An investigation of factors contributing to the sustainability of home safety equipment schemes in communities at higher risk of injury:

A multiple case study based on a national programme in England

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ABSTRACT

Background

Unintentional injury in the home setting is the leading cause of mortality and morbidity among pre-school children in the UK. Multi-component, community-based intervention programmes are a recommended means of addressing injury. England operated a national home safety programme based on this approach from 2009 to 2011. The programme was targeted at high risk families and supported through national government funding.

Little is currently known about the sustainability of injury prevention programmes, despite its relevance to public health planners and policy makers. Studies of programme sustainability in the global public health literature reveal an over-reliance on self-reported data from a single source and often under represent the target group perspective.

Aim and setting of the current study

The current study aims to explore influences on the sustainability of a multi-component injury prevention programme targeted at high risk communities in England.

Study design

The multiple case study design used qualitative methods to explore programme and contextual influences on sustainability in five sites. Multiple perspectives were considered including those of families in the target group and professionals involved in scheme delivery. Local, national and global public health policy documents were reviewed to understand the wider context for scheme sustainability and to corroborate research

findings. Interviews with stakeholders in injury prevention policy at national and international level were undertaken to explore the conceptualisation of sustainability.

Framework analysis was conducted within-case and to identify cross-case over-arching themes. The analytic framework, display matrices and production of case study profiles documented the analysis stages. 'Thick description' assists the consideration of transferability of findings to other settings.

Principal findings

Little consensus was apparent in the conceptualisation of sustainability among policy makers. Although programme sustainability was seen as relevant to those agencies influential in policy development, this was not reflected in policy documents.

Funding availability and a supportive local context for scheme delivery were identified as the two main conditions required for sustainability. Ongoing change within the national political and economic context in England challenged sustainability efforts of local schemes. Three key strategies to actively encourage sustainability were identified: programme adaptation; presence of a co-ordinator or champion and extending collaborative networks. The adoption of these varied in response to contextual changes over time.

Ongoing benefits of the scheme were identified in all sites. These included improved safety practices reported by the target group and increased access to harder-to-engage families for scheme professionals. Programme components

displayed differential levels of fidelity between and within sites over time.

Based on the study findings, a conceptual framework for promoting the sustainability of community-based child injury prevention programmes is presented.

Conclusions

This is the first study to comprehensively explore the sustainability of a community-based injury prevention programme in England. It has identified influences on sustainability that contribute to and support findings from other areas of public health. The proposal of a conceptual framework to promote sustainability within community-based child injury prevention programmes makes an original contribution to the field. Potential transferability of study findings suggests that public health gain may be increased by sharing the knowledge base between topics.

The study identified considerable challenges to sustaining local public health initiatives amidst ongoing change in the wider political and economic environments. Educating practitioners and policy makers could improve understanding of sustainability and enhance the future prospects for local initiatives. It is therefore recommended that sustainability should form an integral part of the programme planning cycle for public health initiatives.

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Where quotations appear in this thesis the inclusion of square brackets [ ] indicate the substitution of wording to preserve participant anonymity. Brackets of this type ( ) indicate additional information provided by the researcher to aid reader comprehension.

GLOSSARY OF TERMS

Children's Centres (Sure Start)	Statutory responsibility of local Government from 2004. Provide universal service to improve educational outcomes for children and support for families.
Health and Wellbeing Boards	Forum established by the Health and Social Care Act 2012 bringing together leaders from both sectors to improve population health and reduce inequalities.
Joint Strategic Needs Assessment (JSNAs)	Statutory requirement since 2007 to assess health needs of the local population. Underpins the Health and Wellbeing Strategy and informs commissioning of services within local authority areas.
Local Safeguarding Children Boards (LSCBs)	Statutory responsibility established by Children Act 2004. Provide multi-agency forum for partnership working on safeguarding and child welfare.
OFSTED	Office for Standards in Children's Services Education and Skills. Independent body reporting directly to Parliament. Responsible for inspection and regulation of services for children and young people.
Safeguarding	Defined as: Protecting children from maltreatment. Preventing impairment of children's health or development. Ensuring that children are growing up in circumstances consistent with the provision of safe and effective care. Taking action to enable all children to have the best life chances. (Working Together to Safeguard Children, 2013, HM Government)
Sure Start Local Programme (SSLP)	Government initiative (1999 – 2003) to support families in disadvantaged areas of England. Co-ordinated services for early education, childcare, health and family support.
Third sector	Refers to charity and not-for-profit agencies. (The other two sectors are the private and public sectors).

CHAPTER ONE
INTRODUCTION AND BACKGROUND

1.1 INTRODUCTION TO THE STUDY

This research uses a multiple case study design to explore the influences on sustainability within a multi-component childhood injury prevention programme targeted at high risk communities in England.

This initial chapter sets the scene for the study. It presents an overview of the epidemiology that identifies childhood injury as an ongoing public health problem. Risk factors for injury are described and approaches used in preventing injury are discussed, together with the theoretical basis for these. The concept of programme sustainability within the public health context is then introduced. This is followed by an overview of 'Safe At Home', the national home safety programme that forms the basis of the current study. The aim and objectives of the current study are then presented. A brief introduction to the researcher follows and the chapter concludes with an overview of the subsequent thesis chapters.

1.2 CHILDHOOD UNINTENTIONAL INJURY AS A PUBLIC HEALTH PROBLEM

1.2.1 Defining unintentional injury

Injury is a broad term, subject to variation between countries and settings, and for which the conventional definition has been contested (Langley and Brenner 2004). The standardised classification of injury adopted by the World Health Organization (WHO) is based on that developed by Baker et al (Baker, O'Neill et al. 1984):

"An injury is defined as a body lesion at the organic level, resulting from an acute exposure to energy (mechanical, thermal, electrical, chemical or radiant) in amounts that exceed the threshold of physiological tolerance. In some cases (e.g. drowning, strangulation, freezing), the injury results from an insufficiency of a vital element".

(World Health Organisation 2010)

Unintentional injury refers to those events in which no intent to do harm was apparent. The term 'injury' has been adopted by the research community in preference to 'accident', since the latter implies a random event and consequently limits the perceived potential for intervention (Avery 1995; Loimer and Guarnieri 1996; Christoffel and Gallagher 1999).

1.2.2 The burden of injury

Unintentional injury is a leading cause of childhood mortality and morbidity in developed countries (Adamson, Mickelwright et al. 2001; Borse, Gilchrist et al. 2008; Peden, Oyegbite et al. 2008; Sethi, Towner et al. 2008). The importance of prioritising action on injury as a public health issue has been emphasised by the WHO (Peden, Oyegbite et al. 2008).

An overall decline in childhood mortality from all causes was reported in the UK, for the period 1980-2010 (Royal College of Paediatrics and Child Health 2013). The same source however also observed that injury remained the most frequent underlying cause, accounting for 31% of deaths in children aged 0-4 years. An overall downward trend in the mortality rates attributed to injury has also been identified, however the effect of this disproportionately benefits children from higher socio economic groups: the majority of the injury burden

continues to fall on those living in poorer circumstances (Edwards, Roberts et al. 2006).

Figures obtained from Public Health England suggest that on average 450 000 children under the age of five present as emergency hospital attendances each year following injury (de Sousa 2014). Forty thousand of these cases are admitted, the majority of which are attributed to falls, and sixty children die as a consequence of their injury. Though there is a paucity of research into the effects of injury in the longer term, childhood injury has been identified as a major contributor to long term disability (Audit Commission and Healthcare Commission 2007).

The global burden of injury in the form of costs borne by the emergency, health and care services within each country, has been the focus of considerable research (Peden, Oyegbite et al. 2008). A range of promising and proven interventions to address the injury issue has been identified at national and international levels (Towner, Dowswell et al. 2001; Sethi, Towner et al. 2008).

1.2.3 Risk factors for injury in early childhood

The risk of childhood injury is influenced by a range of inter-related factors (Bijur, Golding et al. 1988b; Simpson, Turnbull et al. 2009). Some of these, such as gender (Baker, O'Neill et al. 1992; Department for Children Schools and Families, Department of Health et al. 2009; de Sousa 2014) and ethnicity (Avery and Jackson 1993; Towner, Dowswell et al. 2005), act at the level of the individual child. Others exert their effect within the environment, for example socio-economic factors that can manifest in poor quality housing

(Gielen, Shields et al. 2012), over-crowding or emotional pressure on carers (British Medical Association 2001). In young children, stage of child development provides a predictor of likely injury type and setting (Baker, O'Neill et al. 1992; Child Accident Prevention Trust 2009). Early childhood is characterised by a rapid increase in physical growth and cognitive functioning during which children become more mobile, independent and keen to explore their immediate environment (Alexander and Roberts 2002). This makes the home, where pre-school children spend most of their waking hours, the most likely setting for injury (Towner, Dowswell et al. 1996; Mercy, Sleet et al. 2006).

Among the risk factors associated with childhood injury, a marked social gradient has been identified between countries (Adamson, Mickelwright et al. 2001; Towner, Dowswell et al. 2005; Peden, Oyegbite et al. 2008). This social gradient also exists within countries and has been evidenced between communities in England (Townsend and Davidson 1982; Edwards, Roberts et al. 2006; de Sousa 2014). Despite children from poorer backgrounds being at significantly greater risk of injury and death than those from more affluent families, relatively few initiatives targeting socially disadvantaged groups have been reported (Towner, Dowswell et al. 2005; Mackay and Vincenten 2007; Sethi, Mitis et al. 2010).

1.2.4 Approaches to injury prevention

1.2.4.1 Conceptualising injury

Over the last four decades the conceptualisation of injury and the development of approaches to its prevention have been greatly influenced by a conceptual framework referred to as

'the Haddon Matrix' (Runyan 1998). This identifies risk factors associated with the host, agent and environment and considers their role prior to, during and after injury occurs (Haddon 1980). Potential interventions arise from attempts to break this chain of events. Subsequent adaptation of the model suggests that environmental influences can be sub-divided into those associated with the physical environment, for example the features within a home, and the social environment that encompasses wider influences such as community norms and policy implications (Runyan 1998).

The concept that injury is subject to a multiplicity of causes has been further developed using socio-ecological models, such as the 'Injury Iceberg' (Hanson, Hanson et al. 2005). A socio-ecological approach considers multiple influencing factors on health and behavioural outcomes that can operate and interact at differing levels including those of the individual, the organisation, the community and wider society (Stokols 1996). Hanson argues that effective intervention for many injuries requires a systems approach that addresses the underlying influences, such as social class, as well as the more easily identifiable factors associated with individual behaviour. A socio-ecological approach has been advocated for the planning and evaluation of community health interventions (Potvin and Richard 2001; Richard, Gauvin et al. 2011) and specifically for injury and violence prevention programmes (Dahlberg and Krug 2002; Gielen and Sleet 2003; Allegrante, Marks et al. 2006).

1.2.4.2 Strategies for prevention

Approaches to injury prevention fall into the two broad categories of active and passive measures.

Active prevention requires individuals to engage and take responsibility in protecting themselves and others from hazards. An example would be through a change in behaviour, such as storing household chemicals out of the reach of young children. Behaviour changes can be encouraged through the delivery of safety education programmes to parents (Gielen and Sleet 2003).

Passive measures operate independently of individual action providing protection that is *"passive, automatic and constant"* (Gallagher and Christoffel 2006). The passive approach is illustrated by legislative and environmental measures, such as safety standards for children's play equipment or the installation of a fireguard in the home. Few passive approaches can be effective, however, without some element of human interaction. The fireguard, for example, needs to be appropriately installed and maintained. This has led to the proposal of an *"active approach to passive prevention"* (Gielen and Sleet 2003): p.66. An immediate and dramatic reduction in injury rates has been evidenced for some passive measures, such as that observed in the incidence of poisoning following the introduction of child resistant packaging for the storage of salicylates and paracetamol, introduced in the UK in 1976 (Sibert, Craft et al. 1977; Lawson, Craft et al. 1983).

Intervention programmes that employ a combination of active and passive approaches: have been effective in influencing safer practices (Towner and Dowswell 2002; Kendrick, Coupland et al. 2009; Pearson, Garside et al. 2009); show potential for positive injury outcomes (Towner, Dowswell et al. 2001; Turner, Arthur et al. 2011; Kendrick, Young et al. 2012); and comprise a key part of the recommended strategy

for preventing home injury and reducing health inequalities in England (National Institute for Clinical Excellence 2010a; de Sousa 2014).

1.3 PROGRAMME SUSTAINABILITY WITHIN PUBLIC HEALTH

1.3.1 The relevance of sustainability

Interest in the sustainability of public health programmes originated as a means of evaluating donor contributions to international aid campaigns within developing countries (Lefebvre 1992). It now features among the standard outcomes required by many funding agencies, for example within its Safe Communities manifesto, the WHO state that:

> *"The programme must be long-term and not consist solely of short-term projects".*
>
> (World Health Organization 1998): p.24

Over the last twenty years, despite an increase in publications that consider the sustainability of public health programmes, this is often not the main focus of research and receives less attention than other aspects of the planning process such as implementation (Greenhalgh, Robert et al. 2004; Nilsen, Timpka et al. 2005; Feldstein and Glasgow 2008; Lovarini, Clemson et al. 2013). One reason for the lack of priority may be the level of resources and time frame required to support sustainability research.

1.3.2 The benefits of programme sustainability

Establishing complex community-based public health programmes takes time (Klassen, MacKay et al. 2000; Towner and Dowswell 2002). In addition the full manifestation of

programme benefits may be delayed beyond the initial period of implementation (Green and South 2006; Nutbeam, Harris et al. 2010). Influencing behaviour change at the individual level within a target population can be a lengthy process (Nutbeam 1998), and may take even longer in settings that require access to low-income, minority or hard-to-reach communities (Goodman, McLeroy et al. 1993a). In such situations, sustaining programmes beyond the stage of initial support may be pre-requisite to enable full assessment of their effectiveness (Rissel, Finnegan et al. 1995; Schell, Luke et al. 2013).

In addition to supporting full programme implementation, sustainability has been widely acknowledged to provide other benefits and has been identified as a goal for public health programmes (Johnson, Hays et al. 2004). The initial resource investment in community-based interventions can be substantial and sustaining a programme that delivers ongoing benefit can therefore provide an efficient means of resource deployment (Shediac-Rizkallah and Bone 1998; Pluye, Potvin et al. 2004; Schell, Luke et al. 2013). In contrast, programme discontinuation can have negative consequences at local level as noted by the Chief Medical Officer in his 2005 report:

"valued small-scale local projects to improve health are often not sustained losing money and the skills that had been acquired over time".

(Department of Health 2005) : p.40

Managing community expectations can be a particular challenge for public health practitioners since programme cessation can lead to disillusioned participants and diminished

trust in professionals (Goodman, Steckler et al. 1993b; Shediac-Rizkallah and Bone 1998; Pluye, Potvin et al. 2004; Schell, Luke et al. 2013). Sustaining a programme demonstrates ongoing commitment to the participating community, and, it has been argued, fulfills a moral obligation to the communities concerned (Mancini and Marek 2004). More controversially it has been suggested that when programme sustainability becomes the responsibility of the local community, following an initial period of funding, this may help to conserve national resources thereby accommodating a wider political agenda (Wharf Higgins, Naylor et al. 2007). The authors based this suggestion on a study of the longer-term effects of government seed funding in 11 regional health promotion projects in Canada. They reported insufficient time during the initial period of financial support to develop the processes for sustained programme delivery. They also noted cynicism amongst some participants that the capacity-building aim of the programme masked a desire for national government to devolve responsibility for public health to the local community. By including a requirement for local agencies to demonstrate programme sustainability, national funding bodies may therefore be outlining their own exit strategy.

1.3.3 Potential disadvantages of sustainability

Countering the benefits outlined, some disadvantages have been identified suggesting that sustainability may not always be a desirable state. For some programmes a point of obsolescence may be reached beyond which they are no longer useful or valued (Shediac-Rizkallah and Bone 1998; St Leger 2005; Gruen, Elliott et al. 2008; Savaya, Spiro et al. 2008). Suggested reasons for this may be that the initial

programme aims have been achieved or superseded by changing population needs, or because new evidence has identified more effective approaches. It has also been argued that integrating a particular programme into a host organisation may inhibit future innovation within the area of public health that the programme addresses (Greenhalgh, Robert et al. 2004).

1.3.4 Achieving sustainability

Empirical studies indicate that public health programmes do not automatically achieve sustainability following the withdrawal of initial support. It has been suggested that up to 40% of new programmes fail to operate beyond their first few years (Savaya, Spiro et al. 2008). This has generated an interest in planning for sustainability as part of the wider programme planning cycle and is supported by a small range of guidance documents and web-based tools produced by health-related agencies within several countries (Central Sydney Area Health Service & New South Wales Health 1994; NHS Institute for Innovation and Improvement 2003; Centre for Disease Control 2010). These are discussed further within the Literature Review (Chapter Two).

1.4 'SAFE AT HOME': A NATIONAL HOME SAFETY EQUIPMENT PROGRAMME

1.4.1 Background

In 2007 the English government announced its intention to launch a national home safety equipment programme to address unintentional death and injury to young children in the home (Department for Children Schools and Families 2007). The Royal Society for the Prevention of Accidents (RoSPA), a national charitable organisation, was appointed as host agency

with responsibility for national co-ordination and implementation. The programme operated for two years from 2009, ending in March 2011. The primary objective of the programme was the provision of safety equipment to families with children under 5 years of age, living in areas of England with the highest rates of unintentional injury (Merrill and Martin 2010). Longer term objectives were to promote understanding of the importance of home safety and to build the capacity of local communities to run their own schemes, incorporating equipment provision and safety advice to families (Merrill and Martin 2010). Specific guidance on sustaining programme operation beyond the period of national support was not provided.

1.4.2 Target Group

Eligibility criteria for the programme were applied on two levels, firstly by local authority and subsequently by individual family (RoSPA 2009). Those local authorities in England with hospital admission rates for unintentional injury (children under five years) that exceeded the national average of 88.82 per 100 000 population were invited to take part. This gave an initial target of 141 local authorities. Areas looking to establish a new safety scheme as well as those where a similar scheme already existed were eligible to join. In relation to families, those with a child under the age of five years living within the targeted local authority areas and in receipt of means-tested benefits were eligible to participate in the programme. Referrals into the programme were made by community-based workers from the local partner agencies, with families also having the option to self-refer.

1.4.3 A multi-component intervention programme

To-date, systematic reviews into the effectiveness of home safety programmes for young children have found no consistent evidence for reduced injury outcomes (Towner, Dowswell et al. 2001; Turner, Spinks et al. 2004; Lyons, John et al. 2006; Kendrick, Coupland et al. 2009; Pearson, Garside et al. 2009; Turner, Arthur et al. 2011). This may have been influenced by limitations in evaluation design (Turner, Arthur et al. 2011), short programme timescales (Nilsen, Timpka et al. 2005; Lyons, John et al. 2006) or by the complexities associated with collecting comprehensive injury outcome data (Cryer, Langley et al. 2005). Programmes combining education and environmental modification have, however, been effective in influencing safer practices in the home (Kendrick, Coupland et al. 2009; Pearson, Garside et al. 2009), and may also show potential for positive injury outcomes (Towner, Dowswell et al. 2001; Turner, Arthur et al. 2011).

The multi-component Safe At Home intervention was therefore based on identified best practice for home visit programmes (Nilsen, Hudson et al. 2005; Kendrick, Coupland et al. 2009). It comprised a combination of passive and active intervention strategies (Errington, Watson et al. 2011), an approach that was backed up by a meta-analysis of interventions to prevent falls in children under five years of age (Hubbard, Cooper et al. 2014). The meta-analysis indicated that the most intensive intervention combining education, home inspection, equipment provision and fitting was also most effective in increasing the possession of fitted safety equipment. The 'Safe At Home' programme included all of these components, and, in addition, provided training for local professionals involved in its delivery

(Errington, Watson et al. 2011). A home visit incorporating a safety assessment and home safety education was available universally to families with a pre-school child living in the target areas. In addition, those families in receipt of means-tested state benefits were also eligible for free provision and installation of safety equipment (see Appendix 1 for equipment list).

1.4.4 Implementation

The national programme began active operation in April 2009. The professional training component was developed and delivered by RoSPA. Safety equipment items were ordered centrally and provided through a single national provider. The home safety check, family education, equipment distribution and installation components were delivered to communities through collaborative partnerships at local level, overseen by a designated co-ordinator for each area.

Mid-way through the implementation period, in May 2010, there was a change of national government. A new public health strategy, Healthy Lives, Healthy People was launched (Department of Health 2010), that announced the intent to decentralise responsibility for public health away from the health sector to local authorities. The impact of this changing service context was explored within the current study.

1.4.5 Evaluation

An independent process and impact evaluation of the Safe At Home programme was conducted by the University of Nottingham over a sixteen-month period from December 2009 to March 2011 (Watson, Errington et al. 2012). It is important to note that the evaluation did not investigate injury outcomes

associated with the programme. By the end of the intervention period 130 of the original 141 local authority areas targeted had registered with the national programme (Errington, Watson et al. 2011). Safety equipment had been provided and installed in 66 127 homes and 314 000 families had received safety information and advice. The evaluation also reported high participant satisfaction (95%), based on a postal survey sent to a random sample of 1000 families (response rate 49%). In the same survey 92% of respondents reported that their home felt safer following equipment installation. The cost of providing equipment was estimated at £120.21 per child, with education costing 56p per family.

1.4.6 Aims and objectives of the current study

The current study builds on the evaluation of the Safe At Home programme. It explores contextual influences on local scheme sustainability, beyond the period of national programme support (March 2011). It addresses a gap in the existing public health evidence base relating to programme sustainability in the UK setting (the justification for this can be found in the Literature Review that follows).

The aims and objectives are presented overleaf.

AIM:

To identify factors contributing to the sustainability of home safety equipment schemes for young children living in communities at higher risk of injury in England.

OBJECTIVES:

1. To identify influences on scheme sustainability including those associated with:
    i) the programme content and delivery mechanism
    ii) the organisational setting
    iii) the immediate community setting and the wider social, political and economic context.

2. To explore experiences of scheme participation and the potential influence of these on sustainability from the perspective of families within the target group.

3. To explore experiences of scheme participation and the potential influence of these on sustainability from the perspective of professionals with an interest or involvement in home safety schemes.

4. To explore the conceptualisation of programme sustainability within the global and national public health policy context relevant to child injury prevention.

1.5 INTRODUCTION TO THE RESEARCHER

My interest in the sustainability of public health programmes has developed gradually over a 20 year period. I have worked in injury prevention since 1993, initially in a co-ordinating role that involved developing partnerships with local communities and organisations to encourage action on injury. Following this I moved into academic research, retaining a focus on childhood injury within a range of projects delivered at various times through the Universities of Newcastle Upon Tyne, West of England and Nottingham. My involvement in work commissioned by national government departments and charitable organisations enabled me to broaden my experience of partnership working and extended my professional network of injury prevention and public health contacts at national and international levels.

Having participated in many short-term injury prevention projects myself, I understand some of the challenges that can arise when support for the work ends. I was a member of the team from the University of Nottingham that evaluated 'Safe At Home'. As the programme and the evaluation ended at the same time (March 2011), there was no opportunity for longer term follow up of the local schemes. Obtaining a RoSPA/BNFL scholarship provided funding for the current study, thereby enabling me to explore programme sustainability within an intervention and topic area that was already familiar to me.

1.6 INTRODUCTION TO THE THESIS

The thesis comprises ten further chapters. Chapter Two presents the process and findings from a review of the global literature on the sustainability of public health intervention

programmes. Particular attention is paid to methodological issues in order to inform the current study. Evidence from public health programmes and from the field of injury prevention is given separate consideration. The chapter concludes by identifying gaps within the current evidence base.

Chapter Three presents the process and findings from a review of key public health policy documents at global and national level. It explores the priority afforded to child injury prevention within these health agendas over time, thereby offering an insight into the potential influence of the policy environment on the sustainability of home safety programmes.

Chapter Four addresses the study methodology and the associated underlying philosophical assumptions. A detailed research protocol is provided for each of the individual study components. Ethical issues inherent in the study and approaches taken to enhance trustworthiness are discussed. The researcher's personal reflections on the process are also included.

Chapter Five presents an overview of participants for the current study, and individual profiles for each of the case study sites. Comparative demographics, injury epidemiology and site characteristics are included to provide context for the reader.

The next four chapters present the study findings. Chapter Six provides a policy perspective on the conceptualisation and relevance of programme sustainability. It presents findings from a series of interviews with international and national

stakeholder representatives who are influential in the development of child injury prevention policy, and from an in-depth content review of the health policy documents that formed the basis of Chapter Three.

Chapters Seven, Eight and Nine present the integrated cross-case findings from interviews and focus groups conducted in the case study sites and from the interviews with senior personnel who took a national role in the Safe At Home programme. Each chapter is focused around a key theme. Chapter Seven considers the manifestations of sustainability in the form of ongoing programme activities and the benefits associated with these. Chapter Eight presents the mediating factors that were found to influence sustainability. Chapter Nine identifies the three main strategies that were adopted to sustain local schemes.

Chapter Ten synthesises and presents key insights from the findings. These are then discussed and interpreted in the context of the current evidence base for sustainability of public health programmes. The strengths and limitations of the methodological approach used are considered.

Chapter Eleven concludes the thesis by considering the theoretical and practical implications of the study findings with respect to the sustainability of public health programmes. A series of recommendations are made.

1.7 CHAPTER SUMMARY

This chapter has set the scene by providing introductions to the current study and the research context, to the researcher and to the subsequent thesis chapters.

Unintentional injury in childhood is introduced as a public health issue. The risk factors for injury in early childhood are presented, together with approaches to injury prevention. The relevance of sustaining public health interventions is discussed, and an outline of some of the benefits and disadvantages that may be associated with sustainability is provided. An overview of the national home safety equipment programme, Safe At Home, is presented. This intervention provides a basis for the exploration of programme sustainability within the current study.

CHAPTER TWO
SUSTAINABILITY OF PUBLIC HEALTH INTERVENTIONS: A REVIEW OF THE LITERATURE

2.0 INTRODUCTION

This chapter presents a review of the global literature on the sustainability of public health intervention programmes. Particular consideration is given to methodological issues that may inform development of the current study. Findings relating to the wider public health literature are presented separately (Section 2.4) from those specific to community-based injury prevention programmes (Section 2.5).

2.1 RATIONALE

The literature review adopted a narrative approach that aimed to provide comprehensive coverage of the emerging field of sustainability within public health interventions (Baumeister and Leary 1997; Collins and Fauser 2005; Green, Johnson et al. 2006). Literature reviews that focus on narrative rather than statistical analysis have been recommended as a means of gaining better understanding of evolving concepts such as sustainability (Greenhalgh, Robert et al. 2004; Lovarini, Clemson et al. 2013). Furthermore, by linking studies from different topic areas they offer the potential for theory building, as opposed to supporting the testing of existing hypotheses (Collins and Fauser 2005). This was considered complementary to the exploratory approach adopted within the current research study.

It has been argued that the conceptual ambiguity associated with sustainability does not fit well with the typical approach for systematic review, for which a clearly formulated research question is pre-requisite (Buchanan, Fitzgerald et al. 2005). However, in documenting the stages of the review process (Green, Johnson et al. 2006),and including a summary table of all publications reviewed (See Appendix 2), the current study borrows from the systematic approach as a means of enhancing transparency.

Specific objectives of the literature review were as follows:

i) To provide an overview of current debates on the definition and conceptualisation of sustainability as applied to public health interventions.

ii) To consider the potential influences on sustainability in public health associated with the programme content, delivery context and the processes involved.

iii) To identify methodological considerations for future research into sustainability in public health.

iv) To use the findings from the review to inform development of the current study.

2.2. METHOD

2.2.0 Introduction

The review draws on a range of source literature including peer-reviewed articles, book chapters, reports and on-line resources. A 4-stage process was developed based on the researcher's previous experience of conducting both

qualitative and quantitative reviews. The process involved search, selection, review, synthesis and presentation of results.

2.2.1 Search

Electronic searches of the following databases were conducted: ASSIA, CINAHL, Cochrane Library, DARE, EMBASE, MEDLINE, PsychINFO, Web of Science, Web of Knowledge. Targeted website searches of the following organisations, all of which have an interest in the development of child injury prevention programmes, were also undertaken: Child Accident Prevention Trust (CAPT); Centre for Disease Control (CDC); Department of Health (DoH); National Institute of Health and Care Excellence (NICE); Royal Society for the Prevention of Accidents (RoSPA); World Health Organization (WHO).

Searches were limited to publications in the English language, with no restrictions regarding date of publication. Initial keywords associated with the nature of the intervention (both for public health and injury-specific programmes), and the focus on sustainability were identified by the researcher. Searches were then conducted using combinations of these keywords. The search strategy was varied to reflect the lack of standardisation between databases and followed an iterative process that enabled new keywords to be included as these were identified within the literature.

Tables 2.1 and 2.2 below present the keywords used in the searches.

Table 2.1 Keywords used to identify public health programmes for the literature review

Descriptor for intervention	Descriptor for sustainability
communit* health* prevent* program* project* promot* strateg*	continu* durab* embed* incorporate* institutionali* integrat* ongoing maint* routini* sustain*

Table 2.2 Keywords used to identify injury prevention programmes for the literature review

Descriptor for intervention	Descriptor for sustainability
safe* inj* accid* **and/or** prevent* communit*	continu* durab* embed* incorporat* institutionali* integrat* ongoing maint* routini* sustain*

Despite the range of search terms used, the diversity of terminology associated with sustainability increased the potential for some publications to be overlooked. Therefore, in addition to conducting electronic searches, individual articles were hand-searched and citations of interest were followed up. Contact was made with authors and experts in the fields of sustainability and in public health to identify 'grey literature', and to ensure that the searches were as inclusive as possible (Hawker, Payne et al. 2002).

2.2.2 Selection

Publications that met the following selection criteria were included for review:

- Primarily addressed programme sustainability
- Focused on health, social or community-based programmes
- Had findings of potential relevance based on the research objectives specifically identified for this literature review.

Selection was not limited by study design since it was considered appropriate to include evidence derived from quantitative, qualitative and mixed method studies, thereby reflecting the heterogeneous nature of sustainability research.

2.2.3 Review

Details relating to the setting, nature of the intervention, and the relevance for programme sustainability were extracted for each publication and documented in the form of "thick description" (Roen, Arai et al. 2006). Summaries of content, together with reviewer comments, were stored on an Excel worksheet. Publications were sorted and prioritised according to their relevance with respect to the objectives of the review (presented in Section 2.1). Checklists from the Critical Appraisal and Skills Programme, (CASP), were used to provide an indication of the quality of study design and reliability where appropriate (Critical Appraisal Skills Programme 2013a; Critical Appraisal Skills Programme 2013b).

It is acknowledged that research of a qualitative nature is subject to continuing debate regarding the value and

applicability of quality assessment tools (Hawker, Payne et al. 2002; Dixon-Woods, Shaw et al. 2004; Cohen and Crabtree 2008a). Whilst consensus on the use of tools has not been reached, the inclusion of generic quality principles was considered relevant within this review in order to support judgments as to the extent to which individual publications might inform the current study.

2.2.4 Synthesis and presentation

Issues and evidence relevant to the review objectives were identified and synthesised thematically across sources. The narrative was structured around the resultant themes. To mediate the potential for researcher bias in the search, selection and review processes, the interpreted findings were subject to review by two independent experts in injury prevention.

The main findings are presented in two sections: Section 2.4 considers programme sustainability within the wider public health literature. Section 2.5 presents a review of sustainability based on community-based injury prevention programmes, and contrasts this with the wider findings.

2.3 OVERVIEW OF ALL PUBLICATIONS REVIEWED

The review included sixty-five publications in total, with publication dates ranging from 1981 to 2014. Appendix 2 provides a summary table of all these publications. Forty-eight publications (74%) were published post-2000, with eighteen of these (28%) published after 2010, evidencing a current and ongoing interest in sustainability. The largest category of publications (48%, n = 31) reported findings from

primary research on the sustainability of public health programmes. Nine of these (29%) had a particular focus on injury prevention.

Ten publications presented literature reviews considering the influences on sustainability, six of which had been conducted as systematic reviews. The focus of these ten review publications was as follows: seven general health related programmes (Shediac-Rizkallah and Bone 1998; Greenhalgh, Robert et al. 2004; Johnson, Hays et al. 2004; Scheirer 2005; Gruen, Elliott et al. 2008; Wiltsey Stirman, Kimberly et al. 2012; Schell, Luke et al. 2013); one health/social care related programme (Savaya, Spiro et al. 2008); one obesity prevention (Whelan, Love et al. 2014) and one relating to falls in the elderly (Lovarini, Clemson et al. 2013).

Twelve publications presented conceptual discussions relating to sustainability. Four resources provided specific guidance on planning for sustainability and four further publications comprised book chapters. Additional journal publications included two editorials and one commentary on a previous article.

2.4 FINDINGS FROM THE WIDER PUBLIC HEALTH LITERATURE

2.4.1 Conceptualisation of sustainability in the public health literature

2.4.1.1 Terminology

Reviews of empirical studies within the public health literature revealed a variety of terms used to describe programme sustainability. These included continuation, durability, incorporation, institutionalization, maintenance, and routinization (Shediac-Rizkallah and Bone 1998; Johnson, Hays et al. 2004; Pluye, Potvin et al. 2004; Scheirer 2005; Wiltsey Stirman, Kimberly et al. 2012). Terminology was inconsistent, with some terms being used interchangeably. Distinguishing between the usage of particular terms was rare. However, in one example, the authors of a systematic review of health programmes suggested a distinction between the terms 'institutionalization' and 'sustainability' based on the level at which these applied (Johnson, Hays et al. 2004). Institutionalization was defined primarily as the extent to which a programme had become integrated into other systems at the level of the organisation. This implies a degree of stability and consistency within the programme itself. In contrast sustainability was seen as more likely to apply at the community level and emphasised adaptive capacity and programme responsiveness to changing needs.

2.4.1.2 Definitions of sustainability

Definitions of sustainability within the literature varied. In a substantial proportion of the empirical studies that were reviewed, the authors failed to include their working definition of sustainability. This echoed the findings as reported by one systematic review in which 65% of the 125 studies included

did not offer a definition for sustainability (Scheirer 2005). Where definitions were provided they lacked consensus thereby limiting opportunities for cross-study comparison and leading to recommendations for standardisation (Shediac-Rizkallah and Bone 1998; Wiltsey Stirman, Kimberly et al. 2012; Schell, Luke et al. 2013).

Table 2.3 below provides the definitions of sustainability that featured within the wider public health literature and identifies the extent to which these encompass the manifestations of sustainability as first identified by Schediac-Rizkallah and Bone (Shediac-Rizkallah and Bone 1998). Despite the range of definitions that exists, some commonality is apparent, particularly with respect to the continuity of benefits and the continuity of programme activities.

It has been suggested that the multiplicity of definitions of sustainability may in part be attributed to multiple stakeholder perspectives whereby researchers, programme funders, service providers and those in the target group personalise their understanding of the concept (Gruen, Elliott et al. 2008; Leurs, Mur-Veeman et al. 2008; McMillan 2013).

Table 2.3 Definitions of sustainability within the public health literature

Author/Date	Definition	Features of sustainability included:		
		Continuity of benefits	**Continuity of programme activities**	**Continuity of community capacity**
Central Sydney Area Health Service & NSW Health,1993	Describes a "new" dimension of the program cycle concerned with the extension or maintenance of successful programmes.		√	
Rissel et al, 1995	The continued ability of a program to meet the needs of its beneficiaries.	√	√	
Olsen, 1998	The ability of the system to produce benefits valued sufficiently by users and stakeholders to ensure enough resources to continue activities with long-term benefits.	√	√	√
Shediac-Rizkallah & Bone, 1998	A multi-dimensional concept of the continuation process. The term encompasses a diversity of forms that this process may take. Three perspectives: 1) maintaining health benefits achieved through the initial programme 2) continuation of the programme activities within an organizational structure 3) building the capacity of the recipient community	√	√	√

Author/Date	Definition	Features of sustainability included:		
		Continuity of benefits	Continuity of programme activities	Continuity of community capacity
NHS Institute for Innovation and Improvement, 2003	When new ways of working and improved outcomes become the norm…an integrated or mainstream way of working rather than something "added on".	√	√	
Greenhalgh et al, 2004	Making an innovation routine until it reaches obsolescence.	√	√	
Johnson et al, 2004	The process of ensuring an adaptive prevention system and a sustainable innovation that can be integrated into ongoing operations to benefit diverse stakeholders.	√	√	
Mancini & Marek, 2004	The capacity of programmes to continuously respond to community issues. Key element – continued benefits – more imp than sustaining programme activities per se.	√		
Sarriot et al, 2004	Defined in child survival projects as a contribution to the development of conditions enabling individuals, communities, and local organizations to express their potential, improve local functionality, develop mutual relationships of support and accountability, and decrease dependency on insecure resources (financial, human, technical, informational), in order for local stakeholders to negotiate their respective roles in the pursuit of health and development, beyond a project intervention.	√		√
Pluye et al, 2005	The continuation of program-related activities.		√	

Author/Date	Definition	Features of sustainability included:		
		Continuity of benefits	Continuity of programme activities	Continuity of community capacity
Scheirer, 2005	a) continuing to deliver beneficial services (outcomes) to clients, b) maintaining the programme or its activities in an identifiable form, even if modified, c) maintaining the capacity of a community to deliver programme activities after an initial programme created a community coalition or similar structure. (after Schediac-Rizkallah and Bone)	√	√	√
Clinical Excellence Commission, 2008	Ensuring gains are maintained beyond the life of the project.	√		
Leurs et al, 2008	Sustainable (re: collaboration) – aim to continue after the initial project phase has ended, without committing to an ever-lasting collaboration.			√
Savaya et al, 2008b	Working definition – the fate of the program following termination of financial support received from the foundation.		√	
Centre for Disease Control, US, 2010	A community's ongoing capacity and resolve to work together to establish, advance and maintain effective strategies that continuously improve health and quality of life for all.	√		√
Davies & Macdowall, 2010	The extent to which an intervention may be continued beyond its initial implementation; this may be dependent upon a continued source of funding, programme effectiveness or changing priorities.		√	
Saunders et al, 2012	Maintenance or continued presence of the essential program elements at follow-up.		√	

Author/Date	Definition	Features of sustainability included:		
		Continuity of benefits	Continuity of programme activities	Continuity of community capacity
Scheirer & Dearing, 2011	The continued use of program components and activities for the continued achievement of desirable program and population outcomes.	√	√	
Wiltsey Stirman et al, 2012	Maintenance of core elements after initial implementation support has been withdrawn (e.g. remain recognizable or delivered at a sufficient level of fidelity or intensity to yield desired health outcomes) and adequate capacity for continuation of these elements is maintained.	√	√	√
Chambers et al, 2013	The process of managing and supporting the evolution of an intervention within a changing context.		√	
Harris & Sandor, 2013	Sustainable practice in community-based health promotion defined as: "practice that focuses on collaboratively progressing community health determinants and aspirations through emphasis upon processes and outcomes".	√	√	√
Schell et al, 2013	Sustainability capacity – the existence of structures and processes that allow a program to leverage resources to effectively implement and maintain evidence-based policies and activities.	√	√	

2.4.1.3 Manifestations of sustainability

The inconsistency of definitions makes it difficult to identify precisely what constitutes sustainability. A continuation of programme activities beyond the initial period of funding and support is often used as a proxy-measure of sustainability. In one Australian study, project leaders involved in 106 diverse and innovative government-funded social programmes were surveyed immediately after their funding ended (Savaya, Elsworth et al. 2009). At this point 74% of respondents believed that their project would continue in some form. However other studies that assessed actual sustainability rates based on programme activities suggests that these are somewhat lower, ranging from 53% at six years post-support in the Minnesota Healthy Hearts Program (Rissel, Finnegan et al. 1995), to 64% at two years-plus in a review of healthcare programmes (Wiltsey Stirman, Kimberly et al. 2012).

The nature of programme activities that are sustained may vary from those in the original intervention. It has been suggested that partial sustainability may be a common feature of multi-component programmes (Wiltsey Stirman, Kimberly et al. 2012). One systematic review of nineteen US and Canadian-based health programmes reported that at least one programme component had been sustained in 60% of the sites (Scheirer 2005). The exact nature of those components that are sustained may however deviate from the original programme. This was illustrated in the Minnesota Healthy Hearts Program in which 57% of the programmes that continued to operate at six-years post-support were considered to have changed substantially, as assessed by those involved (Rissel, Finnegan et al. 1995). One third of these were attributed to programme adaptations in response

to contextual changes, and, though assessment was only made at one point in time, the authors indicated that programme quality did not appear to have been compromised. Findings such as these highlight the association between sustainability and programme fidelity, the latter a concept that has been defined as:

> *"the extent to which delivery of an intervention adheres to the protocol or programme model originally developed"*.
>
> (Mowbray, Holter et al. 2003): p.315

Programme fidelity has been suggested as a moderator between intervention and outcomes, with adherence to essential elements helping to maintain effectiveness (Carroll, Patterson et al. 2007). Assigning levels of fidelity may help to identify differential levels of sustainability within multi-component interventions. For example, when assessing sustainability of the LEAP study, a high-school based physical education programme for girls implemented in the US, researchers identified several essential programme components, such as gender-separated PE classes (Saunders, Pate et al. 2012). These were used to assign sites to a high or low group regarding fidelity of implementation. The authors reported sustained change in 4 of the 11 participating schools at three years, noting that this was higher for the educationally-based components than for those requiring environmental modification.

Whilst few studies address programme fidelity, some have attempted to assess levels of sustainability (Pluye, Potvin et al. 2004; Lapelle, Zapka et al. 2006; Savaya, Spiro et al. 2008; Savaya, Elsworth et al. 2009). The idea that the extent

of programme sustainability might vary supports the supposition that:

"sustainability is probably a matter of degree rather than an all-or-none phenomenon"

(Shediac-Rizkallah and Bone 1998)p.96

One of the studies identified two mechanisms as potential influences on the extent of sustainability (Pluye, Potvin et al. 2004). These were: "routinization" arising from the development of routines within organisations, and "standardization" resulting from the imposition of institutional standards that operate at a supra-organisational level. The authors suggested that combinations of these processes could produce three categories of sustainability:

- 'Weak' - where activities may continue but are not routinized
- 'Medium' - where activities are routinized but not standardized
- 'Strong' - where activities become part of standardized routines.

The inconsistency apparent in defining and applying levels of sustainability does, however, make cross-study comparison difficult.

To assist in the identification of potential differentials in the sustainability of multi-component programmes, it has been suggested that future research studies should include detailed descriptions of the intervention content, and of any subsequent adaptations made (Scheirer 2005; St Leger 2005;

Scheirer and Dearing 2011; Wiltsey Stirman, Kimberly et al. 2012).

2.4.1.4 Sustainability as process or event?

Within some of the earlier literature, sustainability is conceptualised as an 'event' that happens towards the end stage of programme development. In his multiple case study of innovative programmes in municipal agencies, Yin described interventions as having "life histories" based on a series of stages (Yin 1981). He defined these stages as improvisation, expansion and the subsequent 'disappearance' of a programme at which point it is absorbed within the organisation and no longer viewed as new. Goodman and Steckler similarly place institutionalisation as the final point in a linear series of programme development stages (Goodman and Steckler 1989; Goodman and Steckler 1989; Goodman, McLeroy et al. 1993a; Goodman, Steckler et al. 1993b).

More recent empirical studies have challenged this notion of 'stages', suggesting instead a non-linear progression from innovation to sustainability, viewing this as a process rather than an event (Greenhalgh, Robert et al. 2004; Pluye, Potvin et al. 2004; Scheirer 2005; Scheirer and Dearing 2011). Several tools that have been developed to support programme spread and sustainability also adopt a process-based approach by encouraging the consideration of sustainability throughout each stage of the planning cycle (Central Sydney Area Health Service & New South Wales Health 1994; NHS Institute for Innovation and Improvement 2003; Clinical Excellence Commission 2008). Furthermore, it has been suggested that implementation and sustainability may be overlapping phases, with the former influencing the latter (Scheirer 2005). The

identification of factors capable of influencing both implementation and sustainability, such as incentives to encourage participate uptake, and programme adaptation, have led to the further suggestion that these phases may be concomitant (Pluye, Potvin et al. 2005).

A recent comparative concept analysis suggested that the perception of sustainability, as either process or outcome, may be linked with professional ethos (McMillan 2013). Based on a review of the literature, the author concluded that sustainability within the nursing profession continued to be viewed primarily as an outcome associated with evaluation. This contrasted with the perspective presented in the management literature where sustainability was regarded as a fragile, time-dependent process (Buchanan and Fitzgerald 2007). Differences in professional understanding between the two cultures were suggested as explanation for the divergence (McMillan 2013), with end results taking priority over process in the healthcare setting. The study highlights the value of considering sustainability from different professional perspectives as a means of strengthening the current evidence base.

2.4.1.5 Theoretical concepts associated with sustainability

Despite the suggestion that theoretical underpinning may enhance programme sustainability (Savaya, Spiro et al. 2008), few of the empirical studies that were reviewed appeared to draw on explicit theories, and an absence of unifying theory typified the sustainability field as a whole (Goodman and Steckler 1989; Lefebvre 1992). Examples were found of one empirical study and one planning tool that referred to Rogers'

Diffusion of Innovation Theory (Paine-Andrews, Fisher et al. 2000; Clinical Excellence Commission 2008). This theory was developed as an explanation for programme uptake within community settings, attributing a range of characteristics regarding programme adoption to sections within the target population (Rogers 2002).

The notion of a "state of readiness" as an intermediary step leading to sustainability featured in several systematic reviews (Greenhalgh, Robert et al. 2004; Johnson, Hays et al. 2004; Wiltsey Stirman, Kimberly et al. 2012). This concept was identified initially in relation to community readiness to implement interventions (Edwards, Jumper Thurman et al. 2000). It may offer a means of understanding the receptiveness of organisations to intervention programmes with potential implications for sustainability.

Several conceptual frameworks for sustainability (discussed further in Section 2.4.3.6) adopt an "open system" approach (Olsen 1998; Sarriot, Winch et al. 2004; Gruen, Elliott et al. 2008; Scheirer and Dearing 2011; Chambers, Glasgow et al. 2013). This mimics the balance found in ecosystems where existence relies on a dynamic exchange of internal and external resources.

Routinization and institutionalization are two further concepts associated with programme sustainability (Goodman and Steckler 1989; Pluye, Potvin et al. 2004). Both refer to an intervention becoming a stable, everyday i.e. 'routine' part of the organisation's business (Yin 1981; Jacobs 2002). Within public health, the term institutionalization is largely influenced by the work of Goodman and Steckler who relate this to

programme longevity as a final stage in the innovation-diffusion process (Goodman and Steckler 1989; Goodman and Steckler 1989; Goodman, Steckler et al. 1993b).

2.4.2 Assessing programme sustainability within public health

2.4.2.1 When to assess sustainability

The intervening time between the loss of original programme support and assessment of sustainability was found to vary considerably between empirical studies. For example, at the lower end of the scale one multiple case study of a smoking cessation programme in Massachusetts collected data at three and nine months after initial support ceased (Lapelle, Zapka et al. 2006). Other studies, including the Healthy Heart initiatives in the United States, had intervening periods of several years prior to assessing sustainability (Yin 1981; Rissel, Finnegan et al. 1995; Evashwick and Ory 2003; Pluye, Potvin et al. 2005; Savaya, Spiro et al. 2008; Saunders, Pate et al. 2012). In the absence of consensus as to when sustainability should be assessed, an interval of at least one year from cessation of support has been recommended (Scheirer and Dearing 2011).

It has been suggested that activity levels can fluctuate across the lifespan of a community-based health programme:

> *"Programs ebb and flow, wax and wane"*
>
> (Mancini and Marek 2004): p.339

This may provide support for ongoing assessment of sustainability, as opposed to obtaining an indication of this at one point in time. Furthermore, since intervention intensity

can have a direct bearing on the manifestations of sustainability, it cannot be assumed that programme benefits, capacity building and other indicators of sustainability will remain constant if the level of programme activity changes over time (Scheirer and Dearing 2011). However, ongoing assessment of sustainability has implications for research funding in what is already acknowledged to be a resource intensive area because of the long-term investment required to enable the full manifestation of programme effects (Central Sydney Area Health Service & New South Wales Health 1994; Rissel, Finnegan et al. 1995; Green and South 2006; Schell, Luke et al. 2013).

2.4.2.2 Tools for assessing programme sustainability

The current review identified tools that had been designed specifically to assess the sustainability of a particular programme, as well as more generic tools with wider applicability, though not all of these had been tested. An example of the former was developed using a seven-step model that identified the sustainability of essential elements within the LEAP physical education programme in high schools (Saunders, Pate et al. 2012). Tools designed to assess different programmes implemented within the same setting were also identified , such as DISC which provides a "snap-shot" of sustainable collaboration for school-based health promotion programmes (Leurs, Mur-Veeman et al. 2008). The tailored nature of these may however preclude transfer of their use to alternative settings.

To facilitate sharing of findings it has been suggested that rather than being topic-based, assessment of sustainability should focus on programme type as regards the purpose of

the intervention and its mechanism of delivery (Scheirer 2013). Scheirer proposes an analytic framework that comprises six categories of programme types derived from her own experience. These cover interventions that are: implemented by individuals; co-ordinated among multiple staff; instigating new policies, procedures or technologies; building capacity or infrastructure; based on community collaborations or encouraging broad-scale system change. She suggests that where interventions fall within more than one category they should be assessed using a combination of these approaches.

Several of the generic tools that were identified focused primarily on assessing sustainability within the organisational setting. The two-dimensional matrix designed by Goodman and Steckler to assess levels of institutionalization provides an example of this (Goodman and Steckler 1989). The matrix assesses intensiveness (programme passages or formal transitions, routines and niche saturation) and extensiveness (the extent to which a programme permeates into organisational sub-systems), both at the level of the organisation. Testing of the matrix led to the development of Level of Institutionalization (LoIn) scales, identifying eight factors, four of which related to routinization and were found to be highly correlated with programme longevity (Goodman, McLeroy et al. 1993a). At the time of publication there was criticism of the validity of the scales (Scheirer 1993). In addition their use appears complex which may explain the absence of subsequent studies employing this method of assessment. Whilst institutionalization may offer an indication of the likelihood for programme sustainability, it does not

account for influences operating in the broader environment, such as community capacity and partnership working.

The organisational perspective also provided the focus within a guidance document aimed primarily at sustaining improved clinical practice in Australia (Clinical Excellence Commission 2008). The guidance considered a range of assessment tools for sustainability that may be applicable to public health. Though no particular approach was advocated, the tools included a UK-based guide for spread and sustainability of innovative health care programmes that had undergone testing, translation and use abroad (NHS Institute for Innovation and Improvement 2003). The guide, based on action research, aimed to identify areas for improvement at any stage of the process, thereby supporting ongoing assessment of sustainability. It presented three domains: staff; processes; organisation, suggesting that a score be allocated for each of these based on an assessment exercise among current employees. The guide focused on internal pressures but did not consider factors outside the organisation, such as funding or the wider policy environment that may be of importance in community-based programmes.

Other tools exist that consider both the internal and external processes influencing sustainability. For example, the US-based Centre for Disease Control produced a ten-step sustainability plan for healthy communities that considers factors associated with the programme, the organisation and the wider context (Centre for Disease Control 2010). Each factor is linked to action steps and accompanying checklists that are designed to enhance the prospects of sustainability.

One further example, the Programme Sustainability Assessment Tool (PSAT) has been tested on state and community-level programmes to assess capacity for sustainability (Luke, Calhoun et al. 2014). PSAT was developed through systematic review and concept mapping involving a panel of experts, six (from a total of thirty-nine) of whom specialised in injury prevention (Schell, Luke et al. 2013). Nine core domains critical for the planning of sustainability for public health programmes were identified initially. These were sub-divided into those regarded as having an external locus of control: political support; funding; partnerships and public health impact and those with an internal locus of control: organisational capacity; programme evaluation; adaptation; communications and strategic planning. Conceptually the authors presented these in a circular configuration with strategic planning at the centre. The size of the domains represented conceptual cohesiveness. Their location reflected conceptual similarities, for example, programme evaluation and adaptation were located close together since it was considered that one may drive the other. Refinement of the tool resulted in a name change for one domain (political support became environmental support) and the loss of another, 'public health impact', which was deemed to be an outcome rather than an indicator of capacity for sustainability. The resulting tool therefore consists of eight domains with five items in each, giving a total of forty items. Whilst the authors describe the PSAT as *"reliable and ready to use"* (Luke, Calhoun et al. 2014), the validity of the tool has yet to be tested with respect to injury prevention programmes.

2.4.3 Influences on the sustainability of public health programmes

2.4.3.1 Overview

The influences on programme sustainability are multiple, dynamic and operate at different levels (Shediac-Rizkallah and Bone 1998; Gruen, Elliott et al. 2008; Scheirer and Dearing 2011). Complex relationships exist between the content of the intervention, the process of delivery, the contextual setting and programme outcomes, however, the understanding of these may be inhibited by a lack of process measures and insufficient contextual detail in the reporting of empirical data (Johnson, Hays et al. 2004). Cross-study comparison of influencing factors is complicated by the lack of standardised terminology and variation in the way that these factors are conceptualised (Wiltsey Stirman, Kimberly et al. 2012).

Of the nine publications that conducted reviews of the influences on sustainability (summarised in Table 2.4), few indicated whether these influences could be prioritised. One systematic review identified five key positive influences on sustainability, in addition to funding, listing these as programme modification, existence of a programme champion, "fit" with organisational mission, programme benefits, and stakeholder support (Scheirer 2005). The author concluded that the influence of some factors may be programme-dependent, showing greater effect in one context compared to another. Since multiple factors can influence sustainability, it has been suggested that efforts to modify these should focus on only one or two at a time, so as to limit the level of supporting resources required (NHS Institute for Innovation and Improvement 2003).

Table 2.4 Influences on sustainability identified in reviews of public health programmes

Author,Date, Country of origin	Aim(s)	Review type	Publication dates/studies included	Key findings	Comments/quality assessment
Shediac-Rizkallah & Bone 1998 U.S.	To consolidate what is known about factors that influence the sustainability of health intervention programmes.	Literature review	No details provided.	Influences conceptualised into 3 categories- 1) Programme design and implementation: project negotiation process, effectiveness, duration, financing, project type, training. 2) Organisational setting: institutional strength, integration with existing programmes, champion/leadership. 3) Broader community:socio-economic and political considerations, community participation. *"Financing is probably the most prominent factor in sustainability"*	Production of simple conceptual model for influences on sustainability that has subsequently endured within the literature.
Greenhalgh et al 2004 UK	To determine how to spread and sustain innovations in health service delivery/organisations.	Systematic review	***Publication dates:*** not specified. ***Studies included:*** n = 495 (213 empirical studies)	Major influences on sustainability: - Network facilitators - Organisational champions - Routinisation of programmes supported by a range of organisational factors	Primarily considers health care studies. Publications in the 'grey' literature were excluded.

Author,Date, Country of origin	Aim(s)	Review type	Publication dates/studies included	Key findings	Comments/quality assessment
Johnson et al 2004 U.S.	To discuss the sustainability literature, present a prevention-focused sustainability planning model and discuss lessons learned and future steps.	Systematic review	***Publication dates:*** not specified ***Studies included:*** n=105	Categorised influences into two groups: 1) Capacity-building: resources, champions, leadership, administrative structures, policies, expertise. 2) Causal factors (programme characteristics): effectiveness, alignment with needs, positive relationships, implementation quality, adopter ownership.	Purpose of publication is to present a model for use in substance misuse programmes though some of findings may be transferable. Currently model remains untested. Publications included articles, book chapters and books.
Scheirer 2005 U.S.	To report the results of a systematic review of empirical literature on sustainability of health projects, focusing on studies that report data collected at a time point after the initial external funding has expired, for programs or innovations related to health care.	Systematic review	***Publication dates:*** 1990-2003 ***Studies included:*** n = 19	Five key positive influences required for sustainability, in addition to funding: 1) Programme modification over time 2) Programme champion 3) "Fit" with organisational mission 4) Programme benefits staff/clients (suggests perceptions may be more important that evidence) 5) Stakeholder support from other organisations Programmes have individual "stories" that may be context-dependent.	Influences categorised after Shediac-Rizkallah & Bone, 1998. Only programmes of U.S./Canadian origin included.

Author,Date, Country of origin	Aim(s)	Review type	Publication dates/studies included	Key findings	Comments/quality assessment
Gruen et al 2008 Australia	To review existing perspectives and empirical research about health programme sustainability, to derive a practical framework and use this to propose an approach to planning for sustainability.	Systematic review	***Search dates:*** Medline 1980 – 2008 Embase 1950 - 2008 ***Studies included:*** n=145 (84 empirical studies)	Multiple influences conceptualised into triad of: 1) Health concerns 2) Programme 3) Drivers Reports that influences operate within a context defined by socio-cultural, political, geographical and health-system characteristics, and by availability of resources.	Focus on 2-way dynamic interactions between influences using approaches adapted from sustainability science. Extensive search period for publications. Only 2 of 84 empirical studies reviewed related to injury prevention. Neither originated in UK.
Savaya et al 2008 Israel	To contribute to a better understanding of the factors and processes that differentiate between programmes that are sustained and those that are not. Focus on social programmes.	Narrative review	No details provided.	Influences on sustainability: 1) Project design and implementation: programme theory, demonstrable effectiveness, flexibility, human resources, financial resources, evaluation. 2) Organisational factors: stability and flexibility, programme champions, managerial support, integration. 3) Factors in the broader community: support, political legitimation, socio-economic context. Identifies the potential role of the funding body in sustainability.	Influences categorised after Shediac-Rizkallah & Bone, 1998. Literature review conducted as introduction to case study analysis.

Author,Date, Country of origin	Aim(s)	Review type	Publication dates/studies included	Key findings	Comments/quality assessment
Wiltsey Stirman et al 2012 U.S.	To review the empirical literature and make recommendations for future research on the sustainability of new programs and innovations in the healthcare setting.	Systematic review	***Publication dates:*** to July 2011 ***Studies included:*** n=125	Influences categorised into 4 areas: 1) Programme: fit, adaptability, effectiveness/benefit, fidelity 2) Organisational context: climate,culture, leadership, setting characteristics, system/policy change 3) Capacity: champions, funding, workforce, resources, community/stakeholder support/involvement 4) Processes: relationships, shared decision-making, adaptation, integration of rules/policies, evaluation/feedback, training, collaboration, navigating competing demands, ongoing support, planning.	Suggestion of multiple level interactions emerges from introduction of new category – "processes". Rigorous review process employed using range of truncated search terms and alternative spellings.

Author,Date, Country of origin	Aim(s)	Review type	Publication dates/studies included	Key findings	Comments/quality assessment
Schell et al 2013 U.S.	To present a new conceptual framework for program sustainability in public health.	Narrative review	***Publication dates:*** covers 20 years, dates not specified. ***Studies included:*** n = 85	Influences aggregated into 9 core domains, two of which seen as key influences on sustainability (2 and 4). EXTERNAL FACTORS: 1) Political support 2) Funding stability 3) Partnerships 4) Public health impact INTERNAL FACTORS: 5) Organisational capacity 6) Programme evaluation 7) Programme adaptation 8) Communications 9) Strategic planning	Modification to the framework led to loss of factor 4 – regarded as outcome. Framework tested, though not on injury prevention programmes (Luke,2014) Includes publications within the 'grey' literature. Only programmes of U.S./Canadian origin included.
Whelan et al 2014 Australia	To report on a scoping review that aimed to understand key elements of sustainability in public health and health promotion interventions, using community-based obesity prevention as an example.	Scoping review* (see comments)	***Publication dates:*** to January 2014. ***Studies included:*** not specified	Influences categorised as 10 "key elements": 1) Early planning 2) Gathering and using the evidence 3) Seeking commitment and support 4) Community engagement and partnerships 5) Programme champions 6) Building organisational and community capacity 7) Evaluation 8) Embedding into care policy 9) Evolving and adapting 10) Funding	*The authors describe this as a 'scoping review' but provide no overview of the studies included. Searches screened for 'sustainability' but no indication as to whether alternative search terms used.

A minority of publications addressed the interaction between influences operating at different levels, considering how these might combine to produce conditions more or less supportive to sustainability (Greenhalgh, Robert et al. 2004; Gruen, Elliott et al. 2008; Wiltsey Stirman, Kimberly et al. 2012). Gruen et al, for example, considered the two-way dynamics between a triad consisting of programme factors, the health problems that they addressed and drivers in the wider environment (Gruen, Elliott et al. 2008). The authors illustrated how changes within one area, such as the status of the economy within the wider environment, can determine local priorities and thus affect the sustainability of individual programmes.

Active planning for sustainability was advocated in much of the public health literature (Yin 1981; Shediac-Rizkallah and Bone 1998; Paine-Andrews, Fisher et al. 2000; Johnson, Hays et al. 2004; Mancini and Marek 2004; Pluye, Potvin et al. 2004; Scheirer 2005; Davies and Macdowall 2006; Scheirer and Dearing 2011). However this can conflict with the need to present evidence of effectiveness which may not become apparent until a programme has been fully operational for some time (Wiltsey Stirman, Kimberly et al. 2012).

Much of the literature adopted a socio-ecological approach, categorising the influences on sustainability according to the level at which they exerted their effect. In keeping with the conceptual framework developed by Schediac-Rizkallah and Bone, discussion of the influences on sustainability in the following sections has therefore taken a similar approach, categorising these into factors associated with the programme, the organisational setting and the broader community (Shediac-Rizkallah and Bone 1998).

2.4.3.2 The role of funding

The provision of adequate funding to support programme sustainability emerged as a common factor within the public health literature. Some authors have suggested that provision of insufficient resources in the short to medium term can result in the failure of potentially successful programmes, leading to inaccurate conclusions of their effectiveness and limiting opportunities for sustainability (Goodman, Steckler et al. 1993b; Shediac-Rizkallah and Bone 1998). The negative impact of short-term funding is further compounded in disadvantaged communities that lack internal resources, making them even more reliant on external support for programme implementation and, potentially sustainability (Olsen 1998; Shediac-Rizkallah and Bone 1998; Nutbeam, Harris et al. 2010).

Inadequate or unstable sources of funding are oft-cited barriers to programme continuity (Goodman, Steckler et al. 1993b; Bracht, Finnegan et al. 1994; Wharf Higgins, Naylor et al. 2007; Schell, Luke et al. 2013), with programme staff identifying funding as key to sustainability (Scheirer 2005). Financing has been referred to as:

> *"probably the most important factor in sustainability"*
> (Shediac-Rizkallah and Bone 1998): p.100

with the potential to facilitate the embedding of a programme into the wider organisational setting (Yin 1981; Whitelaw, Graham et al. 2012).

Obtaining funding from multiple sources has been suggested to enhance the prospects of programme sustainability

(Savaya, Spiro et al. 2008). The same authors also identified multiple funding sources to be a predictor of sustainability in a survey of 197 short-term funded social projects in Israel (Savaya and Spiro 2012). To maximise the efficient use of financial resources it has been suggested that funders should invest in the expansion of existing programmes rather than attempting to initiate new projects (Goodman and Steckler 1989; Wharf Higgins, Naylor et al. 2007). This would however have detrimental effects on encouraging innovative practice.

In the absence of adequate funding, a range of protective or compensatory factors such as redefining the project scope or accepting in-kind donations, have been associated with continuation of programme activities (Paine-Andrews, Fisher et al. 2000; Lapelle, Zapka et al. 2006; Wharf Higgins, Naylor et al. 2007; Wiltsey Stirman, Kimberly et al. 2012).

2.4.3.3 Factors associated with the programme

Interventions that develop from prudent use of the evidence-base in order to identify underlying causes and effective counter-measures may attract initial resource allocation (Whelan, Love et al. 2014). Beyond this, aligning programme aims with the needs of the target group and/or the organisation may positively influence sustainability (Goodman and Steckler 1989; Johnson, Hays et al. 2004; Scheirer 2005). Where the alignment, or 'fit', of an intervention fails to keep pace with changing needs within the local setting, programme discontinuation may result. This was demonstrated by programmes established as part of the Healthy Heart initiative in the United States (Bracht, Finnegan et al. 1994). The authors identified several reasons for programme cessation,

among them perceived loss of value to stakeholders and lack of uptake within the community.

It has been suggested that flexible programmes, able to adapt to contextual change over time, are more likely to be sustained (Scheirer 2005; Schell, Luke et al. 2013; Whelan, Love et al. 2014). However, since fidelity to essential programme components is linked to intervention outcomes, any modifications to these may also impact on effectiveness (Carroll, Patterson et al. 2007).

The influence of programme effectiveness per se on sustainability remains unclear. Two of the reviews considered here suggest effectiveness as a facilitator for sustainability (Johnson, Hays et al. 2004; Savaya, Spiro et al. 2008). However a more recent review suggests that it may be the perception of effectiveness by those involved that carries more influence than the actual evidence of this (Schell, Luke et al. 2013). In a similar way, perceived programme benefits, either as public health gain for the target group or benefits for staff and stakeholders involved in delivery, have also been positively associated with sustainability (Yin 1981; Scheirer 2005; Schell, Luke et al. 2013).

2.4.3.4 Factors associated with the organisational setting

Many of the factors associated with programme sustainability are thought to exert their influence at the level of the host organisation. Among the "human factors" are those relating to staff capacity (Greenhalgh, Robert et al. 2004; Schell, Luke et al. 2013), and ongoing support for training (Greenhalgh, Robert et al. 2004). Strong programme leadership and

management commitment across all levels have been identified as positive influences on sustainability (Johnson, Hays et al. 2004; Mancini and Marek 2004; Savaya, Spiro et al. 2008; Whelan, Love et al. 2014). In addition, leaders that demonstrated an understanding of different partner perspectives and were comfortable with sharing ideas, resources and power between agencies (referred to as "boundary-spanning leaders") have been associated with enhancing collaboration and partnership synergy (Cramm, Phaff et al. 2013). It has been also been suggested, however, that current approaches within public health programmes involving joint ownership between multiple stakeholders may complicate the process of assigning lead agency responsibilities (Wharf Higgins, Naylor et al. 2007).

The notion of "champions" able to generate enthusiasm for a programme and facilitate productive relationships was a recurring theme in the literature (Goodman and Steckler 1989; Greenhalgh, Robert et al. 2004; Johnson, Hays et al. 2004; Scheirer 2005; Savaya, Spiro et al. 2008; Saunders, Pate et al. 2012; Whelan, Love et al. 2014). The positive influence of innovators displaying a "can-do" attitude may hint at the characteristics contributing to the success of such individuals (Yin 1981; Pluye, Potvin et al. 2005). Collaboration appears to be an important process (Johnson, Hays et al. 2004; Nilsen, Timpka et al. 2005; Schell, Luke et al. 2013), with internal relationships forming the basis for the external partnerships that often prove critical for sustainability (Hanson, McFarlane et al. 2012).

Other potential influences concerned the culture of an organisation and its usual mode of practice. Flexibility within

the organisational structure and devolved decision making are suggested as two factors that may support routinization – the process whereby a novel programme becomes part of the normal business of an organisation (Greenhalgh, Robert et al. 2004). A willingness to accept innovation may explain the tentative suggestion, based on a systematic review of nineteen US and Canadian health-related programmes, that early adopters appear to have a greater chance of sustaining a programme once it is implemented (Scheirer 2005).

Integrating a programme into the wider organisation appears to enhance its chances of sustainability (Savaya, 2008; Shediac-Rizkallah & Bone, 1998), though paradoxically this also makes it vulnerable to changing financial and political priorities within the host agency (Nilsen, Timpka et al. 2005; Gruen, Elliott et al. 2008; Hanson, McFarlane et al. 2012). Findings from an Australian survey of project leaders associated with 106 government-funded community initiatives suggested that the continued support of the host agency was a strong predictor of anticipated sustainability, possibly interpreted as an intermediate step towards institutionalization (Savaya, Elsworth et al. 2009).

2.4.3.5 Factors associated with the broader community

Despite extensive use of the case study approach in the sustainability literature (see Section 2.4.4.1), the influence on sustainability of contextual factors operating in the wider environment has remained poorly addressed. Involving the target community has been identified as a positive influence on sustainability, with the potential to increase investment in programme ownership (Johnson, Hays et al. 2004; Savaya,

Spiro et al. 2008). Similarly, stakeholder support from other organisations may enhance sustainability prospects (Scheirer 2005; Hanson, McFarlane et al. 2012).

The wider socio-economic context into which an intervention is introduced can exert an effect on sustainability, with political and economic drivers influencing stakeholders, who in turn decide programme fate (Gruen, Elliott et al. 2008). A supportive political environment may therefore positively influence programme sustainability (Savaya, Spiro et al. 2008; Schell, Luke et al. 2013). By contrast, diverting resources to address multiple or competing problems, often a characteristic of deprived communities, has been shown to inhibit sustainability at both community and organisational levels (Shediac-Rizkallah and Bone 1998; Whitelaw, Graham et al. 2012).

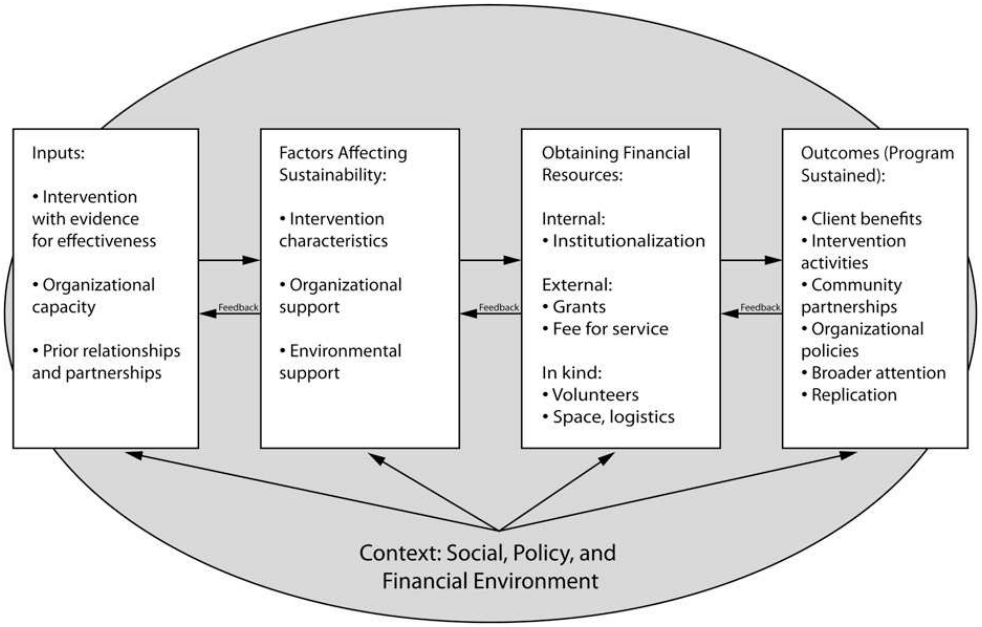
2.4.3.6 Conceptual frameworks for sustainability

The multiple factors associated with sustainability have informed the development of a range of conceptual models designed to aid understanding of the phenomenon. Few of these have been tested and support in the form of planning tools is lacking (Schell, Luke et al. 2013). The original model presented by Shediac-Rizkallah and Bone identified three categories of influencing factors (Shediac-Rizkallah and Bone 1998). Factors associated with the broader community, such as political and socio-economic conditions, were considered to exert a unidirectional influence on other factors associated with either the programme or the organisational setting. Sustainability manifested in the form of maintained health benefits, programme institutionalization and community capacity building. The socio-ecological basis of this

conceptualisation has endured and continues to influence current thinking.

One framework developed from this model has been presented for use with generic health promotion programmes and is illustrated below in Figure 1 (Scheirer and Dearing 2011).

Figure 1 A generic framework for the sustainability of public health programmes
(Scheirer and Dearing 2011)



The framework takes as its basis an *"intervention with evidence for effectiveness".* The authors acknowledge however that in some cases, for example when considering a pilot programme or in community-based studies where research results may take longer to produce, full evidence of effectiveness may not always be available at the point at which programme sustainability is considered. They advocate therefore that intervention and sustainability research should occur in parallel, with preliminary results being made available

to assist management decisions regarding continuing support for the programme.

Within the framework, "independent variables" are identified that operate within three levels of influence associated with:

- the intervention
- the organisation
- the environment.

Sustainability outcomes are manifested as six "dependent variables", specifically: continued benefits; continued activities; maintenance of partnerships; maintenance of new practices/policies; maintenance of attention to the issue and replication at other sites (Scheirer and Dearing 2011). The authors give no indication as to which among these may have priority. Financial resources feature as a separate category mediating between influencing factors and outcomes. Interactions between the framework categories are depicted as two-way. In keeping with a socio-ecological approach, the authors situate the framework within the wider context, encouraging consideration of influences in the broader environment such as social, financial and policy implications. As yet the framework remains untested.

Other conceptual frameworks have adopted a similar open-system approach, placing emphasis on the need for overall balance between individual components in order to achieve equilibrium (Olsen 1998; Sarriot, Winch et al. 2004; Gruen, Elliott et al. 2008). One framework designed for assessing sustainability of child health programmes in developing countries identified three inter-related components: health and health services, organisational factors and social ecological

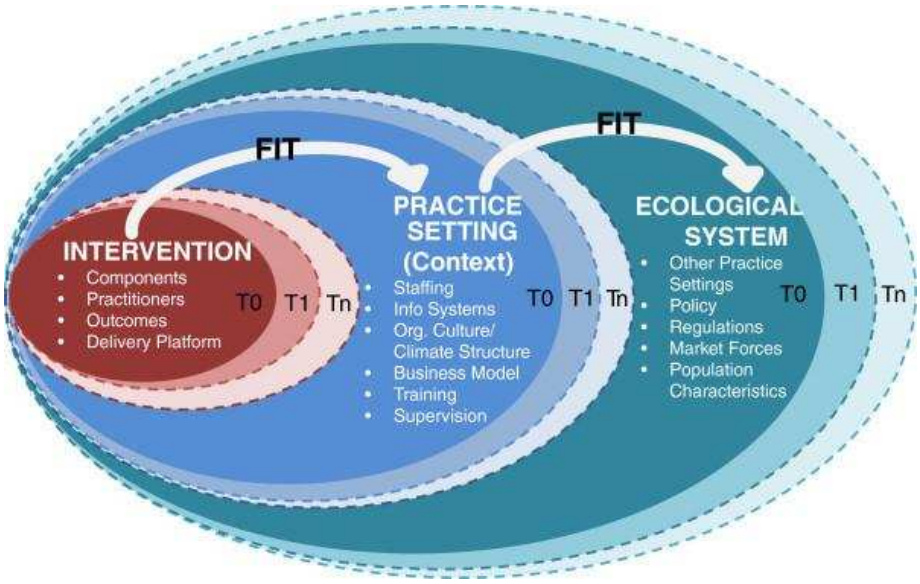
influences (Sarriot, Winch et al. 2004). Opinion on the value of the framework obtained from stakeholders within child health programmes led the authors to suggest that progress within each of these was essential for sustainability.

Although a socio-ecological approach to the conceptualisation of sustainability is evident in much of the literature, factors operating in the wider environment appear to be less well represented within several of the frameworks. In some, these are absent altogether (Johnson, Hays et al. 2004; Savaya and Spiro 2012). One study of community-based family programmes in the US led to the development of an index reflecting seven elements of sustainability, subsequently tested in a survey of professionals (n=243) (Mancini and Marek 2004). While six of the seven elements were found to fit the model, the exception was "understanding the community", a category that had included wider environmental influences, but which was subsequently dropped from the model. It has been suggested that the complexity of processes associated with second order social change, involving for example regulatory control and redistribution of power, may act as disincentives to include this within efforts to encourage and assess sustainability (Swerissen and Crisp 2004).

The conceptualisation of sustainability as a process requiring ongoing assessment over time is a feature of the Dynamic Sustainability Framework (DSF) (Chambers, Glasgow et al. 2013). The model, developed primarily with a focus on clinical care settings, is illustrated in Figure 2.

Figure 2 The dynamic sustainability framework

(Chambers, Glasgow et al. 2013)



The DSF requires ongoing monitoring of the characteristics of the intervention, the immediate environment (labelled as practice setting) and the wider environment (labelled as ecological system) at intervals of time (represented as T0, T1, Tn) in an attempt to continuously improve their respective 'fit'. The dotted lines represent changes occurring within each contextual level over intervals of time. The authors state that the DSF supports a culture of Continuous Quality Improvement whereby commitment is made to the ongoing evolution of a programme through its continuous adaptation to changing contexts. This rejects the concepts of *"voltage drop"*[1] and *"program drift"*[2], both of which assume that fidelity to the original programme represents the optimal achievement (Chambers, Glasgow et al. 2013). Although the value of core

[1] *"Voltage drop"*: the reduction in outcomes observed between the efficacy of an intervention in a research setting and its subsequent effectiveness when implemented in a community setting (Kilbourne 2007).

[2] *"Program drift"*: changes made to an intervention as it is implemented over time (U.S. Department of Health and Human Services 2002).

programme components is acknowledged, these are considered of less importance for sustainability than a culture of quality improvement:

"ongoing quality improvement of interventions is the ultimate aim, not quality assurance of them"

(Chambers, Glasgow et al. 2013):p.121

Rather than viewing contextual change as a challenge to sustainability, the authors embrace this, claiming it provides an opportunity to improve understanding of optimal programme fit and refinement within diverse settings.

The range of conceptual models suggested for sustainability has led to the recommendation that future research efforts should attempt to explicitly define the basis of any conceptual framework used (Wiltsey Stirman, Kimberly et al. 2012). This would enable differences in emphasis regarding the processes and components of sustainability to be taken into account across studies.

2.4.4 Methodological lessons learned from existing research: implications for future study design

2.4.4.1 Methods used and study design

Research into the sustainability of public health programmes remains at an early stage (Greenhalgh, Robert et al. 2004). The current literature review has identified examples of both quantitative and qualitative methods used within empirical studies.

Surveys of programme staff, such as those conducted by Savaya exploring the predictors of sustainability, provided

information from a range of projects in which the numbers of participants strengthened the potential for generalisation from the authors findings (Savaya, Elsworth et al. 2009; Savaya and Spiro 2012). The quantitative approach was built on a prior understanding of the potential indicators of sustainability developed through a multiple case study of six innovative social programmes in which the authors employed qualitative methods (Savaya, Spiro et al. 2008).

The use of qualitative methods in exploratory studies has provided valuable insights into the understanding of process issues associated with sustainability (Hawe, King et al. 1998; Pluye, Potvin et al. 2005; Saunders, Pate et al. 2012; Harris and Sandor 2013). For example, in a multiple case study of heart health programmes in Quebec, the Critical Incident Technique was used to identify ten important incidents from project reports (Pluye, Potvin et al. 2005). These were then further explored through participant interviews. The authors reported that significant events in the life story of a programme, such as the creation of a new post, were capable of triggering mechanisms that resulted in routinization.

Qualitative methods enable detailed information to be collected regarding intervention content, and also support the exploration of process issues associated with programme operation. Both of these aspects have been highlighted as important considerations within future sustainability research (Scheirer and Dearing 2011; Wiltsey Stirman, Kimberly et al. 2012). The lack of documented process issues within the existing empirical literature on injury prevention may limit the understanding of programme implementation, and potentially

of sustainability (Nilsen 2004; Ingram, Deave et al. 2012), making this particularly relevant for the current study.

The current literature review identified a lack of consensus in the definition and conceptualisation of sustainability. Perspectives on sustainability have been shown to vary between professional groups (Leurs, Mur-Veeman et al. 2008; McMillan 2013) and to be subject to personalisation (Hanson, Salmoni et al. 2009). The inclusion of multiple perspectives as supported by qualitative methods therefore appears to offer an appropriate approach for the exploration of sustainability.

The potential for both programme and contextual factors to influence sustainability has been identified in the literature (Scheirer 2005; Scheirer and Dearing 2011; Wiltsey Stirman, Kimberly et al. 2012). The adoption of a case study approach, capable of exploring influences at both these levels, featured extensively within empirical studies into the sustainability of public health programmes (Goodman, Steckler et al. 1993b; Paine-Andrews, Fisher et al. 2000; Pluye, Potvin et al. 2005; Lapelle, Zapka et al. 2006; Wharf Higgins, Naylor et al. 2007; Savaya, Spiro et al. 2008; Whitelaw, Graham et al. 2012), and also contributed to the development of conceptual frameworks associated with sustainability (Goodman and Steckler 1989; Heward, Hutchins et al. 2007; Leurs, Mur-Veeman et al. 2008). Case studies support the socio-ecological conceptualisation of sustainability, the basis for several of the key frameworks reviewed (Shediac-Rizkallah and Bone 1998; Gruen, Elliott et al. 2008; Scheirer and Dearing 2011; Chambers, Glasgow et al. 2013). Although case studies are based on the particular rather than the general, the inclusion

of multiple sites may help to improve the transferability of findings (Yin 2009).

2.4.4.2 Data sources

Much of the empirical literature relied on self-reported data as an indicator of sustainability and did not attempt to corroborate this using other sources (Scheirer 2005). One systematic review of health interventions identified self-reported data as the sole source in almost half of the 125 studies included (Wiltsey Stirman, Kimberly et al. 2012).

A further methodological weakness apparent in some of the studies for this review was that the sole perspective related to one key professional participant (Lapelle, Zapka et al. 2006; Savaya, Elsworth et al. 2009; Savaya and Spiro 2012). Experience from the Healthy Heart initiative illustrated the reluctance of senior programme staff to acknowledge shortcomings within their own area (Rissel, Finnegan et al. 1995). Obtaining a single professional perspective may therefore lead to potential bias whereby participants provide socially desirable responses, particularly if they believe that these may influence future programme prospects.

The rigour of future research studies into sustainability may be enhanced by considering the perspectives of multiple informants and by including multiple sources of evidence, including documentation, to corroborate findings (Scheirer and Dearing 2011).

2.4.4.3 Involvement of the target group

Though benefits to the target group are regarded as a common manifestation of sustainability, a systematic review of

nineteen health related programmes found that only two studies explored continued benefits to new clients (Scheirer 2005). The author recommended ongoing monitoring to assess benefits, stating that these should not be assumed simply because a progamme is sustained.

Overall the perspective of the target group was poorly represented in studies of sustainability in public health programmes. Of the twenty-four empirical reports reviewed that related to public health programmes, only one (4.2%) included views from the target group. This was a programme to promote physical exercise for girls in secondary schools in which focus groups took place with pupils (Saunders, Pate et al. 2012). It has been recommended that future research studies should attempt to confirm the continuation of client benefits, particularly where the original programme may have been modified over time (Wiltsey Stirman, Kimberly et al. 2012).

2.4.4.4 Addressing contextual issues

Exploration of influences operating in the wider environment appeared to be under-represented in the literature, compared to those within the organisational setting. It has been suggested that the inclusion of underlying data sources, for example policy documentation, may assist in identifying some of these wider influences (Scheirer and Dearing 2011).

The empirical literature in this review lacked detailed "thick description" of contextual factors that may have assisted with transferability of findings. In addition there was a paucity of UK-based research on sustainability. The majority of primary studies reviewed were of North American or Antipodean origin,

raising questions as to the transferability of findings to the UK setting where political and economic governance and social norms may differ. Only one UK-based empirical study, a multiple case study considering sustainability in health promoting settings within the Scottish health service, and one sustainability assessment tool originating in England were identified (NHS Institute for Innovation and Improvement 2003; Whitelaw, Graham et al. 2012). The recent transfer of responsibility for public health in England from health authorities to local authorities may have implications with respect to the current relevance of findings from these sources, particularly where organisational influences on sustainability are concerned.

2.5 FINDINGS FROM COMMUNITY-BASED INJURY PREVENTION PROGRAMMES

2.5.1 Overview of injury prevention publications addressing sustainability

Twelve of the sixty-five publications included in this review specifically addressed sustainability within community-based injury prevention programmes. The publication dates for these ranged from 1996 – 2013.

Two of these twelve publications were systematic reviews, a summary of which is provided in Table 2.5. The first of these addressed the effectiveness of sixteen community-based injury prevention programmes, published between 1987 – 2002 (Nilsen 2004). Ten of the programmes considered had a focus on children, seven included interventions to address injuries in the home setting. None of the studies included were UK-based. The second of the systematic reviews focused on the sustainability of community-based falls prevention

programmes targeted at older people and included two UK-based studies (Lovarini, Clemson et al. 2013).

Nine of the twelve injury-focused publications were primary studies, the findings from which are summarised in Table 2.6. Five primary studies emerged from the WHO Safe Communities initiative. Four of the five originated in Sweden (Lindqvist, Timpka et al. 1996; Bjerre and Schelp 2000; Nilsen 2004; Nordqvist, Timpka et al. 2009) and one was Australian (Hanson, McFarlane et al. 2012). Three other studies concerned falls prevention programmes for older people. One of these took place in Australia and considered influences on sustainability (Barnett, Van Beurden et al. 2004); the remaining two were of Canadian origin in which the same lead author explored perceptions of sustainability among stakeholders within three demonstration sites (Hanson, Salmoni et al. 2009; Hanson and Salmoni 2011). The ninth primary study reported on a comparative survey of national scorecards developed to assess indicators of child injury prevention across eighteen European countries (Mackay and Vincenten 2012). Assessments of national leadership, infrastructure and capacity were included within this.

The last of the twelve injury-specific publications was a chapter from a book on injury prevention and public health. (Christoffel and Gallagher 2006; Chapter 14: p. 425-42). In this the authors briefly considered sustainability as part of the programme planning process.

Table 2.5 Systematic reviews addressing programme sustainability within the injury prevention literature

Author, Date, Country of origin	Aim(s)	Search criteria	Key Findings	Quality assessment/ comments
Nilsen 2004 Sweden	To identify key components that contribute to the effectiveness of community based injury prevention programmes employing multiple strategies to target different age groups, environments and situations.	***Publication dates:*** 1987-2002 ***Studies included:*** n = 16 (10 focus on children, 7 focus on home injury, no UK-based studies) ***Exclusion criteria:*** programmes that target a specific injury category e.g. falls or burns.	Programme duration identified as one of 6 critical factors influencing effectiveness. Influencing factors may work in one context or timeframe but not in another (transferability). ***Other comments:*** few studies related to sustainability, lack of process and programme description reported.	Association between duration and effectiveness: *"most successful programmes are longer lasting"*. This is less apparent when considering only programmes that focus on child home injuries. 3 programmes target lower socioeconomic communities: mixed findings on effectiveness.
Lovarini et al 2013 Australia	To identify theories, models, frameworks, influencing factors or interventions for sustaining community fall prevention programmes.	***Publication dates:*** 1998-2011 ***Studies included:*** n=19 (2 UK based studies dated 2002, 2010) ***Exclusion criteria:*** 'grey' literature	Most common influences: ongoing financial support and participation of target group. Unable to identify critical factors. Some programme-specific barriers. Proposes "supporting interventions" for sustainability. ***Other comments:*** description and definition of sustainability inconsistently reported in studies.	Studies reviewed include Hanson, 2009 and Barnett, 2004 (see Table 3ii)).

Table 2.6 Primary studies of sustainability within the injury prevention literature

Author, Date, Country of origin	Aim(s)	Intervention, data collection interval, method	Key Findings	Quality assessment/ comments
Lindqvist et al 1996 Sweden	To present the participative model used in one of the first Swedish Safe Communities programmes (Motala) and lessons learned from the first 10 years of its operation.	***Intervention***: Safe Communities Programme, commenced 1983, handover to practitioners 10 years later. Action research with dynamic researcher role. Active and passive interventions, focus on children up to 15 years of age. ***Method*** : Documentary review, interviews with community informants, analysis of outcome data, practitioner involvement in interpretation of findings.	Communication between departments and agencies identified as key to programme maintenance. Hand-over stage critical : to *"right people"* rather than formal authority. Implementation took time, need long-term project – preferably more than 10 years.	Qualitative methods enabled identification of process issues associated with sustainability.
Bjerre & Schelp 2000 Sweden	To examine whether the character of a community-based injury prevention programme was a determining factor on the outcome (in-patient injury cases); to evaluate the effects of this programme and to draw comparisons with other community-based programmes.	***Intervention***: Safe Communities programme in Falun, commenced 1989. Activities varied with time, primarily employed active strategies. Five special risk groups included injuries to children at home. ***Data collection interval***: 7 years of programme activity. ***Method****:* Review of hospital admissions (outcome data).	Reduction in admissions for targeted compared to less targeted and non-targeted injuries. Effect lasted 7 years, though diminished in final 2 years of programme when a decline in activities was also observed. Suggest community-based programmes should be continuously renewed and reinforced.	Duration of intervention enabled data to be collected over several years. Monitoring of programme activities enabled linkage of these with injury outcomes.

Author, Date, Country of origin	Aim(s)	Intervention, data collection interval, method	Key Findings	Quality assessment/ comments
Barnett et al 2004 Australia	To assess sustainability of the 1992-1996 'Stay on Your Feet' programme for older adults across multiple community stakeholder groups.	***Intervention****:* 4-year multi-component falls prevention programme for older Australians. ***Data collection interval***: 5 years after programme support ended. ***Method***: Survey of professionals by mail/telephone. Focus groups with target group representatives (n =73).	Most common reason for programme cessation – loss of funding (41% respondents). Continued professional involvement as *"part of work role"* (41% respondents). Found that programme sustained among professionals and behavior change sustained in target group.	Survey response rates varied by professional group. Highest: 90% (n=10) for shire council employees Lowest: 63% (n=204) for community health staff. Measure of sustainability based on proportion of staff involved throughout the duration of the project. This does not appear to account for staff turnover where the role may be continued by a different individual. May result in under-estimate of sustainability.

Author, Date, Country of origin	**Aim(s)**	**Intervention, data collection interval, method**	**Key Findings**	**Quality assessment/ comments**
Nilsen et al 2005 Sweden	To contribute to improved understanding of the conditions under which community-based injury prevention programmes are most likely to attain sustainability.	***Intervention***: Safe Communities Programmes operating in 10 sites in Sweden. ***Data collection interval***: 9-28 years. ***Method****:* Telephone interviews with one professional from each site. Analysis based on 7 pre-imposed categories: 1) Resources, 2) Activities, 3) Effects, 4) Financial, 5) Human, 6) Structural, 7) Relational.	Influences on sustainability are inter-related with none primary. Financial, human and relational resources lay groundwork. Intersectoral collaboration and programme adaptability crucial for sustainability. Political commitment needed at highest level. Reliance on key individuals may compromise sustainability. Integration acts as facilitator but vulnerable to financial and political priorities of host agency.	Data from only one key professional informant in each site. Pre-determined categories for analysis may have overlooked other potential influencing factors.
Hanson, H et al 2009 Canada	To uncover how the goal of programme sustainability was interpreted by key stakeholders from 3 fall prevention demonstration sites.	***Intervention***: Fall prevention programmes for older people in 3 sites, 2 years initial funding. ***Data collection interval***: 6 months after funding ended. ***Method*** : Stakeholder interviews (n=40), included target group.	Sustainability associated with continuity of programme activities rather than goals. Meaning of sustainability personalised by stakeholders.	Included target group though findings not reported from differing participant perspectives.

Author, Date, Country of origin	Aim(s)	Intervention, data collection interval, method	Key Findings	Quality assessment/ comments
Nordqvist 2009 Sweden	To empirically identify factors that promote sustainability in the structures of programmes that are managed and co-ordinated by local government.	***Intervention***: Safe Communities Programmes in the first of 10 designated Swedish municipalities. ***Data collection interval***: all participated for several years, though categorised as 'early' and 'late' designations. ***Method****:* Focus groups with professionals, interviews with politicians.	Networks, political support and co-ordination identified as influences. Decision-making primarily horizontal across groups. Lack of evidence of effectiveness led to loss of funding, despite necessity of funding to enable evaluation.	Involvement of programme staff and local politicians in providing data gives differing perspectives from the level of the organisation and the broader community.
Mackay & Vincenten 2010 Netherlands	To assess national leadership, infrastructure and capacity in the context of child injury prevention in 18 countries in Europe and to explore the potential of these for use as additional indicators to support child injury prevention practice.	***Intervention:*** None ***Method***: Survey of key stakeholders in child injury prevention. Assessed indicators associated with national leadership, infrastructure and capacity building in 18 European countries. ***Data collection period:*** 2005-2006, co-ordinated by Eurosafe partners.	Overall scores suggest significant negative correlation between leadership and capacity building with child injury mortality ranking. Leadership, infrastructure and capacity may act in combination depending on policy and environmental influences. Identifies role for national government in co-ordination, communication and dissemination of evidence-based strategies.	Northen Ireland and Scotland participated, England did not at this stage though did in a later study. Scoring system used developed specifically for this study – not validated elsewhere.

Author, Date, Country of origin	Aim(s)	Intervention, data collection interval, method	Key Findings	Quality assessment/ comments
Hanson,H & Salmoni 2011 Canada	To share the perceptions of programme sustainability held by key stakeholders involved in a community-based fall prevention program in 3 demonstration communities in Canada.	***Intervention***: Fall prevention programme for older people in 3 sites. ***Data collection interval***: 6 months after funding ended. ***Method***: Stakeholder interviews (n=45), included target group.	Actions to enhance sustainability supported by literature: networking, partnerships, increasing capacity, policy change. Less reported strategies also identified e.g. alternate use of resources, use of own funds. Common barriers: funding, human resources. Also fear of fragmentation, lack of buy-in, loss of key individuals.	Same data-set as Hanson, 2009. Older adults included but no indication of numbers and overall results reported collectively. Provides perceptions of sustainability but does not link these to project achievements.
Hanson, D et al 2012 Australia	To quantify the flow of resources used by Mackay Whitsunday Safe Communities to implement and sustain its injury control activities.	***Intervention***: Mackay Whitsunday Safe Communities Programme, initiated 2000. ***Method***: Survey of network members (n=148). Social Network Analysis to quantify resource exchange between members.	54% reported exchange of human resources 47% reported exchange of "in'-kind" resources 15% reported exchange of financial resources. Internal networks considered critical for developing external networks. External networks vulnerable to sponsor priorities.	Unclear whether 'network members' included programme recipients. Survey response rate 87%.

2.5.2 Conceptualisation of sustainability in the injury prevention literature

2.5.2.1 Terminology and definition of sustainability

Sustainability appeared as the preferred term in the injury prevention literature, with seven of the twelve references using this nomenclature in their title. Only one publication, a multiple case study of ten Swedish Safe Communities programmes, provided an insight into the working definition adopted for sustainability (Nilsen, Timpka et al. 2005). This identified the continuation of programme activities as pre-requisite in order for benefits to be maintained:

> *"Sustainable health effects require the sustainability of the programme that delivers the effects".*
>
> (Nilsen, Timpka et al. 2005): p.187

One Canadian-based multiple case study explored the definition of sustainability within a community-based falls prevention programme for older people (Hanson, Salmoni et al. 2009). Multiple stakeholder perspectives were considered, revealing a diversity of meanings, the majority of which associated sustainability with the continuity of programme activities rather than health outcomes. The authors noted a tendency for individuals to personalise their meaning, and suggested that inconsistent conceptualisation may inhibit the identification and achievement of programme goals.

2.5.2.2 Manifestations of sustainability

Empirical studies into the sustainability of injury prevention programmes appeared to view the phenomenon as an "either/or" state, with no discussion of varying levels of sustainability or the role of programme fidelity. Only one

study mentioned programme adaptability as a positive influence on sustainability (Nilsen, Timpka et al. 2005).

2.5.2.3 Theoretical concepts associated with sustainability

The theoretical underpinning for sustainability was poorly addressed within the injury prevention literature. One systematic review of falls prevention programmes for older people recommended the Normalization Process Theory as a potential framework for sustainability, although this did not feature in any of the individual studies that were reviewed (Lovarini, Clemson et al. 2013). Normalization Process Theory, initially developed within the healthcare setting, suggests that continuing management support and an appreciation of benefits at both the individual and organisational levels can help to embed new working practices (May and Finch 2009).

One multiple case study of Safe Communities initiatives in Sweden developed an analysis framework based on Donabedian's Triad of structure-process-outcome, in which resources aid development of programme activities which then generate effects (Donabedian 1988; Nilsen, Timpka et al. 2005). The authors added an additional contextual element comprising four further resources: financial, human, structural and relational resources. These seven categories were then imposed on the analysis, potentially limiting the identification of other influences that may have emerged had a more exploratory approach been adopted.

One injury prevention publication adopted an open-system approach, conceptually similar to that used in the development

of models for sustainability within the wider public health literature (Hanson, McFarlane et al. 2012). Here Social Network Analysis (SNA) was used to measure the flow of resource exchange between a Safe Communities network in Queensland, Australia and its wider environment. SNA comprises a range of quantitative research tools designed to analyse relationship patterns. The study findings identified that the human and financial resources that sustained network activity come largely from external agencies, suggesting an ongoing role for external programme support. The authors argue that the principle of resource exchange identified here conflicts with the premise of capacity-building, a concept also associated with sustainability. In the latter, the development of resources internal to an organisation or community alludes to a degree of self-sufficiency that is at odds with acceptance of external support. Whilst there is clearly a tension between these two concepts, it is interesting to note that both rely on processes of change, itself identified as a key element of sustainability (Heward, Hutchins et al. 2007).

2.5.2.4 Conceptual frameworks for sustainability

No injury prevention studies were found that proposed a conceptual framework for sustainability, nor any that tested the existing frameworks identified earlier in this review. One of the publications reviewed noted that despite a requirement within the WHO Safe Communities Manifesto that member programmes demonstrate long term sustainability (World Health Organization 1989), no elaboration as to what constitutes "long term" is provided (Nordqvist, Timpka et al. 2009). Neither does the Manifesto provide suggestions for conceptualisation or support for the assessment of sustainability.

2.5.3 Influences on sustainability in the injury prevention literature and strategies to enhance this

2.5.3.1 Overview of influences

Four of the primary studies focused on identifying influences on the sustainability of injury prevention programmes (Barnett, Van Beurden et al. 2004; Nilsen, Timpka et al. 2005; Nordqvist, Timpka et al. 2009; Hanson and Salmoni 2011). Although no critical factors were identified, the issues of funding and human resources, and the inter-relations between these, were frequently mentioned.

Influences specific to the individual intervention or setting were suggested by two of the studies (Nilsen, Timpka et al. 2005; Lovarini, Clemson et al. 2013). For example, in a systematic review of influences on the sustainability of falls prevention programmes in older people, barriers emerged relating to risk and liability issues associated with the use of volunteers in programme delivery (Lovarini, Clemson et al. 2013).

2.5.3.2 Funding

Funding was identified as a common barrier to sustainability in falls prevention programmes for older people, and in broader focused community-based safety programmes (Barnett, Van Beurden et al. 2004; Nilsen, Timpka et al. 2005; Nordqvist, Timpka et al. 2009; Hanson and Salmoni 2011; Lovarini, Clemson et al. 2013). One innovative strategy for addressing this emerged from a Canadian study where stakeholders in a falls prevention programme for older people reported using their own personal finances to promote the intervention (Hanson and Salmoni 2011). Whilst this may work in the

short-term, perhaps as a bridge between formal funding sources, as a longer-term strategy it may place unrealistic expectations on individuals.

2.5.3.3 Collaboration

Networking and partnerships were identified as influences on sustainability (Nilsen, Timpka et al. 2005; Nordqvist, Timpka et al. 2009; Hanson and Salmoni 2011; Hanson, McFarlane et al. 2012). Internal relationships were postulated as the basis for forming the external partnerships upon which programme funding often depended (Hanson, McFarlane et al. 2012). The importance of personal contacts was highlighted in network development (Nordqvist, Timpka et al. 2009). However, it was also suggested that too much reliance on key individuals may threaten the sustainability of community-based programmes (Nilsen, Timpka et al. 2005; Hanson and Salmoni 2011).

2.5.3.4 Leadership, management and commitment

Leadership and management commitment across all levels were identified among the influences on sustainability. The findings from a comparative study of progress on injury prevention between European member states led the authors to identify a leadership role for government at national level (MacKay and Vincenten 2012). This consisted of co-ordinating activities, facilitating inter-agency communication and disseminating good practice. At organisational level, a report on the 10-year experience of operating a Safe Communities programme in Motala, Sweden identified the importance of regarding programme activities as part of the usual routine:

"…it was found essential to have the prevention activities grounded within the framework of day-to-day operation".

(Lindqvist, Timpka et al. 1996):p.344

The normalisation of programme activities was further supported by a survey of professional staff associated with a falls prevention programme for older people in Australia (Barnett, Van Beurden et al. 2004). Forty-one per cent of the respondents (n = 73) reported that the reason for their continued involvement was that the programme formed part of their work role, implying commitment at both bureaucratic and individual levels.

2.5.3.5 Intensity, duration and effectiveness of intervention activities

The intensity and duration of intervention activities have both been associated with the sustainability of community-based safety programmes. The Safe Communities experience in Falun, Sweden demonstrated that although a reduction in injury outcomes was detectable over a seven-year period, this diminished in the final two years of the programme, along with a decline in activity levels (Bjerre and Schelp 2000). This may in part be attributable to a levelling out of the intervention effect. The authors recommended renewal and reinforcement of programme activity in order to maintain benefits. The need to protect against reduced programme activity by means of "supporting interventions", such as the establishment of a programme co-ordinator or training for programme staff, was similarly identified in a systematic review of falls prevention programmes (Lovarini, Clemson et al. 2013). This may be particularly important in overcoming the effects of programme decay where active prevention strategies (those that require

repeat actions on the part of the target group, such as educational programmes relying on individual behaviour change) are used as opposed to passive measures (more often associated with environmental modifications) (Green and South 2006). The time needed to establish effective intersectoral collaboration may explain Nilsen's finding that success within community-based safety programmes, as assessed by injury outcomes, was associated with increased programme duration (Nilsen 2004; Nilsen, Timpka et al. 2005).

The influence of programme effectiveness on sustainability was inconclusive in the wider public health literature and this was echoed in the injury prevention field. Whilst lack of effectiveness could trigger loss of funding (Nordqvist, Timpka et al. 2009), the existence of injury surveillance systems was found to have little influence on sustainability, suggesting that programmes may be sustained without evidence of effectiveness (Nilsen, Timpka et al. 2005). This would appear to support Schell's supposition that it is the perception of effectiveness amongst those involved in programme delivery that carries more weight than the actual programme outcomes (Schell, Luke et al. 2013).

2.5.4 Methodological issues relating to injury prevention studies

2.5.4.1 Methods used

A case study approach was adopted in two of the injury prevention studies, resulting in three publications (Nilsen, Timpka et al. 2005; Hanson, Salmoni et al. 2009; Hanson and Salmoni 2011). One further publication involving process evaluation of a Safe Communities programme appeared to

satisfy the requirements of a case study, although the authors do not describe it as such (Lindqvist, Timpka et al. 1996). Qualitative methods, mainly involving interviews with programme stakeholders, featured in six of the empirical studies (Lindqvist, Timpka et al. 1996; Barnett, Van Beurden et al. 2004; Nilsen, Timpka et al. 2005; Hanson, Salmoni et al. 2009; Nordqvist, Timpka et al. 2009; Hanson and Salmoni 2011). These provided particular insight into the sustainability process. For example, one study of a Safe Communities initiative engaged local project practitioners to assist in interpreting the findings from documentary review and interviews with community informants (Lindqvist, Timpka et al. 1996). This revealed project hand-over to be a critical stage in the process and, crucially, the methods used were able to identify the importance of transferring responsibility to the *"right people"* rather than to formal authorities.

The data collection interval ranged from six months after the initial support period in a multiple case study exploring stakeholder definitions of sustainability, to twenty-eight years in an investigation of factors influencing the sustainability of ten Swedish Safe Community programmes (Nilsen, Timpka et al. 2005; Hanson, Salmoni et al. 2009).

2.5.4.2 Perspectives considered

Data sources consisted primarily of the views of programme participants, with only one study including a review of documentary evidence (Lindqvist, Timpka et al. 1996). Multiple stakeholder perspectives were better addressed within the injury prevention literature on sustainability than within the general public health literature and were a feature in six of the publications included (Lindqvist, Timpka et al. 1996;

Barnett, Van Beurden et al. 2004; Hanson, Salmoni et al. 2009; Nordqvist, Timpka et al. 2009; Hanson and Salmoni 2011; Hanson, McFarlane et al. 2012). The broadest range of participants was reported in a study exploring conceptualisation of sustainability among stakeholders in a Canadian community falls-prevention initiative for older people (Hanson, Salmoni et al. 2009). This included programme leaders, staff involved in delivery, volunteers and representatives of the target group. Only one of the studies reviewed was reliant on the perspective of a single professional in each site (Nilsen, Timpka et al. 2005).

Three publications included views of the target group, all of which addressed sustainability of falls prevention programmes for older people (Barnett, Van Beurden et al. 2004; Hanson, Salmoni et al. 2009; Hanson and Salmoni 2011). Barnett conducted focus groups with older people, (n=73), five years after support for the intervention ended. The findings from these were reported separately and indicated some sustained benefit through changes to daily practice consistent with the programme messages. Hanson interviewed older people in the target group across three programme sites to explore stakeholder definitions and perceptions of sustainability, resulting in two publications from the same data set (Hanson, Salmoni et al. 2009; Hanson and Salmoni 2011). The number of participants was not explicitly stated and findings were not reported from the perspective of the target group.

2.5.4.3 Contextual issues

Since none of the primary studies on injury prevention took place in the UK setting, transferability of findings deserves consideration. The remit of the five Safe Communities

programmes included home injuries in young children, however, four of these took place in Sweden where the local government infrastructure and behavioural norms with respect to safety differ from those in the UK. One systematic review identified three community-based safety programmes that targeted lower socio-economic groups and reported mixed findings regarding the influence of this on programme effectiveness (Nilsen 2004). It is important to note that none of the studies reported on the sustainability of home safety programmes targeted specifically at children living in socially deprived communities.

2.6 SUMMARY OF THE REVIEW FINDINGS

Programme sustainability within the public health literature remains an elusive and fragmented concept, revealing use of multiple terms and lack of consensus as to its operational definition. Initial short-term investment in programmes may inhibit sustainability whereas early, active planning is suggested to enhance it. The identification and description of essential programme components may improve understanding of the link between intervention fidelity and outcomes.

Multiple influences appear to act on programme sustainability. These are inter-related and exert their effect at different levels, leading to their broad categorisation as programme factors, organisational factors and factors in the broader community. No factor has been identified as primary, although provision of adequate funding is frequently associated with potential for programme continuity and may well be a pre-requisite for all other factors. Improved reporting of process measures and contextual detail in empirical studies, together with the adoption of standardised

terminology would improve understanding of the influences on sustainability.

Few studies of programme sustainability explicitly refer to theory. The literature on conceptualisation of sustainability is fragmented and although conceptual frameworks and assessment tools exist, few have been tested. The absence of standardised terminology and definitions associated with the field has led to a lack of clarity regarding the conceptualisation of sustainability. Exploration of the linkage between factors influencing sustainability and the way in which this manifests is under-represented. Generic frameworks and tools to assess sustainability may be of limited value given the programme and context-specific nature associated with some of the influencing factors. Whilst strategies to enhance programme sustainability involve modification of the influencing factors, there is currently no consensus as to which of these may be most effective.

Sustainability research lends itself to a case study approach that supports consideration of both programme and contextual factors, and includes multiple data sources. The use of qualitative methods has enabled exploration of sustainability from a range of perspectives, though currently views of the target group are under-represented. Attempts to corroborate participant self-reports using, for example, documentary evidence would enhance study rigour. Provision of "thick description" relating to the programme content, immediate setting and wider context may aid transferability of findings.

In relation to injury prevention, there is a paucity of literature on the sustainability of community-based safety programmes.

No empirical studies that addressed sustainability with respect to safety interventions for pre-school children in the UK setting were identified. Findings from the international literature (predominantly Australia, Canada and Northern Europe) raise issues of transferability to the UK context where the systems for funding, management and delivery of services may differ. Additionally, the relevance of current research findings with respect to socially deprived communities remains unclear. No conceptual frameworks exist to assist understanding of sustainability in injury prevention programmes, nor have generic models been tested using injury initiatives. Future research should consider the use of case study design and qualitative methods that enable exploration of the phenomenon from multiple perspectives, in particular giving voice to the views of the target group.

2.7 GAPS IN THE EVIDENCE BASE

The current study was designed to address the following gaps within the evidence base as identified by the literature review:

1) The lack of studies addressing sustainability of injury prevention programmes for children living in socially deprived communities in the UK setting.

2) The under-representation of the target group perspective and its potential influence on sustainability.

3) The extent to which existing conceptual models may apply to the sustainability of community-based home safety programmes.

CHAPTER THREE
CHILD INJURY PREVENTION IN PUBLIC HEALTH : A REVIEW OF POLICY

3.0 INTRODUCTION

This chapter presents a narrative overview and discussion of key public health policy documents at global and national level, exploring the trends within these with respect to child injury prevention.

Whilst the Literature Review in Chapter Two identified that factors operating in the wider environment may influence the sustainability of public health programmes, it was also noted these have received relatively little attention in the literature to-date (Scheirer and Dearing 2011). The existence of a supportive policy environment may encourage resource provision for public health interventions (Parekh, Mitis et al. 2014), and has also been positively associated with programme sustainability (Gruen, Elliott et al. 2008; Savaya, Spiro et al. 2008; Schell, Luke et al. 2013). Improved understanding of the policy context, and the factors within it that may influence health priorities, has been suggested as a means of encouraging the translation of research findings into practice (Kickbusch 2015).

This review considers the priority afforded to injury prevention within international and national public health policy over time. Whilst it is acknowledged that policies from a range of sectors outside health may impact on unintentional injury in childhood, a pragmatic decision was taken to limit searches to public health policy, since at the time of initiating the review,

the health sector was designated lead agency for injury prevention in England.

3.1 METHOD

3.1.1 Selection of documents

Source documents consisted of public health policies at global and national levels, injury prevention reviews and implementation guidance relevant to programmes for children and young people in England. The policy documents reviewed were produced by both government and non-governmental organisations, and constituted a:

> *"formal statement that defines priorities for action, goals and strategies, as well as accountabilities of involved actors and allocation of resources"*
>
> (Bull, Bellow et al. 2004): p.94

Since it has been suggested that influences on current policy may have developed over the longer term (Walt, Shiffman et al. 2008), initial searches were conducted to cover the 30 year period prior to initiation of the review (1981 -2011). This timeframe enabled all national public health policy produced in England to be included, as well as key international documents. Subsequent extension of the timeframe allowed the inclusion of policy documents published up to the time of writing (2014).

International and national documents were identified using researcher knowledge and searches of the following websites:

British Medical Association
http://www.bma.org.uk
Department of Health

http://www.dh.gov.uk/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/

European Union

http://europa.eu/legislation_summaries/public_health/european_health_strategy/index_en_htm

Injury Observatory Britain and Ireland

http://www.injuryobservatory.net/

Injury Prevention Journal

http://injuryprevention.bmj.com/

National Institute for Health and Clinical Excellence

http://guidance/nice.org.uk/

World Health Organisation

http://www.who.int/publications/en

Inclusion criteria for policy documents were as follows:

- Published in the English language post-1981
- Include goals/objectives/recommendations for improved child health

  and/or
- Identify strategies or priorities for action on injury

3.1.2 Review process

The initial policy review was conducted from October 2012 – January 2013, prior to data collection from study participants. Subsequent updates were made as new publications were identified. Two references providing guidance on policy review were used to inform the process (Walt, Shiffman et al. 2008; Daugbjerg, Kahlmeier et al. 2009). These encouraged consideration of policy content (targets and goals), implementation (actors involved, monitoring and evaluation, resources) and the wider context into which the policy was introduced. The data extraction form developed for this component of the study can be found at Appendix 3.

3.2 FINDINGS

3.2.1 Documents included in the review

A total of forty-nine documents were included in the review, a list of which is provided at Appendix 4. Twenty documents were of international or European origin and twenty-nine originated in England.

3.2.2 Overview of global public health policy documents

Documents produced at international level included one global health strategy (World Health Organization 1981), two health promotion charters (World Health Organization 1986; World Health Organization 2005a) and two documents relating to the Safe Communities initiative (World Health Organization 1989; World Health Organization 1998). Seven further World Health Organization documents had an injury prevention focus (World Health Organization 2005b; Peden, Oyegbite et al. 2008; Sethi, Towner et al. 2008; World Health Organization 2009; Sethi, Mitis et al. 2010; World Health Organization 2011; Zambon and Loring 2014). Four reports were produced by the European Child Safety Alliance, a network providing policy support and advocacy (European Child Safety Alliance 2004; Mackay and Vincenten 2007; European Child Safety Alliance 2012; MacKay and Vincenten 2012). Three health strategies were published by the European Union (EU), of which the UK became a member state in 1973 (European Community 2000; Council of the European Union 2007; European Union 2007). One European Commission (EC) document reflected on the EU health strategy (European Union 2004).

International documents ranged from four to 232 pages in length. Most were advisory in nature and broad in content to

account for the diversity in health patterns and policy implementation between countries. A socio-ecological approach to public health, acknowledging the link between the health of an individual and his/her environment, originated in the Ottawa Charter and provided an underpinning for many of the subsequent international documents (World Health Organization 1986).

3.2.3 Overview of English public health policy documents

The twenty-nine English documents included twelve government-produced national policy or policy-related documents (Department of Health 1992; Department of Health 1993; Department of Health 1999; Department for Education and Skills 2003; Department of Health 2003; Department of Health 2004; Department for Children Schools and Families 2007; Department for Children Schools and Families 2008; Department for Children Schools and Families, Department of Health et al. 2009; Department of Health 2010; Department of Health 2011; Department of Health 2012a). Seven independent reports were commissioned by government to inform policy (Acheson 1998; Department of Health 2002; Department of Health 2005; Audit Commission and Healthcare Commission 2007; Department for Children Schools and Families, Department of Health et al. 2009; The Marmot Review 2010; Department of Health 2013). A further eight publications consisted of independently produced guidance documents (British Medical Association 2001; National Institute for Clinical Excellence 2010a; National Institute of Health and Clinical Excellence 2010b; Royal Society for the Prevention of Accidents 2012; Buck and Gregory 2013; National Institute of Health and Clinical Excellence 2013; Royal

Society for the Prevention of Accidents 2013; Public Health England, Royal Society for the Prevention of Accidents et al. 2014). The remaining two documents comprised an independent review of child health (BMA Board of Science 2013) and an independent policy assessment (University of Leeds Glamorgan and the London School of Hygiene and Tropical Medicine 1998). English policy documents ranged from thirty to 352 pages in length.

Significant changes in the political and economic context in England occurred during the period covered by the review. There were two changes of national government, in 1997 and 2010. In January 2009 Britain was declared to be in economic recession. The resulting period of national austerity resulted in significant cuts to spending on public services, and increased both the rate of unemployment and that of housing repossession (Vaitilingam 2009). The impact of these may have had a detrimental effect on population health.

3.2.4 The status of injury prevention in public health policy

The extent to which injury featured within the public health agenda was explored. International documents were consistent in their recommendation that injury prevention be prioritised and supported as a public health issue in an attempt to reduce the associated health and financial burdens (World Health Organization 2005b; Council of the European Union 2007; Peden, Oyegbite et al. 2008; Sethi, Towner et al. 2008; World Health Organization 2011; European Child Safety Alliance 2012). A World Health Organization (WHO) resolution on the prevention of child injuries urged member states to:

"...prioritize the prevention of child injury among child issues and ensure that intersectoral coordination mechanisms necessary to prevent child injury are established or strengthened".

(World Health Organization 2011): p.2

This prioritisation was not reflected within public health policy in England where the status of unintentional injury was found to have declined significantly over the past two decades. In Health of the Nation, the first public health strategy for England, accident prevention was identified as one of five priority areas for action on health (Department of Health 1992). Whilst change of government has been suggested to inhibit national plans for child safety (Mackay and Vincenten 2007), the election of a Labour government in 1997 did not initially appear to have a detrimental effect on the profile of injury. In their first public health policy, Saving Lives: Our Healthier Nation, the new government named accidents as one of four "big killers" (Department of Health 1999). Further evidence of political commitment came with the establishment of a high-level, multi-disciplinary national Accidental Injury Task Force to assist in policy implementation. "Saving Lives" initiated a move away from policies that had held with an individual's responsibility for health, embracing a broader conceptualisation that focused attention on the underlying social and economic determinants. In keeping with this approach, a raft of multi-sector, national initiatives were introduced, such as Sure Start and Health Action Zones, targeted at the most deprived communities with the aim of reducing health inequalities.

The subsequent decade saw the publication of numerous government health policies that appear to coincide with fragmentation of the national agenda for injury (Baggott 2011). A policy report on injury prevention produced by the BMA highlighted disparity between unintentional (accidental) and intentional (deliberate) injury at both national and local levels:

"...in terms of staffing within the department (of Health), resourcing and the priority given to local action, unintentional injury lags well behind intentional injury".

(British Medical Association 2001): p.72

A re-orientation of the national discourse on injury within health policy, from unintentional to intentional causes, appeared to emerge following the Laming inquiry into the death of Victoria Climbié (HMSO 2003). The Laming report identified serious deficiencies in communication and co-ordination of children's services. As a consequence of this, radical reforms were introduced in the mid-term strategy Every Child Matters (Department for Education and Skills 2003). A new government department, the Department for Children, Schools and Families (DCSF) was formed to co-ordinate policy. The DCSF produced Action Plans for each of the five outcomes identified in Every Child Matters, specifically to: be healthy; stay safe; enjoy and achieve; make a positive contribution and achieve economic wellbeing (Department for Children Schools and Families 2007). The Staying Safe Action Plan marked the start of a broader conceptualisation of child safety encompassing neglect and abuse; accidents; bullying; crime and anti-social behaviour and the provision of a safe and stable home environment (Department for Children Schools

and Families 2008). This was supported by the establishment of a new Public Service Agreement (PSA) that combined hospital admissions for injury from both accidental and deliberate causes.

The sustainability literature suggests that policy changes may provide opportunity for programmes to become embedded in wider agendas, both within and beyond health (Shediac-Rizkallah and Bone 1998; Savaya, Spiro et al. 2008). However, responsive policy that is contingent on the reorientation of services, as has been the case for child health in England, appears to have presented a barrier to maintaining a focus on unintentional injury. In referring to accident prevention as *"targeted safeguarding",* the Staying Safe Action Plan may have assigned it a subsidiary role within this wider agenda (Department for Children Schools and Families 2008). The generation of a high public and media profile for intentional injury may have further served to divert resources away from unintentional injury, creating an adverse climate for practitioners seeking local programme support (Gruen, Elliott et al. 2008).

The decision to consider combined injuries resulting from both deliberate and accidental causes may be a reflection of the approach taken in several international documents (European Child Safety Alliance 2004; World Health Organization 2005b; Council of the European Union 2007). More recently however, the WHO has produced separate reports for each of these causes (Pinheiro 2006; Peden, Oyegbite et al. 2008; Zambon and Loring 2014) whilst acknowledging, as this exert from the report on unintentional injury shows, that the distinction between the two is not always clear cut:

"Determining the intentionality of an injury to a child is, however, not always straightforward. Where, in discussing data for a particular type of child injury, the question of intent may be ambiguous, then intentional injuries are also touched on in that particular chapter".

(Peden, Oyegbite et al. 2008): p.XV

With the election of the Coalition government in 2010, all policy aspects of Every Child Matters were eradicated and the Department for Children, Schools and Families was dissolved. The BMA Board of Science questioned who would now champion the interests of the child (BMA Board of Science 2013). From April 2013, the process of transferring responsibility for public health in England from the health sector to local authorities commenced. Unintentional injury became one of seventeen public health areas under local authority responsibility, with injury included as part of the Public Health Outcomes Framework (Department of Health 2011; Department of Health 2012a). However, since identification of community health priorities now rests with local authorities, any nationally-led requirement for action on injury has effectively been removed.

Three independent sources have recently produced practical advice aimed at local authorities on potential ways to address unintentional injury (Buck and Gregory 2013; Royal Society for the Prevention of Accidents 2013; Public Health England, Royal Society for the Prevention of Accidents et al. 2014). These may encourage renewed discussion of the issue since all carry high level endorsement from key national agencies. Two of the documents, along with other advisory reports, have identified a particular role for local authorities in facilitating

safety within the built environment (BMA Board of Science 2013; Buck and Gregory 2013; Department of Health 2013; Royal Society for the Prevention of Accidents 2013). From a clinical perspective, both the British Medical Association and the Chief Medical Officer's Report have included recommendations on the prevention of childhood accidents, recognising these as continuing threats to child health (BMA Board of Science 2013; Department of Health 2013).

3.2.5 Approaches advocated for injury prevention

Policy documents at both international (European Child Safety Alliance 2004; Peden, Oyegbite et al. 2008; Sethi, Towner et al. 2008; MacKay and Vincenten 2012) and national level (Department of Health 1999; Department of Health 2002; Audit Commission and Healthcare Commission 2007; Department for Children Schools and Families, Department of Health et al. 2009; National Institute of Health and Clinical Excellence 2010b; Buck and Gregory 2013) have recommended that injury intervention programmes should combine educational measures with environmental modification. Whilst sharing of experiences between countries was recognised as beneficial, contextual limitations influencing the transferability of specific interventions were acknowledged (Sethi, Towner et al. 2008). Both the WHO and Eurosafe noted low adoption levels for effective interventions, citing as examples the use of safety gates and window guards (Mackay and Vincenten 2007; Sethi, Mitis et al. 2010). National documents within England have recommended a range of interventions for the home setting that include local home safety schemes, (Department of Health 1999; National Institute of Health and Clinical Excellence 2010b; Buck and Gregory 2013), home risk assessments (Department of Health

2002) and installation of specific equipment items such as smoke alarms and child-resistant closures (British Medical Association 2001).

Despite recognition that children living in socially disadvantaged circumstances bear an increased risk of injury, interventions aimed at addressing this were scarce (British Medical Association 2001; European Child Safety Alliance 2004; Mackay and Vincenten 2007; Sethi, Mitis et al. 2010; Zambon and Loring 2014). This inequity in provision has also been recognised in general health promotion programmes (European Union 2004). One European guidance document specifically considered inequities in unintentional injury, recommending that both policy and intervention programmes should address the underlying social determinants of these (Zambon and Loring 2014).

Safety in the road environment was more prevalent in policy than that within the home and disparity in the levels of activity and achievement between the two settings was acknowledged (Council of the European Union 2007; European Child Safety Alliance 2012; Royal Society for the Prevention of Accidents 2012). One explanation for this may be found in a survey of fourty-seven European member states conducted by the WHO (Sethi, Mitis et al. 2010). The overall results indicated an increase in national injury prevention policies between 2008 and 2009. However, disaggregating these showed that whilst 95% of participating countries had a road safety policy, this proportion fell considerably for home injuries with only 45% reporting a fire prevention policy. Since a positive correlation between lower injury rates and adoption of national injury prevention policies has been identified, this variation in high-

level policy commitment may have a significant impact on progress within different settings (European Child Safety Alliance 2012).

In England, road casualty reduction has historically been the remit of local authority highway departments and has been addressed through a range of national and local strategies. For home injuries, prevention efforts in England have benefitted from national policy support in some areas, as was evidenced by the establishment in 1998 of the National Community Fire Safety Centre (Home Office 1997). However, the absence of any single, identifiable agency responsible for home injury may have reduced local impetus for overall action in the home setting (Towner, Carter et al. 1998).

3.2.6 Targets for injury reduction

The inclusion of targets and indicators within national strategy has been advocated as a means of demonstrating government commitment and providing a unifying framework for action (Towner, Carter et al. 1998). At international level, where injury patterns vary between countries, the policies reviewed did not include specific or measureable indicators for injury prevention. At national level, targets for injury reduction were identified in four of the English policy documents, with timeframes for delivery ranging from three to thirteen years (Department of Health 1992; Department of Health 1999; Department for Children Schools and Families 2008; Department of Health 2012a). Two of the publications quantified expected outcomes (Department of Health 1992; Department of Health 1999). In the first of these, Health of the Nation, age-specific targets were established against baseline measures for each of the three groups considered

most vulnerable to injury: children (0-15 years), young people (15-24 years) and older people (65 plus years) (Department of Health 1992).

"To reduce the death rate for accidents among children aged under 15 years by at least 33% by 2005 (from 6.7 per 100,000 population in 1990 to no more than 4.5 per 100,000)". (Department of Health 1992): p.19

The second policy, Saving Lives, identified a single target across all age groups:

"To reduce the death rate from accidents by at least one-fifth and the rate of serious injury by at least one-tenth by the year 2010". (Department of Health 1999): p.54

The targets set by both these strategies covered accidents within all settings and monitored progress at national level. Attempts to improve the local relevance of national targets for injury reduction included the suggestion of indicators for ill-health made in the The Key Area Handbook: Accidents, that accompanied the Health of the Nation (Department of Health 1993). Subsequently, in Saving Lives, targets included morbidity measures as well as mortality, thus improving the sensitivity of outcome indicators and acknowledging the many injury events that resulted in impaired function or disability (Department of Health 1999). However, difficulties in monitoring progress against these targets were identified by the Accidental Injury Task Force. Their report highlighted the inconsistent and incomplete nature of routine data collection on injury nationwide, calling for a national minimum data set to enable comparison across settings and geographical areas

(Department of Health 2002). These recommendations were never enacted.

The following year saw the demise of two national surveillance systems operated by the Department of Trade and Industry that had monitored home and leisure accidents since 1970. These systems had collated data on injury admissions from a sample of eighteen hospitals around the country, making this available to inform policy and local activity. Attempts to reinstate the service have not been successful to-date. In addition to the short-comings of national data, it has been suggested that assessing progress towards injury targets may have been further hindered by an overall lack of public health policy evaluation in England (Baggott 2011).

From 2008 onward the word *"accident"* was replaced by *"injury"* within policy indicators, adopting the preferred terminology of the research community. This change may have been a reflection of the evidence-based culture that has become associated with public health (Brownson, Fielding et al. 2009). The current indicator within the Public Health Outcomes Framework combines unintentional (accidental) and intentional (child abuse/neglect) injury, perpetuating the broader conceptualisation of safety initiated by the previous government (Department of Health 2012a; Department of Health 2012b).

"Hospital admissions caused by unintentional and deliberate injuries in under 18s"

(Department of Health 2012a): p.27

The monitoring of local targets may give added impetus for action and afford greater opportunities for comparison of progress between local authorities. However, the current Outcomes Framework gives no indication of the expected reduction in injury rates against which progress might be assessed (Department of Health 2012a). The reliance on longer-term outcome measures for injury (reduction in mortality and morbidity) is at odds with health indicators that have been applied in other areas of public health, for example smoking prevalence. Given the limitations of current injury surveillance systems (Krug 2015), a similar approach that considers positive behaviour change, for example the proportion of homes using safety equipment, may offer a more sensitive indicator with which to motivate intervention efforts in the short to medium term (Watson and Watson 2013).

3.3 CHAPTER SUMMARY

This chapter contributes to increased understanding of the influences on programme sustainability that may operate in the wider environment, through consideration of the priority afforded to injury prevention within the public health policy context.

Within international policy documents, (published 1981-2014), child injury prevention remained a priority health issue. Public health policy produced in England (1992-2014), however, revealed a diminishing profile for injury, potentially reducing the national impetus for local action. At both global and national level the extent of policy focus and activity levels were seen to vary between injury settings. Where national targets existed for injury prevention, these were found to be

inconsistent in nature, difficult to monitor and focused primarily on outcome measures.

CHAPTER FOUR
METHODOLOGY

4.0 INTRODUCTION

This chapter begins with a brief overview of the study origins before revisiting the aim and objectives that were presented in Chapter One. It goes on to describe the underlying philosophical assumptions and the study design selected, justifying the choice for each of these. The processes used in sampling, recruitment, data collection and data analysis are then discussed. These are followed by consideration of the trustworthiness of the study, and of the ethical issues inherent in the nature of the research conducted. The chapter concludes with researcher reflections on the research process.

4.1 STUDY BACKGROUND, AIM AND OBJECTIVES

During 2010-2011 I was involved in the evaluation of the national 'Safe At Home' programme (for details see Section 1.4). The evaluation ended in April 2011, along with national sources of support for the programme, and I was interested to learn what would happen subsequently to those local schemes that had registered. This led to my interest in the field of programme sustainability and to the development of the current study.

The aim of this study was to identify factors contributing to the sustainability of home safety schemes for young children living in communities at higher risk of injury in England.

Specific research objectives were:

1. To identify influences on scheme sustainability, including those associated with:
   i) the intervention content and delivery mechanism
   ii) the organisational setting
   iii) the immediate community setting and the wider socio-political and economic context.

2. To explore experiences of scheme participation and the potential influence of these on sustainability from the perspective of families within the target group.

3. To explore experiences of scheme participation and the potential influence of these on sustainability from the perspective of professionals with an interest or involvement in local home safety schemes.

4. To explore the conceptualisation of programme sustainability within the global and national public health policy context relevant to child injury prevention.

4.2 STUDY DESIGN

4.2.1 Adopting an interpretivist stance

An interpretivist stance was selected at the outset of the current study and has influenced the research methodology and interpretation of findings (Mantzoukas 2004; Carter and Little 2007). Interpretivism has been referred to as:

"the complex world of lived experience from the point of view of those who live it". (Schwandt 1994): p.118

An interpretivist approach views reality as a social construct and places paramount importance on the experiences of individuals and the meanings that they assign to them (Naidoo and Wills 2005; Snape and Spencer 2010). The exploration of multiple perspectives contributes to knowledge creation through a move towards greater understanding (Naidoo and Wills 2005; Creswell 2007). This contrasts with the positivist tradition that takes reference from an objective concept of reality (Benton and Craib 2011). Adopting an interpretivist approach supported the research objectives and underlying values of the current study by acknowledging that differing interpretations of the 'Safe At Home' programme may exist among its multiple stakeholders.

In attempting to understand the 'lived experiences' of individuals, an interpretivist approach regards meaning as being created through social interaction that is rooted within a specific time and setting (Creswell 2007). This gives rise to situated research findings in which context can influence outcomes, a concept associated with realistic evaluation (Pawson and Tilley 1997). Contextual factors operating in the immediate and wider environments have been shown to influence programme sustainability (Shediac-Rizkallah and Bone 1998). The exploration of these within naturalistic settings is supported by the interpretative approach taken within the current study.

Adopting an insider stance, in which the researcher actively participates in the co-construction of data, is characteristic of an interpretative approach (Benton and Craib 2011). This was particularly relevant in the current study, given the researcher's prior experience of injury prevention and her

knowledge of the 'Safe At Home' programme. A high degree of reflexivity was employed throughout the study to ensure that researcher values, background and a priori assumptions were accounted for during the data collection and analysis processes (Denzin 1998; Murphy, Dingwall et al. 1998; Ritchie and Lewis 2010). Strategies used to address this are discussed in detail in Section 4.6 and researcher reflections on the process are presented in Section 4.8.5.

The national 'Safe At Home' programme identified sustainability as one of its longer term objectives, by looking to:

> *"build the capacity of local communities to run their own schemes providing equipment and advice to families".*
>
> (Merrill and Martin 2010):p.4

The evaluation of public health programmes has been subject to debate between those taking a positivist stance and the opposing interpretative view (Pawson and Tilley 1997; Tones and Green 2004; Green and South 2006). As a relatively new field, health promotion has taken its methodological lead from the disciplines of education, psychology and medical science, all of which are heavily influenced by the positivist approach (Bunton and MacDonald 2002). The evaluative principles of the World Health Organization advocate the use of multiple methods to incorporate a range of perspectives, although they acknowledge that this is unlikely to lead to absolute proof of effectiveness (Rootman, Goodstadt et al. 2001). Adopting an interpretivist stance has been associated with understanding community health programmes from *"within"* (Potvin and Richard 2001), is in keeping with the 'holistic' approach

prevalent in health promotion (Burrows and Bunton 1995), and supports the core values of community-based approaches; those of participation, empowerment and collaboration (Springett 2001; Tilford, Green et al. 2003).

Criticisms of the interpretivist approach focus on its lack of objectivity and the perceived limitations for generalising from study findings. Although the potential for researcher bias is a feature of both positivist and interpretivist studies, greater attention is paid to this in the latter (Carter and Little 2007). In an interpretivist approach, the situated standpoint of the researcher and her ultimate responsibility for telling the stories of others necessitates careful consideration of the potential for bias in data collection, analysis and reporting (Denzin 1998; Angen 2000). The focus on individual experiences often results in small participant numbers that are not statistically representative of the wider population and are therefore seen to limit the generalisation of the findings (Andrade 2009). The research stance taken in the current study draws support from Silverman's counter-view; that the methodological flexibility associated with an interpretivist stance can enhance opportunities for generalisation through progressive focusing based on early study findings (Silverman 2010). Providing contextual detail on the setting, including historical and cultural aspects, together with a balance of raw and interpreted data, can assist the reader to make their own assessment of the rigour of research findings and their relevance to other settings (Gadamer 1994; Angen 2000; Carter and Little 2007). With the emergence of more structured analytical approaches for interpretivist research, such as grounded theory (Glaser and Strauss 1986), a

relevant role has been identified for inductive reasoning in the generation of wider theory (Andrade 2009).

The absence of a definitive external referrant against which to make knowledge claims has been identified as a potential problem for researchers adopting an interpretative stance (Denzin and Lincoln 1994). To mediate potential conflict that may arise between individual accounts, the study made use of corroborating data sources and included an option for further data collection from participants in order to clarify specific points (Andrade 2009). The interpretative approach provided opportunity to explore the explanatory potential of existing sustainability theories as well as offering the potential to generate new theory through inductive analysis of the study data collected (Hammersley, Scarth et al. 1985; Murphy, Dingwall et al. 1998). The sensitivity of the data collection methods used therefore remained open to the possibility of identifying new influences on programme sustainability.

4.2.2. Using a qualitative methodology

The so-called "*paradigm wars"* within the health and social sciences, once associated with allegiance to either qualitative or quantitative research, have increasingly been replaced by a more pragmatic approach that considers the potential contribution of both based upon best *"fit"* for the research questions concerned (Bryman 1988; Pawson and Tilley 1997; Murphy, Dingwall et al. 1998). The choice of a qualitative methodology for the current study reflected the underlying assumptions associated with an interpretative research stance and provided a good fit for the research questions. In community-based injury prevention studies, a qualitative approach has proved valuable in identifying barriers and

facilitators associated with programme implementation (Mullan and Smithson 2000; Roberts, Curtis et al. 2004; Odendaal, Marais et al. 2008). Literature on the sustainability of health programmes recommends qualitative methods as a means of gaining deeper understanding within this exploratory research area (Scheirer and Dearing 2011; Wiltsey Stirman, Kimberly et al. 2012). In times of policy reform, typified by the context for the current study, qualitative research has been advocated since it can provide a perspective from those directly affected by change (Pope and Nick 1995).

Qualitative methodologies can make a particular contribution to answering 'how', 'what' and 'when' questions (Silverman 2010) and are therefore suited to exploring processes that occur within a situated context (Creswell 2007). Definitions of qualitative research refer to making sense of the meanings attributed by individuals to phenomena that occur within natural settings (Denzin and Lincoln 2005; Creswell 2007). This raises two specific issues with respect to the current study.

Firstly, if 'meaning' is contingent on the experiences of individual participants, supporting the interpretative stance of multiple realities, then a more in-depth understanding of complex phenomena, such as sustainability, is likely to be reached by exploring multiple perspectives and data sources (Murphy, Dingwall et al. 1998; Malterud 2001). The delivery and subsequent continuity of the 'Safe At Home' programme was dependent upon local partnership working between individuals and agencies. It was appropriate therefore that the study adopt a holistic methodology that considered a range of participant perspectives and data sources (Bunton

and MacDonald 2002; Green and South 2006). Inadequate representation of the target group within empirical studies on sustainability, identified by the literature review in Chapter Two, directly influenced the current study objectives. Among the target group for the safety schemes in this study were families regarded as 'hard-to-reach', who were less likely to engage with health and social care providers. Obtaining a meaningful participant perspective from this group therefore constituted a challenge within the timeframe of the study. A qualitative approach was considered more likely to encourage participant engagement, and to address potential barriers relating to mistrust or power inequalities that may exist between professionals and the target community (Creswell 2007).

Secondly, accepting that qualitative research is rooted in natural settings supports the assumption that context may have a bearing on intervention processes and effects (Pawson and Tilley 1997). The national 'Safe At Home' programme, in common with other community-based health initiatives, was introduced into a range of pre-established settings. Each of these operated as an open system (Bhaskar 1975), any changes in which had the potential to impact on programme sustainability. Adopting a qualitative methodology therefore supported consideration of the historical, cultural and social context for scheme delivery within each of the sites in a way that would have been difficult to achieve using an experimental approach (Tones and Tilford 2001; Green and South 2006).

4.2.3 The case study approach

The national Safe At Home programme aimed to deliver a standardised intervention across all participating sites. In the interim period between the end of the national programme (March 2011) and data collection commencing for this study (January 2013), informal discussions with local service providers revealed that modifications to the original programme content had been made in some of the sites. To support the consideration of programme and contextual factors, both of which have been associated with sustainability (Shediac-Rizkallah and Bone 1998), a multiple case study approach was adopted.

Case studies can support both qualitative and quantitative research methodologies (Luck, Jackson et al. 2006; Yin 2009; Thomas 2011). The approach is sufficiently flexible to allow variability of methods thereby enabling progressive focusing throughout the study process (Murphy, Dingwall et al. 1998). A case study approach can contribute to in-depth understanding of a phenomenon in context and is therefore particularly suited to the exploration of contemporary events that may be influenced by factors outside the researcher's control (Bergen and While 2000; Creswell 2007; Yin 2009). The holistic approach adopted to enquiry within a naturalistic setting and the suitability of case studies in answering 'how' and 'why' questions provided a good fit with the current research objectives (Creswell 2007).

Case study definitions vary between authors, with the example given below (relating to the scope of a case study) providing a relatively concise summary of their key features:

"An empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between the phenomenon and context are not clearly evident". (Yin 2009): p.18

Case studies offer a means of exploring relationships and processes (Thomas 2011). Their use has been recommended in the sustainability literature for exploring influencing factors and illuminating the complex interplay that has been identified between these (Gruen, Elliott et al. 2008; Savaya, Spiro et al. 2008; Scheirer and Dearing 2011). Furthermore, case studies are supportive of the socio-ecological approach that has been advocated for conceptualising the influences on injury (Ross and Butera 2004; Hanson, Hanson et al. 2005; Green and South 2006).

Establishing the boundaries of the 'case' is a key stage at the outset that has a bearing on the subsequent analysis (Stake 1995; Yin 2009; Thomas 2011). The current study adopted the *"bounded system"* definition used by Thomas in which:

"The case that is the subject of the inquiry will be an instance of a class of phenomena that provides an analytical frame – an object – within which the study is conducted and which the case illuminates and explores".

(Thomas, 2011): p.23

In this study the subjects comprised individual safety schemes along with the context in which these were delivered, referred to as the case study sites. The object of interest was the phenomenon of programme sustainability.

Integrating multiple data sources from within the same context is characteristic of a case study approach (Yin 2009; Ritchie and Lewis 2010). This enabled a range of perspectives to be explored in relation to scheme sustainability and supported the interpretative stance underlying the study. Yin provides an overview of the six sources of evidence most commonly used: documentation; archival records; interviews; direct observations; participant observation and physical artifacts, along with a summary of the strengths and weaknesses of each (Yin 2009). He notes that no one source has supremacy and advocates use of as many as possible in order to develop converging lines of enquiry that may strengthen study rigour.

The current study involved several case study sites and is referred to as a multiple case study (Yin 2009; Thomas 2011), or collective case study (Stake 1995). It has been suggested that conducting cross-case analysis between multiple sites shifts the analytical focus from intrinsic factors associated with the subject (an individual site), to comparisons with respect to the object (sustainability) (Thomas 2011). Adopting a multiple case study approach can therefore counter criticism that the findings rely too heavily on the unique circumstances surrounding a single case (Yin 2009). Yin suggests that multiple cases operate in a similar way to multiple experiments by employing replication logic (Yin 2009). Literal replication would predict similar results whilst theoretical replication would anticipate different results but for predictable reasons (Yin 2009). However this argument aligns more with a positivist rather than interpretivist stance and therefore is at odds with the underlying philosophy of the current study. The purpose of using multiple sites in this study was to enable

sustainability to be explored within a variety of local scheme settings in an attempt to contribute to a deeper understanding of the phenomenon. This necessitated careful and purposeful selection of sites in order to balance the diversity of cases represented (Creswell 2007) and is discussed in Section 4.3.1. Adopting a multiple case study approach has been associated with enhanced potential for the transferability of theoretical study findings (Yin 2009; Silverman 2010).

Researcher skills that may prove helpful in conducting case studies have been identified. Some of these are generic to qualitative research; the ability to ask good questions, to be a good listener and to remain sensitive to contradictory evidence (Yin 2009), and the ability of the researcher to adapt his/her role and the extent of his/her participation in response to individuals (Stake 1995). Other skills relate more specifically to the case study approach, for example remaining open and flexible to changing circumstances, retaining a grasp of the main issues (Yin 2009), and balancing multiple participant perspectives with a personal interpretation of events in deciding how to tell the story of the findings (Stake 1995). To provide the reader with a sense of the way in which the current study progressed, examples of some of the decisions made during the process are included in the write-up, along with accompanying contextual details.

The in-depth nature of case studies can generate large volumes of data potentially making them a resource-intensive approach (Stake 1995). Researcher capacity and time were managed within the current study by focusing on the research aim and objectives throughout. The primary criticism of case study research however, lies in the potential for generalising

from the findings (Yin 2009; Thomas 2011). Findings arise from a specific setting and are therefore considered to be rooted within a particular context (Bryman 1988). Differing author views on generalisation appear to depend on how the term is interpreted. For example, in his text on case study research, Thomas states unequivocally at the outset that:

> *"A case study is about the particular rather than the general*. *You cannot generalise from a case study"*.
>
> (Thomas 2011): p.3

He later qualifies his use of *"generalise"* as referring to the lack of wider representativeness of case study findings. However Thomas does regard case study research as having a valid role in contributing to knowledge through a process that he refers to as *"phronesis",* defined as practical knowledge based on personal experience that enables individuals to make sense of particular situations (Thomas 2011). Yin similarly rejects generalisation in the statistical sense, but identifies potential for analytical generalisation from case study findings by relating these to broader theory (Yin 2009). Stake distinguishes between the *"petite generalizations"* that refine understanding and may occur throughout a case study and more substantial *"grand generalizations"* that can challenge existing thinking by providing counter examples (Stake 1995).

The current study uses the term 'transferability', after Lincoln and Guba, to consider the relevance of the findings with respect to other contexts (Lincoln and Guba 1985). In keeping with this understanding, 'thick description' of contextual factors has been provided throughout the thesis. 'Thick description' is a term originally used by Geertz (Geertz 1973), and has been defined as:

"…deep, dense, detailed accounts of problematic experiences…it presents detail, context, emotion and the webs of social relationship that join one person to another."

(Denzin 1989): p.83

Thick description of both the phenomenon and the context can assist in determining the extent to which study findings can be transferred to alternative settings. It is a recommended component of both qualitative studies (Arai, Roen et al. 2005), and of case study research (Stake 1995). Thick description has also been identified as important in illuminating factors associated with the process evaluation of injury prevention programmes (Nilsen 2004; Roen, Arai et al. 2006).

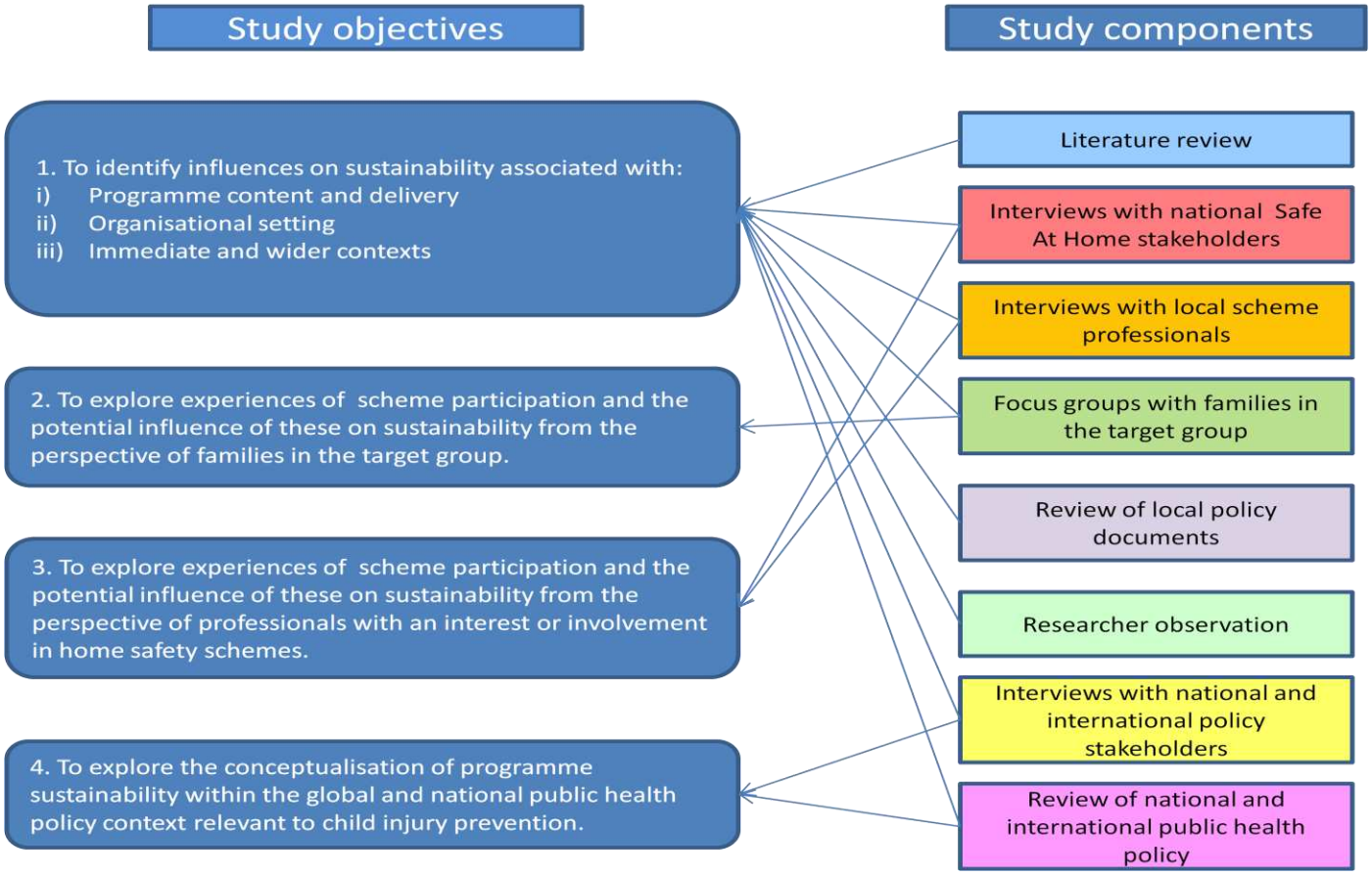
4.2.4 Overview of data sources used in the study

The current study was designed to provide multiple perspectives on the sustainability of home safety schemes. Data was collected from professionals and families involved in safety programmes at local level, from stakeholders with a national role in the 'Safe At Home' programme, and from national and international policy stakeholders with an interest in injury prevention. A review of local, national and global policy documents was conducted to situate the intervention within the wider public health context. Content analysis of national and global policy documents, with respect to programme sustainability, was undertaken in order to provide an insight into the way in which this is conceptualised within public health.

Multiple methods of data collection were employed. Individual interviews were conducted with professionals, whilst family representatives attended focus group discussions. Figure 3

below illustrates how the individual study components are linked to the overall objectives. The sections that follow then describe in more detail the processes of participant selection and data collection.

Figure 3 Linkage of study components to the research objectives



4.3 SELECTION AND RECRUITMENT

4.3.1 Case study sites

4.3.1.1 Overview of the process

Five case study sites (A, B, C, D and Z) and three corroborating sites (T, W and Y) took part in the study. All of the sites had sustained activities associated with the national 'Safe At Home' programme in whole or in part.

The study was conducted in two phases with Sites A and B forming the key cases, recruited during Phase 1. National stakeholders involved in the 'Safe At Home' programme were also recruited during this phase to provide a broader perspective on sustainability.

In Phase 2 Sites C, D and Z were recruited based on early study findings, along with key informants from 3 further sites (T, W and Y) to corroborate or disconfirm findings. Representatives from national and international agencies involved in child injury prevention were also recruited during Phase 2 to provide a contextual perspective for the development of injury prevention policy and the conceptualisation of sustainability within this.

4.3.1.2 Site labelling – a brief explanation

The labelling of sites is explained as follows. At the outset of the study it was intended to recruit two sites in which scheme delivery had been sustained and two in which it had not. To distinguish these, the 'sustained' schemes were labelled from the start of the alphabet (A and B) and the non-sustained schemes from the end of the alphabet (Y, Z). When data collection commenced in sites A and B it became apparent that both of these operated through sub-contracted arrangements

with the local authority. To balance this perspective it was decided to recruit two further 'sustained' sites (C and D) where scheme delivery was managed directly by the local authority.

As the study progressed it became clear that sustainability could not be represented by a simple yes/no status, with more subtle variations apparent between sites and over time. Site Z was then recruited as a fifth case study site and retained its original label.

Site Y, initially approached as a potential 'non-sustained' scheme during the early stages of the study, was subsequently recruited as a corroborating site, along with two newly-identified sites (T and W). Site X had agreed to participate as a corroborating site but was lost to follow-up. The letters U and V were not assigned to sites since the similarity of these may have led to transcription errors.

4.3.1.3 Study setting

The settings for the current study comprised local authority areas that had participated in 'Safe At Home'. All of the areas had higher than average rates of hospital admission for unintentional injury to children aged 0-4 years (RoSPA 2009). Since child injury rates exhibit a steep social gradient, the levels of social deprivation within these areas were also higher than the national average (Mock, Quansah et al. 2004; Edwards, Roberts et al. 2006; Sethi, Towner et al. 2008).

4.3.1.4 Selection criteria

In the absence of consensus on the definition of sustainability in the literature, this study adopted a working definition,

shown in Figure 4, based on that developed by Scheirer and Dearing (Scheirer and Dearing 2011).

Figure 4 Working definition of sustainability

> **Sustainability is the continuation, beyond the period of national support, of one or more of the core components of the Safe At Home programme with the aim of benefitting the health of the target community.**

In the absence of evidence as to the relative effectiveness of individual components within complex home safety programmes, the identification of core components for the current study was based on evidence of good practice for injury prevention (Nilsen, Hudson et al. 2005; Mackay, Vincenten et al. 2006; National Institute of Health and Clinical Excellence 2010b; Ingram, Deave et al. 2012). The five core programme components identified were:

1) Training for professionals associated with the safety programme
2) Safety assessment conducted at home visit
3) Provision of family education and safety advice
4) Provision of a range of safety equipment items
5) Professional installation of safety equipment

Potential case study sites that were believed to fulfill the above definition of sustainability were identified using existing researcher knowledge of scheme operation, together with information provided by RoSPA and by the main safety equipment supplier. Calls to several of the listed contacts to

verify scheme provision suggested that some of the information was no longer current. Attempts were therefore made to contact all schemes within a four-hour travelling distance of the researcher's base. The information provided was used to establish a database of current scheme provision from which case study sites were selected.

Site selection was based upon purposive sampling (Thomas 2011). This was informed by theoretical influences identified within the sustainability literature (Yin 2009) and balanced with pragmatic considerations regarding access to rich data sources and potential for the transferability of findings (Patton 1990; Stake 1995). The key theoretical influences that informed selection criteria were:

i) The nature of the lead agency

The nature of the lead agency has been suggested as an influence on programme sustainability, with increased autonomy acting as a facilitator (Savaya, Spiro et al. 2008). At the time that sites were selected for the current study, national government policy in England had announced an impending transfer of responsibility for public health, from health to local authorities (Department of Health 2010). It was therefore decided to select case study sites where scheme operation was led by the local authority in order to maximise the potential relevance of the study findings.

ii) Provision of an equipment installation service.

Provision of an equipment installation service within home safety schemes has been recommended as a means of improving parental safety practice (Mackay and Vincenten 2007; Kendrick, Coupland et al. 2009). A survey of local

scheme co-ordinators conducted as part of the national evaluation of 'Safe At Home' had indicated,however, that this was the component least likely to be sustained (Errington, Watson et al. 2011). The selection of case study sites therefore provided an opportunity to contrast the experiences of those schemes that had sustained equipment installation with those that had not.

iii) Consideration of other influences

To represent balance as well as diversity within the case study sites (Stake 1995; Creswell 2007) and in keeping with the exploratory nature of the study, other potential influences on sustainability were considered prior to site selection. These included the date that local sites registered with the national programme, the scale of equipment provision and local performance indicators. (A list of the data sources consulted prior to site selection is provided at Appendix 2).

4.3.1.5 Phased recruitment of case study sites

Site recruitment occurred in two stages. In Phase 1, the initial two sites (A and B) were selected as key cases for this exploratory study using the criteria identified above. A key case has been defined as:

> *"A good example of something; a classic or exemplary case."* (Thomas 2011): p.77

Site A was the highest performing scheme during the national programme, whilst Site B provided a rare example of a scheme that was expanding its coverage at the time of recruitment. A key professional associated with each of these schemes was approached directly by the researcher. Both of

these individuals were known to her. Once agreement to participate had been obtained, these individuals became the local contacts for the study and assisted in disseminating information and identifying additional participants.

During the process of data collection it became apparent that local authority schemes could be either managed directly, or could operate through sub-contracted arrangements with third party providers. The Phase 1 sites, A and B, were both sub-contracted. Since this may have had some bearing on the level of autonomy within scheme delivery, it was decided to select Phase 2 sites that provided examples of directly managed schemes for contrast. Following an iterative study process (Mills, Durepos et al. 2010), the selection of sites for Phase 2 was further informed by the initial findings from Phase 1. Early findings from Phase 1 had identified scheme history and the presence of a local scheme co-ordinator as possible influences on sustainability. In Phase 2 therefore, purposive sampling was undertaken to identify "*outliers"* (Thomas 2011). Site C exhibited neither of the potential influences previously identified, therefore providing an atypical case (Crowe, Cresswell et al. 2011). Site D provided an opportunity to explore the levy of a charge for equipment as a mechanism for sustainability. Site Z was recruited to further strengthen study findings and provided an example of an embedded, or nested case study site (Yin 2009; Thomas 2011). Here three schemes had originally registered with the national programme under the same lead agency. Each had a different local history and only one had continued to provide and install equipment at the stage of recruitment for the current study.

The overall sampling frame for case typology within this multi-site study is represented in Table 4.1 below (Stake 2000). Summary characteristics of all the case studies, together with individual site profiles are presented in Chapter Five.

Table 4.1 Overall sampling frame for case study selection

	No equipment installation	**Equipment installed**
PHASE 1 **Sub-contracted lead agency**	Site A	Site B
PHASE 2 **Local authority-led**	Site D	Site C
PHASE 2	Site Z*	
	Local authority led Z(2), Z(3)	**Charity-led** Z(1)

*Site Z operated 3 schemes during the national programme.
The operation of these continued to varying degrees following the withdrawal of national support.

4.3.1.6 Recruitment of corroborating sites

During Phase 2 of the study, attempts were made to recruit representatives from additional 'corroborating' sites that had participated in the national Safe At Home programme. The purpose of this was to confirm or refute the putative findings from the five main case study sites (Savaya, Spiro et al. 2008).

Information provided by the host agency was used to contact named professionals in areas outside the case study sites in order to ascertain their current level of programme activities. This was intended to inform a process of purposive sampling. Unfortunately, despite extensive attempts, few of the contact details provided had remained current in the two year interval between the end of the national programme and recruitment

for the present study. Corroborating sites therefore comprised a small convenience sample where local contacts with personal experience of the national programme expressed willing to participate in a telephone interview.

4.3.2 Study participants

4.3.2.1 Selection and recruitment of professionals

4.3.2.1.1 National 'Safe At Home' stakeholders

A senior representative from each of three national stakeholder agencies was purposively selected because of his/her active role in the 'Safe At Home' programme. Individuals were approached directly by the researcher. Background information on the study was provided and individual written consent to participate was obtained prior to data collection (see Appendices 6 and 7).

4.3.2.1.2 National and international policy stakeholders

The inclusion of a policy maker perspective has been recommended as a means of widening the narrative in case study research (Simons 2015). For this study, it offered an insight into the understanding of programme sustainability and the way in which this may influence the activities of agencies involved in the development of injury prevention policy. This additional component required an amendment to the original project protocol.

Senior representatives from agencies involved in the development of child injury prevention policy, both at national and international levels, were purposively selected. Advice was sought from international and national experts in child injury prevention regarding relevant agencies and named individuals to contact within each. Contact was made directly

by the researcher. Background information on the study was provided and individual written consent was obtained from all participants prior to data collection.

4.3.2.1.3 Local scheme professionals

Local professionals involved in scheme delivery were identified initially through snowball sampling (Miles and Huberman 1994), taking advice from the main site contact so as to be representative of personnel involved in scheme delivery. Purposive sampling was used to further explore some of the putative findings (Silverman 2010). For example, additional participants were recruited in Site A to obtain a more strategic perspective when management support was identified as a potential facilitator for sustainability. Potential participants were approached directly, either by telephone or e-mail. Background information was provided and written consent obtained from each participant prior to data collection. Evaluations of similar public health initiatives have identified a tendency for some professionals to give overly positive accounts of the programme (Spicer and Smith, 2008; Lloyd and Harrington, 2012). In an attempt to counter this, the background information advised potential participants of the independent nature of the research and in subsequent verbal reminders emphasis was placed on individual contributions, both positive and negative.

4.3.2.2 Selection and recruitment of family representatives

Obtaining a target group perspective from parents receiving the safety scheme was considered important since this was found to be an under-represented area in the review of the sustainability literature (Chapter Two). Family representatives

for this study were identified by the site contact, with a request that the representativeness of the target group be considered when selecting potential participants so as to give voice to minority or less powerful individuals, for example parents from specific ethnic groups or those whose children had special needs (Jewkes 2004; Lloyd and Harrington 2012). The initial invitation to participate was made by a local professional known to the family. This approach was adopted in order to overcome the potential for suspicion and mistrust of professionals that has been identified in previous injury research involving hard-to-engage populations (Mullan and Smithson 2000; Carr 2005). Attempts were made to recruit up to 10 families in each site in order to keep focus group numbers manageable and to allow for possible drop-out (Finch and Lewis 2010). Tailored background information was provided within which parents were advised that they would receive a £10 shopping voucher following participation in the focus group session. The provision of an incentive is a widely accepted strategy to encourage the participation of hard-to-reach sections of the population (Bonevski, Randell et al. 2014). Written consent was obtained from each individual prior to data collection.

4.4 DATA COLLECTION

4.4.1 Multiple data collection methods

The study collected data from a variety of sources using a range of methods thereby providing the triangulation that is characteristic of the case study approach (Thomas 2011). Triangulation has been suggested as a strategy for increasing confidence in study findings (Patton 1990; Creswell 2007; Yin 2009). However, it is also associated with a positivist stance that challenges the interpretative approach underlying the

current research (Silverman 2010). This potential conflict was resolved by adopting triangulation as a means of moving towards deeper understanding of sustainability based on differing perspectives and different contexts rather than attempting to uncover a single reality (Murphy, Dingwall et al. 1998). The iterative approach to this study offered flexibility within the methods used and supported progressive focusing based on the identification of early findings (Stake 1995).

4.4.2 Interviews with professionals

4.4.2.1 Face-to-face interviews

The original study protocol proposed semi-structured, face-to-face interviews with local professionals involved in scheme delivery within the case study sites. Since the research considered individuals within their professional roles, interviews were held in the participant's workplace (Legard, Keegan et al. 2010). Face-to-face interviews enabled the researcher to use visual as well as verbal communication skills and provided an opportunity to gain an impression of the organisational setting that was helpful in contextualising the data (Holstein and Gubrium 1997; Legard, Keegan et al. 2010). The semi-structured interviews offered flexibility and freedom within their structure and content, and could be tailored to individual participants whilst retaining a focus on the main issues associated with the study objectives (Arthur and Nazroo 2010; Thomas 2011). This latter point was particularly important in providing an initial structure to inform the cross case analysis and offered an advantage over open-ended discussion (Miles and Huberman 1994). An option to conduct follow-up interviews with participants was included with the purpose of exploring issues raised in data collection (Lewis 2010).

4.4.2.2 Telephone interviews

A decision was taken to conduct telephone interviews with stakeholders from the national agencies involved in delivery of the 'Safe At Home' programme, with the national and international representatives of those agencies involved in child injury prevention policy, and with local representatives from the corroborating sites. For these interviews observation of the setting was considered to be of less importance. Telephone interviews avoided the need to incur additional travel costs, an important consideration since these participants were based in geographically diverse locations.

During the recruitment process some of the local professionals within the case study sites were also offered the option of telephone interviews. This was found to be of particular value where prior attempts to arrange a face-to-face interview had been unsuccessful.

A previously reported systematic comparison of face-to-face and telephone interviews identified comparable themes and no noticeable loss of depth in the issues reported from the latter (Sturges and Hanrahan 2004). However, given that other authors continue to view telephone interviews within qualitative research as an inferior approach (Novick 2008), the experience within the current study forms part of the researcher reflections later in this chapter (see 4.8.4).

4.4.3 Focus groups with family representatives

The target group perspective for this study was obtained through focus groups with family members. Focus group discussions encourage participant interaction, mirroring the social interaction that occurs in natural settings (Morgan 1993;

Kreuger and Casey 2000; Bloor, Frankland et al. 2001). Their use in obtaining a target group perspective on sustainability within public health programmes has been documented previously (Barnett, Van Beurden et al. 2004; Saunders, Pate et al. 2012). The groups provided an opportunity for parents from similar backgrounds, some of whom already knew each other, to share their experiences of scheme delivery within a specific setting (Finch and Lewis 2010). The method enabled parental interaction to be observed and provided an insight into how individual views and practices on child safety may be influenced by others (Terrance, Albrecht et al. 1993). Group discussion was considered preferable to conducting one-to-one interviews where the intensity and social isolation of the process may have been intimidating for some of the participants (Terrance, Albrecht et al. 1993; Creswell 2007).

The dynamics within group discussions can lead to potential bias where more confident and vocal participants dominate the proceedings and other voices remain hidden (Finch and Lewis, 2010). The researcher's experience, gained in moderating previous discussion groups in a variety of settings, enabled her to mitigate this and in each session the aim was to ensure adequate opportunity for all to contribute. Verbal and non-verbal cues were adopted to support active listening (Terrance, Albrecht et al. 1993). The researcher encouraged individual contributions where appropriate, and maintained a focus on sharing examples of personal experience rather than generic statements. Focus group composition and dynamics were recorded on a reflection sheet, completed immediately after the session, and used to provide context for the data analysis (Knodel 1993).

The date and time of individual sessions were arranged to suit the participants and advice was taken from the local scheme contact in selecting venues that offered accessibility and familiarity to group participants (Ritchie and Lewis 2010). Refreshments were provided, and free on-site crèche provision was made available for young children accompanying their parents to further reduce barriers to participation (Mytton, Ingram et al. 2014). Expectations concerning group conduct, for example speaking in turn, were made clear at the start of each session. The consent form was read out to group members, checking their comprehension of specific points, before obtaining individual signatures. Sessions began with a round of introductions and a general ice-breaking exercise that was designed to encourage all participants to contribute.

4.4.4 Researcher observation

Conducting site visits provided an opportunity to observe routine practice within the Children's Centres and, on occasion, to engage in informal conversations with the colleagues of professional participants or with parents attending activities. Between appointments the researcher took the opportunity to drive around the locality, calling into shops and intentionally engaging people in conversation to obtain a feel for the area. Observing a site in this way and recording researcher impressions at the time helped to build up a picture of the local community that later provided context for the data analysis (Stake 1995). The local knowledge also proved a useful stimulus for conversation within the interviews and focus groups (Terrance, Albrecht et al. 1993).

4.4.5 Development and use of topic guides

Qualitative research can generate vast amounts of data, the organisation and analysis of which can be both time and resource intensive (Mays and Pope 2000; Denzin and Lincoln 2005). To provide focus within the current study, specific topic guides were developed for each category of participant (Arthur and Nazroo 2010; Silverman 2010). These followed a similar format thereby assisting the process of cross-case analysis (Stake 1995). A sample topic guide can be found at Appendix 8. The main issues covered by the guides for each participant group are summarised below in Table 4.2 Descriptive information, such as why the site had registered with the national programme and the role of the respondent, formed an introduction to the interview (Arthur and Nazroo 2010) and was used subsequently to inform the case study profiles presented in Chapter Five. The research questions were then explored indirectly (Wengraf 2001), with the focus and framework of the guides informed by a-priori conceptualisations of sustainability within the literature. In keeping with the exploratory nature of the study however, questioning remained open to other potential influences on sustainability so as to support theory testing and building (Odendaal, Marais et al. 2008; Yin 2009). Though designed to encourage a logical flow of discussion, the topic guides were sufficiently flexible to enable them to be adapted and personalised to each individual set of circumstances (Arthur and Nazroo 2010). Suggested prompts and probes were included as aide-memoirs to be used at the researcher's discretion (Wengraf 2001; Arthur and Nazroo 2010).

Table 4.2 Main issues addressed by topic guides for each participant group

	Local scheme staff	Families in target group	National 'Safe At Home' stakeholders	National and international policy stakeholders
Participant's current role	√	√		√
Experience of scheme provision	√	√	√	
Scheme history	√			
Barriers/Facilitators for sustainability	√	√	√	√
Adaptations/ improvements	√	√	√	
Personal benefits	√	√		
Organisational benefits	√			
Other effects of scheme	√	√		
Future plans	√			
Identification of relevant documents	√			√
Personal home safety concerns		√		
National overview of scheme provision			√	
Original programme objectives met?			√	
Relevance of sustainability				√
Conceptualisation of sustainability				√
Assessment of sustainability				√
Other participant contributions	√	√	√	√
Additional contacts	√			

Topic guides underwent peer assessment from colleagues with knowledge of 'Safe At Home' in order to determine the appropriateness of the content and the sequence of questioning (Arthur and Nazroo 2010). The guides developed for the national and international stakeholders in child injury prevention were reviewed by experts with specific knowledge in the field of injury prevention policy. The initial two interviews within each participant group served as a pilot

stage following which a comprehensive review of the relevant topic guide was undertaken. Revisions were minor and related mainly to the wording or sequencing of questions. For example, during one of the interviews with a national stakeholder in injury prevention policy it had proved difficult for the respondent to identify potential indicators of sustainability. Consequently the wording in this section was changed to encourage a more general discussion of sustainability before offering specific prompts to provide a focus for responses.

4.4.6 Recording discussions

All of the interviews and focus group sessions were audio recorded, with participant permission, to enable researcher attention to focus on the conversation (Hammersley 1995; Legard, 2010). No participant objections to this were raised. On two separate occasions technical problems were encountered with the recording equipment during face-to-face interviews with local scheme professionals. Brief notes were taken at the time and supplemented from memory at the end of the session. Subsequent clarification was sought from the participants with regard to specific detail such as the names of other agencies that were mentioned.

To maintain an informal atmosphere in the focus group sessions it was decided not to have an observer in attendance. At the start of each session the researcher made a spatial sketch of the room layout and invited participants to introduce themselves. This assisted in subsequent identification of individual contributions on the audio tape. The room layout, field-notes and the researcher reflection sheet were used as aide-memoires when transcribing and analysing the data.

4.4.7 Documentary review

4.4.7.1 Documents as a source of data

It has been argued that documents are an often overlooked source of readily-accessible information that, in addition to enhancing the contextual description of case studies, can provide opportunities for corroboration of other forms of evidence (Stake 1995; Savaya, Elsworth et al. 2009; Yin 2009). Documentary analysis has been advocated as a means of balancing the dynamics that may result from interview methods, where data creation is subject to the influence of perceived power relationships and the resulting interaction between the parties (Denzin 1970). Where participant recall may be affected by the intervening time between events and their recounting, documentary evidence also provides an official record of process and outcomes. However, the notion that written documents present a definitive and accurate record of fact is at odds with the interpretative stance taken within this study. Documentary evidence is regarded here as discourse constructed through human activity, bound to the context of its production and the expectations of its intended audience (Potter and Weatherell 1987). As such it is not immune to the potential biases associated with interview data (Finnegan 1996). The partiality of documentary data and the context within which it was produced, as well the researcher's stance and subjectivity should therefore be given consideration since these may influence interpretation of the findings (Walt, Shiffman et al. 2008).

4.4.7.2 Review of local policy documents

Local documents have been identified as a valuable and readily accessible source of data that can corroborate and enhance other forms of evidence within case study research

(Stake 1995; Yin 2009). Prior to or during interview, professional participants were asked to identify examples of local policies and strategies relating to the safety scheme in their area. These were supplemented with searches of local websites for additional documents and on-line resources. The documents were reviewed using the data extraction form previously described in Chapter 3, a copy of which is available at Appendix 2).

A generic list of the documents reviewed is provided in Figure 5 below. No date limit for the publication of local documents was set. The earliest document reviewed was published in 2006.

Figure 5 Local documents reviewed to provide context for case study sites

Annual Reports of the Director of Public Health
Child Accident Prevention Strategy
Child Accident Prevention Plans
Child Poverty Strategy
Children and Young People's Plans
City Strategy
Health and Wellbeing Strategy
Joint Strategic Needs Assessments
Local Safeguarding Children's Board Reports
OFSTED Reports for Children's Centres
Additional documents from local authority websites (searched to identify accident prevention/public health priorities).

The documentary review provided contextual information that contributed to the development of case study site profiles (this process is described in Section 4.5.5.1). It also provided an opportunity to corroborate interview findings. Examples of

disconfirming the information provided at interview were rare, however, in one instance the local documents contradicted information provided by one professional participant. When this was followed up it appeared that as a consequence of recent organisational restructuring the documentary content was no longer current.

4.4.7.3 Exploring the concept of sustainability within national and global public health policy documents

An in-depth content analysis was undertaken on the national and global policy documents reviewed in Chapter Three (a full list of these is provided at Appendix 4). The analysis aimed to answer the following questions:

i) Does sustainability feature within public health policy?
ii) If so, how is it conceptualised?

Additional information specific to sustainability, and the factors that may influence this, was sought using the findings from the Literature Review in Chapter Two as guidance. Notes on each document were made as part of the review process to encourage reflection on the researcher's standpoint (Walt, Shiffman et al. 2008). To assist in exploring the conceptualisation of sustainability, in-text keyword searches for associated terms were undertaken where documents were available in electronic format. Initial search terms were informed by the literature review, with additional terms included as the review progressed (Savaya, Spiro et al. 2008; Wiltsey Stirman, Kimberly et al. 2012). Table 4.3 shows the search terms used. Each provided a "stem" that enabled simultaneous identification of derivatives and alternative

spellings. The in-text frequency and usage of each term was noted and served as a focus for understanding the conceptualisation of sustainability within the policy context.

Table 4.3 In-text keyword searches associated with sustainability in the policy review

Search term	Derivatives
Continuity	
Durab	Durable, durability
Embed*	Embedding, embedded
Incorporat	Incorporate, incorporating incorporation, incorporated
Institutionali	Institutionalise/ize, institutionalisation/zation, institutionalized/ized
Integrat	Integrate, integrating, integration, integrated
Maint	Maintain, maintaining, maintenance, maintained
Ongoing	
Routini	Routinise/ize; routinisation/ization; routinised/ized
Sustain	Sustainable, sustaining, sustained, sustainability

- *Term added as review progressed

4.5 DATA ANALYSIS

4.5.1 Using a framework approach

Data analysis was conducted alongside data collection (Eisenhardt 1989), and followed the six-stage recursive process outlined by Braun and Clarke (Braun and Clarke 2006). In addition to describing patterns across the data set, the intention within this study was to take the analysis a stage further by offering interpretation of the findings. This avoids what has been referred to as a 'garden path analysis', leading the reader through a series of findings without attempting to

explain the relevant connections between them (Boyatzis 1998).

Thematic analysis has been criticised because of the flexibility it affords the researcher in selecting which elements of data to focus on and how to analyse these (Bazeley 2009). To provide initial focus for the analysis (Thomas 2011), and enhance rigour, a framework approach was therefore adopted within the current study (Ritchie and Spencer 1994). An a-priori framework consisting of five initial concepts was developed, informed by the study objectives and the review of the sustainability literature conducted in Chapter Two.

Three of the concepts related to the categories of influencing factors that were used to inform Objective 1 of the current study: those acting at the level of the programme, the organisation and the wider environment (Shediac-Rizkallah and Bone 1998). One concept considered the participant perspective, including any potential benefits (Objectives 2 and 3 of the current study). The final concept considered programme activities, together with any modifications made. The latter two concepts (programme benefits and programme activities) have been identified in the literature as two of the main manifestations of sustainability. Detailed description of these was therefore considered important in understanding the nature of sustainability so as to improve the potential transferability of findings from the study (Yin 2009; Thomas 2011).

Data analysis was conducted initially within-case to gain an understanding of the findings associated with each safety scheme, before conducting cross-case analysis based on

comparison of the themes identified (Sandelowski and Leeman 2012). At each stage particular attention was paid to negative cases since these can assist in refining the claims made (Miles and Huberman 1994; Murphy, Dingwall et al. 1998).

4.5.2 Data organisation and familiarisation

A full, literal transcription of the audio recording was produced within five working days of each interview contact. Verbatim translation retained contextual references that may be relevant to understanding meaning within a specific setting (Braun and Clarke 2006). Transcripts and audio recordings were assigned unique linked identifiers and stored on a password protected database. Sole responsibility for data collection and subsequent transcription proved valuable in familiarising the researcher with the data. Further immersion was achieved through repeated active reading of the transcripts (Braun and Clarke 2006). Audio recordings were replayed to capture the tone of the discussion and transcripts were annotated by hand to reflect this.

4.5.3 Data indexing

Data familiarisation and constant comparison of within-case transcripts produced a comprehensive list of concepts that were used to modify the initial analytical framework. This modified framework was then used to index the data (Ritchie and Lewis 2010). The index comprised hierarchical broad categories and associated sub-categories illustrated by the example given below in Figure 6.

The original analytical framework categorised influences on sustainability by the level at which they operated (on the programme, the organisation or the wider environment). This

conceptualisation proved incompatible with the participant perspective during the early stages of analysis since the level of influencing factors was rarely distinguished. Similar findings have been noted elsewhere (Buchanan, Fitzgerald et al. 2005). The framework was therefore modified to consider influences on sustainability as a collective category (category 4 below), with the level at which they operated re-introduced at a later stage. Participant experience was retained from the initial framework as a sub-category (see 2.5 below). The most significant modification to the analysis framework was the introduction of a temporal aspect to reflect the stages of scheme development that featured strongly throughout the within-case data. This resulted in categories that addressed scheme history, current scheme provision and future plans.

Issues not specified within each category were identified as "other" and addition of a final "Other" category ensured that data indexing was inclusive. A numerical identifier was assigned to each category and sub-category and all raw data within the transcripts was manually indexed accordingly. A similar indexing framework was applied in all case study sites and facilitated visual cross-case comparison on display matrices where, for example, the corresponding matrix cell remained blank if data in support of a specific sub-category was not identified. Index categories were subject to ongoing review and revision in an attempt to best represent the full data set (Boyatzis 1998).

Figure 6 Example of indexing framework: Case Study Site B

1. SCHEME HISTORY
   - 1.1 General injury prevention (local context)
   - 1.2 Scheme funding/support
   - 1.3 Provision, coverage, delivery
   - 1.4 Duration/timing
   - 1.5 Safe At Home (national programme)
   - 1.6 Other
   - 1.7 Context/Researcher comment

2. CURRENT SCHEME PROVISION
   - 2.1 Funding/support/lead agency/training
   - 2.2 Coverage*
   - 2.3 Delivery*
   - 2.4 Target community
     - 2.4A Gaining access to scheme
     - 2.4C Characteristics of population
     - 2.4R Role within scheme
     - 2.4S Personal safety concerns
   - 2.5 Participant experience/benefits
   - 2.6 Signposting to other agencies
   - 2.7 Data /evaluation
   - 2.8 Other
   - 2.9 Researcher comments/context

3. FUTURE PLANS
   - 3.1 Funding/support/lead agency
   - 3.2 Provision, coverage, delivery
   - 3.3 Barriers/facilitators
   - 3.4 Other
   - 3.5 Researcher comments/context

4. INFLUENCES ON SUSTAINABILITY
   - 4.1 Barriers†
   - 4.2 Facilitators†
   - 4.3 Other
   - 4.4 Researcher comments/context

5. OTHER ISSUES

* Examples of sub-categories merged in the subsequent analyses.

† This sub-categorisation worked well for some sites. For others where the distinction between barriers and facilitators was less clear these were collectively indexed as 'influences'.

Tables of temporary concepts produced throughout the analysis provided an "audit trail" and enhanced transparency with respect to the themes identified (Miles and Huberman 1994; Ritchie and Spencer 1994). Table 4.4 below illustrates how relevant data extracts for each case study site were summarised and referenced, using transcript and line number, so as to facilitate the identification of raw data to support the analytic narrative. The tables included extracts from researcher fieldnotes along with her subsequent reflections, providing context for participant contributions (Bryman 2001). Individual contributions made by focus group participants were recorded in a similar way, enabling consideration of the interactions that brought these about (Knodel 1993), an area often overlooked in the analysis of focus group discussions (Belzile and Oberg 2012). A chronological log was kept of key issues that were identified during data collection. This helped to inform the direction of future interviews. As example, the issue of peer education, raised at an early focus group in Site A (15/04/13) was followed up in discussion with other families and professionals from this site and also subsequently explored with families in Sites B (19/06/13) and D (25/09/13).

Table 4.4 Table summarising 'Scheme history' for Site B within-case analysis

Participant ID	1.1 Injury prevention	1.2 Scheme funding/ support	1.3 Provision, coverage, delivery	1.4 Duration/ timing	1.5 'Safe At Home'	1.6 Other	Context/researcher comment
BFG01							
BFG02							
BP04		Part SSLP, funding ended. Cluster CCs pooled resources ***"rather than lose it all together"*** as scheme important (*103)*.	Home safety service from old SSLP. Was flagging so incorporated into CC, been running 7 yrs (*97- 100)*.		SAH workshops - not suited to all families (*45-52)*. Service continuity post-SAH (*94)*.		Composed manner. Op.manager.
BP05		PCT funded pre-SAH (*420)*.	Installed equipment in original scheme. Co-ord left suddenly and BP05 carried it on. Other CCs joined in, then registered with SAH (*105-108)*. Steering group included mums, interest waned with SAH (*429 - 432, 434-436).* Little idea of scheme when took over *(534).* Expanded assessments and education workshops (*541-543.)*	Scheme started ?10 yrs ago (*103)* BP05 has run scheme for 6 years (*533)*.	Sought funding at RoSPA presentation **"I thought well it's there we can ask for it, we need this money" (***110).* National press release when scheme registered (*114)*. No gap in provision when SAH ended (*160)*. SAH saved local scheme (*422)*.		Extensive experience pre and during SAH. Skills in home assessment. Tensions re: current post. Lack of strategic support? Very affable personality.

BP06	Service recruited community safety advocates 5 years ago, resource-based decision (*3-7)*. Keen to engage with new mums (*10-15).*				Not aware of RoSPA role in scheme (*132, 140).*		Key partner, committed, passionate. Personal skill set. Likely to move on from current post. Helpful manner - similar personality to BP05
BP07							Ad-hoc telephone call at instigation of BP06. Individual subsequently appointed to post of BP06.
BP15			When SSLP had specific worker, ***"safety was always something that's been quite a priority in these areas" (****15-17)*		Attended RoSPA training some time ago over several sessions - found interesting (*68-85).* Benefits: built consistency across CCs (*86).*		Personable, chatty, open. Refers families into scheme. Enthusiasm for scheme. Speaks highly of Op manager- borne out by observing their interaction and my interview with manager.

BP14		Scheme operated approx 4 years in CC cluster (incl SAH?) (*4)*. Individ joined CC 18 months ago (*4)*. BP05 as link (*8)*. Parents paid for reduced cost equipt, home safety assessment and workshop (*9)*.		SSLPs - "***had we given the scheme long enough… to really embed into what people really offer?" (****187)*	Service level agreement existed with 3rd sector agency running SAH (*5-6).* ***"It's a real shame any national strategy or policy gets pulled too soon before we've seen the longer-term impact" (****183-4).* SAH limiting re: scope - subsequently included outdoor space (relevant to target group) ***(****189-195, 198).*		Professional but down to earth manner. Seems very "can-do". Calm, productive, supportive atmosphere in office. Strong personal support for safety as priority.
BP05(2)					SAH provided national profile and links with other schemes (*310-313).*		Second interview to check formative themes. Appeared more relaxed, more usual self.

(n) Italicised numbers in brackets correspond to the line number of the transcript.

bold Quotations that illustrate specific points within a category are featured in bold type.

4.5.4 Identifying, reviewing and refining themes

The tables of temporary concepts were used as working documents and annotated to show, for example, possible linkages between categories as well as corroboration or conflict between participant perspectives. This aided the process of identifying patterns in the data, thereby helping to build and review overarching themes (Braun and Clarke 2006). Cross-tabulating the index categories against their relevant data sources introduced a quantitative aspect to the analysis by indicating commonly mentioned themes and identifying sub-themes to be expanded or collapsed (Sandelowski and Leeman 2012). This approach can assist in obtaining an overall sense of the data-set that may otherwise become lost in intensive qualitative research (Silverman 2010). Researcher judgement was used in deciding the relevance of particular themes to the research questions (Braun and Clarke 2006). To enhance study credibility and counter potential researcher bias, putative themes arising from the interpretation of data were discussed with the key site contact (Yin 2009), and decisions were subject to review by both academic supervisors. The analysis moved back and forth between the tab*ulated data extracts and the full transcripts, re-indexing extracts where necessary and constantly refining the themes for 'fit' with the full data set (Boyatzis 1998). Themes were compared with researcher fieldnotes, made immediately after each data collection session, to ensure that these reflected particular experiences and that contextual factors of relevance had not been lost in the indexing process (Ayres, Kavanaugh et al. 2003).

4.5.5 Production of within-case profiles and process of cross-case analysis

4.5.5.1 Within-case profiles

Once the final themes and sub-themes had been identified, individual narratives were developed to describe and explain the findings. These considered similarities and differences between participant groups. The narratives, together with supporting quotes, were used to build a case study profile for each site (Miles and Huberman 1994). These are presented in Chapter Five. Additional information on population demographics, epidemiology and contextual characteristics from the review of local documents (presented in Section 4.4.7) was also used to inform the profiles. The use of standardised nomenclature in the site profiles to describe documentary sources and professional roles assisted in the cross-case analysis and protected participant anonymity. Though individual sites referred to specific policies and activities using a range of terminologies, the preferred term adopted within the profiles was "accident prevention", in order to clarify the distinction between this and intentional injury.

A graphic representation of the pathway to sustainability was produced for each of the case study sites, and for the interviews with national stakeholders in Safe At Home (see example at Appendix 9). This took the form of a sustainability 'flowchart', a concept developed from the use of thematic networks as a tool for qualitative research (Attride-Stirling 2001). The flowcharts were used as an aide-memoir in the cross-case analysis. All site profiles and sustainability flowcharts were reviewed by the academic supervisors.

4.5.5.2 Cross-case analysis

The cross-case analysis involved constant comparison of the themes identified in each site profile to identify transcending themes (Creswell 2007; Yin 2009). Common themes provided an essential framework whilst critical reflection of the original accounts helped to maintain a balance and ensure that within-case nuances were not lost in the cross-case analysis (Ayres, Kavanaugh et al. 2003). Tables were once again used to document and clarify the analysis process, this time displaying data sources for all sites and participant groups against transcending themes.

4.5.6 Write up of report

It is recommended that the writing-up of thematic analysis should begin at an early stage in the process (Braun and Clarke 2006). Within this study, extensive notes were made throughout and individual case study profiles were produced part-way through the process. The majority of the writing up was undertaken towards the end of the analysis period when it became possible to fully integrate the findings from different data sources. Extended extracts of raw data have been included to help the reader to draw his/her own conclusions (Miles and Huberman 1994). All personal identifiers have been removed from these to protect participant anonymity. Attempts have been made to distinguish the researcher's voice and interpretations from those of the participants, with raw data appearing in italics and attributed to source. Discussion of the study findings within the wider context of existing knowledge on programme sustainability aims to strengthen their interpretation and support theoretical generalisation (Patton 1990; Frith and Gleeson 2004).

4.6 TRUSTWORTHINESS OF THE STUDY

4.6.1 Assessing quality within qualitative research

The application of evaluative criteria traditionally used in quantitative research, such as validity (whether the study findings represent what they claim to be investigating) and reliability (the extent to which research findings can be replicated), have been contested with respect to qualitative methodologies (Murphy, Dingwall et al. 1998; Lewis and Ritchie 2010). Whilst alternative criteria have been proposed, most notably those of Lincoln and Guba (Lincoln and Guba 1985), the assessment of quality within qualitative research remains an area of contention (Dixon-Woods, Shaw et al. 2004; Cohen and Crabtree 2008a).

Some authors regard the use of specific criteria, such as those found in assessment tools, to be an unreasonable constraint on the imagination and intuition that characterise qualitative data analysis (Hammersley 2007). Nevertheless, since case studies in particular have been criticised for a lack of methodological rigour (Yin 2009), a critical approach to addressing the issues of quality within this qualitative research study was seen as desirable (Silverman 2010). This was addressed by reference at intervals, throughout the process, to the CASP checklist, part of a well-respected suite of quality assessment tools, together with guidance on quality criteria developed specifically for case study research (Stake 1995; Thomas 2011; Critical Appraisal Skills Programme 2013b).

4.6.2 Consideration of four criteria

Approaches taken to addressing the trustworthiness of the current study are discussed with respect to the four critical appraisal criteria initially applied to qualitative research by

Lincoln and Guba: credibility, transferability, dependability and confirmability (Lincoln and Guba 1985). Some of the strategies adopted, such as triangulation and detailed methodological description offer substantiation for more than one of the appraisal criteria described.

4.6.3 Credibility

Credibility approximates most closely to the positivist concept of internal validity (Shenton 2004). It addresses the extent to which research findings represent a credible interpretation of the original study data (Lincoln and Guba 1985). The situated nature of qualitative research findings can be reflected by conceptualising credibility as:

> *"Does the research accurately reflect the phenomena under study as perceived by the study population?"*
>
> (Ritchie and Lewis 2010): p. 274

Within the current study, strategies to enhance credibility were considered from three key perspectives; those of the researcher, the participants and of the reader (Carlson 2010). Multiple strategies to address credibility at different stages of the study were adopted as recommended by the literature (Shenton 2004; Creswell 2007; Silverman 2010).

One of the key characteristics of qualitative research is the use of specially developed research tools as opposed to quantitative instruments that can be externally validated (Ward, Furber et al. 2013). The development of topic guides for this study was theoretically informed (Silverman 2010) and subject to peer review (Lincoln and Guba 1985). Tactics were employed to encourage honesty in informants (Shenton 2004),

for example by requesting additional detail or anecdotes to confirm that responses reflected actual behaviour (Hammersley 2008). Prior to giving consent, participants were assured of the independent nature of both the research and the researcher. Well-recognised research methods were employed for data collection and analysis (Shenton 2004). Findings were subject to constant comparison across sites and across time (Ritchie and Lewis 2010). The analysis considered the whole data set, with particular attention paid to negative cases in order to refine the interpretation of the findings (Lincoln and Guba 1985; Shenton 2004; Ritchie and Lewis 2010).

The development of an *"evidence trail"*, linking raw data to study findings, can support credibility (Yin 2009). Framework analysis, the approach used in this study, has been identified as a rigorous and systematic method capable of providing such a trail (Ward, Furber et al. 2013). The authors also note its particular value in informing policy and practice, both of relevance to the applied nature of the current research.

The multiple case study approach used supported triangulation of data collection methods, participants and sites. Triangulation is a recognised strategy for improving study credibility (Patton 1990; Yin 2009). However its basis in judging different perspectives against one another to attain an objective reality has attracted criticism from those taking an interpretivist stance in which multiple perspectives are afforded equal consideration (Murphy, Dingwall et al. 1998; Silverman 2010). The concept of corroboration whereby an argument can be strengthened by reviewing additional sources of evidence (Andrade 2009) provided a better fit with

researcher values for the current study. This was demonstrated through purposive participant selection and iterative interview content, as well as by including review of local documents to support participant contributions.

The active role of the researcher in the co-construction of meaning is well-recognised in qualitative research (Hammersley and Atkinson 1995; Murphy, Dingwall et al. 1998; Silverman 2010; Spencer, Ritchie et al. 2010) and has been identified as an important element of the case study approach (Stake 1995; Thomas 2011). To emphasise this the current study described themes as being 'identified' rather than 'emerging' from the data since the latter implies passivity rather than a process of active interpretation. In acknowledging an 'insider stance', the professional background of the researcher, her previous experience of the 'Safe At Home' programme, and her familiarity and sympathy with the practitioner perspective were made explicit within the research report (Malterud 2001; Creswell 2007; Walt, Shiffman et al. 2008).

Reflexivity was an inherent feature throughout the process of this study. It was conveyed to the reader through researcher commentary and in a section (Section 4.8) devoted to her reflections on the methods used (Shenton 2004). A reflection sheet designed for this study was completed after each contact and together with fieldnotes this provided a source of contextual data (Miles and Huberman 1994; Ward, Furber et al. 2013). The reflection sheet recorded immediate impressions of the setting, the participant and the interview process from the researcher perspective and identified key points from the discussion along with potential areas for future

exploration. A research log was used to record the researcher's thoughts and feelings as the study progressed and to document events that may have influenced the research process (Carlson 2010). To mediate researcher bias in the interpretation of study findings, these were subjected to peer review, with research supervisors also available throughout the process to review and challenge the analysis (Lincoln and Guba 1985).

Lincoln and Guba regard respondent validation as the ultimate means of assessing study credibility (Lincoln and Guba 1985). To check formative understanding of the interpreted data within the current study, abridged case study profiles and provisional themes were reviewed by the key contact in each site (Creswell 2007). This provided an opportunity for participants to confirm or refute the researcher's interpretation (Silverman 2010). Member checks on the full case study profiles were not conducted since these would offer only a limited individual perspective on the interpreted data (Sandelowski 1993). In addition the inclusion of quotes may have compromised anonymity given the small number of participants within any one site (Ford and Reutter 1990). The process used for member checking was adapted according to the individual concerned (Carlson 2010). As illustration, with one participant who had a technical background the method used was based on graphic elicitation (Crilly, Blackwell et al. 2006). This involved face-to-face discussion of a visual summary of the temporary themes, with changes made to the diagrammatic representation during the process. Although the initial intention was not to conduct member checks on the full transcripts, the preference of individual participants was considered in order to preserve the relationships that had been

established. For example, a complete transcript was provided for one participant who had expressed concern about her ability to respond fully at the time of interview. In the event this was returned without amendment.

The study report aims to provide the reader with a detailed description of the research setting, participants and protocol, as well as clearly describing sustainability as the phenomenon of interest (Carlson 2010). Where possible researcher familiarisation of the participating case study sites and organisations was enhanced through site visits and review of local documents prior to formal data collection (Shenton 2004). The final report presents the researcher's interpretation of the findings, supported by extracts from the raw data (Murphy, Dingwall et al. 1998). The findings are then discussed within the existing knowledge base for sustainability of public health programmes in order to provide a broader contextual framework for the reader (Shenton 2004; Silverman 2010).

4.6.4 Transferability

Transferability of study findings considers the extent to which these are applicable to other contexts or settings (Lincoln and Guba 1985). To assist the reader in deciding the relevance of findings to their own situation, "*thick description"* (Geertz 1973) has been provided of the nature of sustainability (Chapter Seven) and of the research context (see site profiles in Chapter Five). This aims to broaden the relevance of the research findings beyond the immediate boundaries of the case study sites thereby increasing the potential for wider public health gains (Arai, Roen et al. 2005).

Thick description of the sites was informed by the review of local documentation, researcher observations and the maintenance of ongoing, informal communication with site contacts. The interviews with stakeholders in child injury prevention provided rich detail with which to contextualise the stance taken on sustainability within the policy review. Researcher familiarity with several of the professional participants was helpful in adding contextual detail. For example, during analysis of the transcripts from the policy stakeholders it was noted that one respondent had overlooked the role of his agency in advocacy and lobbying, a contribution that was mentioned by other respondents. In response an additional review of the activities of each agency as presented in their official documentation and/or website took place in order to confirm some of the information provided. This was used to enrich the context for the interpretation of interview data.

4.6.5 Dependability

Dependability provides an assessment of reliability within the processes of data collection, analysis and theory generation (Lincoln and Guba 1985). This can be difficult to address within qualitative research where the nature of the phenomenon under study may be time and context dependent (Shenton 2004). The close association between the concepts of dependability and credibility has resulted in some strategies that are capable of addressing both criteria. Within the current study this includes the provision of in-depth methodological description, together with a description and justification of changes made to the original protocol. These may assist future researchers wishing to conduct a similar study.

4.6.6 Confirmability

Confirmability considers how well the study findings are supported by the data collected, as opposed to being influenced by researcher predispositions (Lincoln and Guba 1985; Shenton 2004). Strategies used within the current study to counter investigator bias, such as triangulation and the presentation of researcher background and beliefs, can therefore also be an appropriate means of addressing confirmability. In-depth methodological description together with reflective appraisal of the methods used has been presented to assist the reader in assessing the extent to which interpretations may be accepted (Shenton 2004). The development of a sustainability "flowchart" for each of the case study sites provided a theoretical "audit trail", comparison of which enabled cross-case similarities and differences to be identified (Shenton 2004; Yin 2009).

4.7 ETHICAL CONSIDERATIONS

4.7.1 Study approval

Ethical approval for the initial study (Nov 2012) and two subsequent amendments (May 2013; July 2013) was obtained from the University of Nottingham Medical School Ethics Committee. A copy of the initial approval letter is provided at Appendix 10.

4.7.2 Autonomy and consent

Study participants were healthy volunteers who were informed of the research by a local professional already familiar to them. No access to medical or personal records was required. Written background information on the study was provided and participants were advised of their right to withdraw at any time (Holloway and Wheeler 2010). Written consent was

obtained prior to initial data collection. Since the iterative nature of the study made it difficult to predict the commitment required from individuals at the outset, verbal confirmation of consent was sought at any subsequent contacts (McDonnell, Lloyd Jones et al. 2000).

4.7.3 Protection from harm

The principle of maleficence protects participants in research studies from intentional harm (Murphy, Dingwall et al. 1998). Within the current study the risk of harm was considered minimal, however, should participation in the discussion groups have evoked distressing memories for any individual, a procedure was in place to address this. In the event, this procedure was not required. Parents were advised in the written information of the researcher's responsibility to report any safeguarding concerns.

4.7.4 Confidentiality and anonymity

Access to the original study data was limited to the researcher and her supervisors. Interview and focus group participants were advised of the confidential nature of the discussions. A password protected database was established for the study and all personally identifiable data was removed from the files stored on this (Creswell 2007). Audio recordings were uploaded to the database, following which the original version on the portable recorder was deleted. Audio files, transcripts and fieldnotes were all assigned a unique identifier that enabled cross-referencing between data sources. Anonymity was addressed using pseudonyms to attribute the quotations used in interim and final reports. Generic titles were adopted

for local documents reviewed so as to protect the identity of the case study sites.

4.7.5 Reciprocity

Reciprocity concerns giving something back to study participants in exchange for their contribution (Lewis 2010). Family members participating in the focus group sessions for this study were provided with a £10 shopping voucher, refreshments and the offer of free on-site childcare. The key professional contact was offered an opportunity to comment on the case study profile for their site. All participants will be provided with a summary of study findings, the format of which will be decided in consultation with the key site contact.

4.7.6 Consideration of conflicting interests

Several of the professional participants in the study were aware of the researcher's previous involvement in the national evaluation of 'Safe At Home'. This had been commissioned by RoSPA, a charitable organisation. Since the same organisation was responsible for funding the current study, it was considered of importance to emphasise the independent nature of the researcher's current role to all study participants.

Concerns regarding potential bias were addressed though the processes detailed previously, specifically: provision of a clear research protocol and documentation of changes made, inclusion of multiple perspectives, robust and transparent processes of data analysis, intermediary and summative findings subjected to peer and expert review, attention paid to researcher reflexivity and a high level of professional integrity.

The research for this study was conducted in accordance with the University of Nottingham Code of Conduct and Research Ethics that underpins commitment to the highest standards of performance and ethical conduct (University of Nottingham 2013).

4.8 RESEARCHER REFLECTIONS

4.8.1 Adherence to the protocol

Several minor adaptations were made when implementing the study protocol. Some of these had been agreed in advance with site contacts, for example increasing the value of the shopping voucher in Site C to encourage family representatives to participate. Others occurred in response to unanticipated situations over which I had little control, such as the preference of two participants in Site C to be interviewed jointly rather than individually. These events were recorded in researcher fieldnotes and contributed to the contextual elements of the data.

On two occasions it became apparent at the focus group discussion that not all participants had received the background information as intended and one participant had not actually been in receipt of the safety scheme at all. Though she opted to remain in the session, I decided later not to include her contribution in the analysis.

Examples such as these illustrate the tension that can exist between the rigour of a research protocol and the way in which this is implemented in practice. Since I was aware of the demands that the study imposed on the time and goodwill of professional contacts, I felt it appropriate to strike a

reasonable balance between these two aspects, particularly where deviating from the protocol was likely to have minimal impact on the data created.

4.8.2 Ethical issues

Two events that occurred during the data collection period raised specific ethical concerns.

One professional participant requested that audio recording be stopped part way through our face-to-face interview, after which she continued to relate details of a particular situation to me. Her comments appeared to be of relevance to the within-case analysis and subsequently I sent her an electronic extract of the draft report indicating how the points that she had made might appear. After consideration she requested that her unrecorded contribution be omitted, explaining that the situation under discussion had since been resolved. I complied with her request.

In a separate incident I was made aware of an employment tribunal involving one of the interviewees. I had known this individual for some time prior to the current study and had noted during our interview that this participant was uncharacteristically quiet. I appreciated that any contribution made at that time was likely to be heavily influenced by the ongoing situation. Though I considered it important to reflect this individual's perspective in the study report, I was also aware of sensitivities regarding the personal context. This resulted in my decision not to actively pursue interviews with additional senior management representatives in that site since I felt that this may compromise the position of this participant.

4.8.3 Participant recruitment

Working with a key contact in the local sites proved a useful way of gaining access to study participants. At site visits I was warmly welcomed by professionals and families. Participating staff and their colleagues appeared genuinely interested in the research, often asking additional questions and spending more time with me than I had anticipated. Contacting parents through a professional already familiar to them gave me access to families that I may have found difficult to recruit independently. In discussion, parents were open about their personal circumstances and very trusting in the nature of the information that they shared with me.

Purposive selection of local professionals enabled putative findings to be explored as the study progressed. For example in Site A, additional participants were recruited to provide a more strategic perspective following the identification of management support as a potential facilitator for sustainability.

4.8.4 Data collection

Comparing the duration of interview by type revealed that face-to-face interviews lasted longer on average than telephone interviews (37.3 minutes compared to 23.3 minutes). Repeated listening to the audio recordings suggested that verbal encouragement in the telephone interviews was substituted for visual cues. This served to maintain the flow of the conversation and encouraged the building of rapport between myself and the interviewee. The interview type did not appear to influence the depth or content of the data obtained, confirming the findings of previous

studies that compared face-to-face and telephone interviews (Sturges and Hanrahan 2004).

Each interview type had associated advantages and disadvantages. For example, one telephone interviewee was very talkative and my only strategy to contain his enthusiasm was through verbal interruption. A face-to-face interview may have been preferable in this case but I was not aware of the situation beforehand in order to inform the choice of method. Although it has been suggested that some researchers may have a preference for one method over the other (Novick 2008), I was comfortable with either.

Participant interaction at the focus group sessions was generally good, although at the smaller session in Site B I was aware that my contribution increased to sustain the flow of conversation. The dynamics at the Site D session were influenced by the presence of two co-habiting couples, familiar to each other and with a tendency to converse amongst themselves. This required my intervention on several occasions to encourage contributions from quieter group members. I subsequently gave all participants the opportunity to make further comments, should they choose to, following the session.

The value of the focus group approach in stimulating contributions that may not have emerged in individual interviews was apparent. As example, in one Site B session several participants identified a safety concern around children becoming entangled in cords attached to window blinds. One mother shared her personal experience of a family whose child had died, leading to a group discussion on strategies used for

prevention that included cutting the blind cords to keep them out of children's reach. Towards the end of the session one participant's comment provided an insight into how the discussion with her peers had influenced her thinking on home safety:

"At the moment my 3 year old is obsessed with blind cords, I've got the lock (safety device for window blinds provided by the scheme) but I'm not happy with it. So you guys have said that you cut them, I'm going to go home and cut them…it's a really good idea".

[Ashley, Mum to 2 children, Site B]

Although free on-site crèche facilities were available for parents attending the group sessions, some opted not to use this and others who had pre-booked places changed their mind on the day. This incurred a cost to the project budget and meant that young children were present in some of the sessions which could cause distraction.

A different power balance was noted between myself and participants in the focus groups compared to those in the face-to-face interviews. With the focus groups I had some influence over the choice of venue and was able to make minor modifications in the form of room layout and provision of refreshments. I ensured that I arrived at the sessions early, acting as host to welcome the participants. Inevitably I was viewed initially as the session "leader", though as discussion got underway I attempted to reduce my input, providing a steer rather than overtly directing the conversation. In the interviews the choice of venue was made

by the professional participant and I was very aware that my role was that of invited guest.

4.8.5 Reflexivity

Reflexivity is a key concept within qualitative research (Flick 2009) though definition and usage of the term vary within the literature (Pillow 2003; Alvesson and Skoldberg 2009). A reflexive approach considers the ways in which the research context and the positioned standpoint of the researcher may influence the process of knowledge production (Alvesson and Skoldberg 2009). By encouraging reflection on the ways in which data collection, interpretation and presentation may be subject to bias, reflexivity can assist in enhancing study rigour (Snape and Spencer 2010).

Fundamental to a reflexive approach is the open acknowledgement of individual background and beliefs that may shape researcher assumptions (Creswell 2007). My previous experience of the 'Safe At Home' programme and my standing within the injury prevention research community proved helpful in gaining initial access to professional contacts. However, despite having made my position as an independent researcher clear at the outset of this study, I did sometimes find myself reminding interviewees that my role was no longer that of a programme evaluator. It is possible that this misapprehension may have influenced the high rate of interview completion among professionals in the case study sites (86%, n = 29).

The funding for the current study was provided through a scholarship scheme in which RoSPA, the host for the national Safe At Home programme, is a partner agency. This

arrangement deserves particular consideration with respect to potential researcher bias (Krimsky 2012).

The aim and objectives for the current study were identified by myself, and provided a focus for the work conducted throughout. Research methods were designed in consultation with academic supervisors and analysis was undertaken witih the support of the supervisors. One of the roles of the supervisors was to ensure that the researcher was not bias in selection of themes.

It is important to note that the funder played no part in the design, analysis or production of the thesis, or in any presentations undertaken. Two brief interim reports were produced for the funders (May 2012; April 2013). The funders made no attempt to influence the direction of the research after reading the reports.

Individual representatives from the agency who contributed to the study were afforded the same rights as other participants regarding autonomy, confidentiality and anonymity. No special privileges were granted with respect to access to raw data, nor was any contribution made to the interpretation of findings. I strived to ensure that participant contributions to the study were treated equally. All aspects of data collection were used to inform the findings and a robust and transparent process of data analysis was employed. The potential for researcher bias in the selection of documents for the two reviews included in this study (literature review and policy review), was mitigated by obtaining expert advice during the search process and again following interpretation of the findings.

My credibility within the injury prevention community undoubtedly afforded me privileged access to participants occupying senior management positions at national and global levels. All of the interviews with national Safe At Home stakeholders and with policy stakeholders were conducted by telephone, and despite the seniority of the individuals concerned the tone was very relaxed. I was familiar with two of the six policy stakeholders and this appeared to be reflected in lengthier discussions (31.5 minutes on average compared to 26.3 minutes).

Despite being clear about my role as a researcher, on one occasion this conflicted with my practitioner's desire to provide support to a parent. A mother attending one of the focus groups had spoken at length about the additional demands placed on her by having a young child with behavioural problems, and how this impacted on her attempts to address home safety for both the child and his siblings. In discussion with site professionals afterwards I was reassured to hear that they were working to support the family. I was also enormously touched when the mother approached me following the session to apologise for her initial defensiveness, before going on to talk very openly about the difficulties of managing the needs of her child.

The potential for researcher assumptions to change over the course of the study has been highlighted (Murphy, Dingwall et al. 1998). As the current study progressed, my own understanding of the nature of sustainability changed. My early research log reveals what now seems to be a rather naïve dichotomous classification of scheme sustainability. The

study findings have revealed this to be a far more complex and dynamic phenomenon.

Although it was my initial intention to focus on the barriers and facilitators for sustainability, and how the understanding of these might assist practitioners, I found myself increasingly drawn to the way in which sustainability is conceptualised. An even greater surprise to me was the pleasure that I derived in conducting the policy review. These opportunities have helped to broaden my future research interests.

4.9 CHAPTER SUMMARY

This chapter has discussed the research methodology for the study, providing justification for the interpretative stance adopted and the qualitative methods employed.

The strengths and limitations of using a case study approach have been considered. A detailed research protocol has been presented. This includes the selection and recruitment of five main case study sites, and three corroborating sites, where safety scheme operation has been sustained. The selection and recruitment of individual participants providing representation at local, national and global levels is also described. The processes of data collection and analysis have been explained and supported using illustrative examples.

The trustworthiness of the study has been considered with respect to the credibility, transferability, dependability and confirmability of the integrated research findings. Ethical issues inherent in the study design have been discussed. Researcher reflections on the study, drawing on fieldnotes and

a research log, have been presented. These provide an insight into the implementation process in keeping with the insider standpoint adopted.

CHAPTER FIVE

STUDY PARTICIPANTS AND SITE PROFILES

5.0 INTRODUCTION

This chapter is divided into two sections. The first presents an overview of all 60 study participants. A study timeline is provided to illustrate the two-phase nature of the data collection process.

In the second section, individual profiles are presented for each of the five main case study sites, together with overviews of the three corroborating sites. The site profiles are based on abridged versions of the intermediate reports that were produced during the within-case data analysis. The purpose of presenting these profiles here is to assist the reader in contextualising the cross-case findings that are presented in subsequent chapters.

5.1 PARTICIPANT OVERVIEW

A summary of the individuals represented within each of the participant groups is provided in Table 5.1 at the end of this section.

5.1.1 National 'Safe At Home' stakeholders

Telephone interviews took place with one senior representative from each of the three national stakeholder agencies involved in delivery of Safe At Home. All three participants had personal experience of the national programme. The duration of interviews ranged from 14 to 25 minutes.

5.1.2 National and international policy stakeholders

Telephone interviews took place with one representative from each of six national and global agencies with an involvement in the development of child injury prevention policy. Three of the agencies had an injury prevention focus, whilst three had a more general remit for public health.

Two of the individuals who were initially contacted agreed to take part personally, while four of the participants were nominated by the original contact. All participants held posts at senior management or director level. The most recently appointed had taken up position six months earlier while the longest serving had been in post for twelve years.

Interview duration ranged from 21 to 38 minutes.

5.1.3 Local scheme professionals

5.1.3.1 Case study sites

Twenty-five local professionals from five case study sites took part in the study. Seventeen participants (68%) were employed predominantly at operational level, whilst eight (32%) held strategic management positions. The profile and number of professional participants varied between sites, reflecting differing models of scheme delivery. Four of the professionals initially approached to participate did not do so for the following reasons: 2 long-term absence, 1 no longer in post, 1 did not respond to follow-up.

Thirteen initial interviews took place by telephone, lasting between 10 and 51 minutes (average 23 minutes). The face-to-face interviews ranged between 25 and 71 minutes

(average 37 minutes). Information for each case study site is provided within the individual profiles in Section 5.2.

Follow-up telephone contact took place in a small number of cases to clarify uncertainties that came to light during transcription. Changes in local circumstances in two of the sites, (A and B), led to two participants being interviewed a second time by telephone and one participant completing a second face-to-face interview.

5.1.3.2 Corroborating sites

Of the twenty local scheme co-ordinators who were contacted using information provided by the host agency, fourteen individuals were no longer in post. Three responded to the initial contact but were unavailable or chose not to participate in interview. The remaining three individuals, representing three sites from outside the case study areas, agreed to participate in telephone interviews. In one site an additional scheme representative was available and also participated at the time of interview. All representatives were employed in an operational or middle management capacity. Interview duration ranged from 12 to 25 minutes.

5.1.4 Family representatives

The target group perspective was represented by twenty-two family representatives, twenty females and two males. A total of four focus group discussions took place across three of the case study sites (for further information see individual site profiles – Section 5.2). The duration of the sessions ranged between 37 minutes and one hour.

Table 5.1 Individuals represented within each participant study group

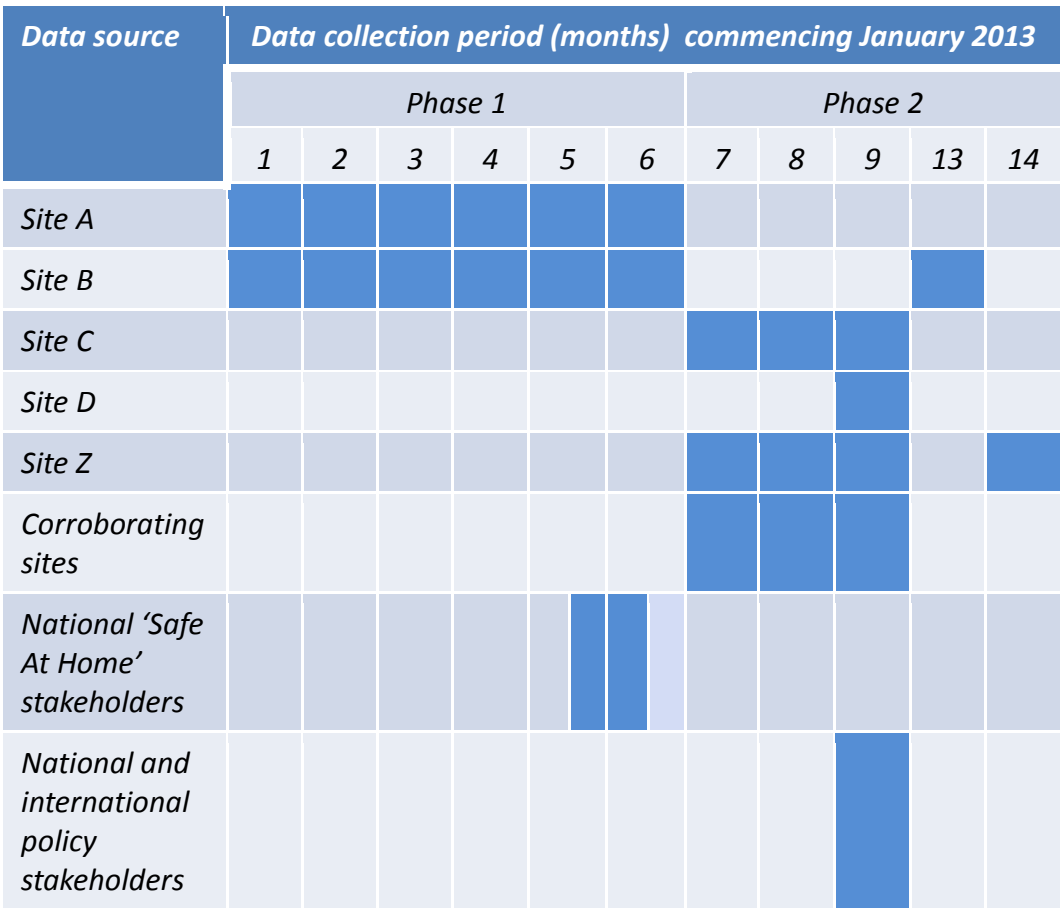
Case Study Site/ Group	Number of professionals approached (designation)	Number of professionals participated (designation)	Number of family representatives	Profile of non-participants	Comments
Site A	**4** (operational) **3** (strategic)	**4** (operational) **2** (strategic)	**6**	1 strategic-level professional - lost to follow-up.	All perspectives represented.
Site B	**7** (operational/ middle management)	**6** (operational/ middle management)	**9**	1 member of staff - long-term absence.	Strategic perspective absent – reflects nature of scheme operation.
Site C	**2** (operational) **2** (strategic)	**2** (operational) **2** (strategic)	**0**	Parental representatives- site staff unsuccessful at recruiting.	Parental perspective absent.
Site D	**2** (operational) **1** (strategic)	**1** (operational) **1** (strategic)	**7**	1 professional - did not respond to researcher contacts.	All perspectives represented.
Site Z	**5** (operational) **3** (strategic)	**4** (operational) **3** (strategic)	**0**	1 operational professional - no longer in post and unable to contact. Parental perspective not sought (advice of local professionals).	Parental perspective absent.
Corroborating sites (n=3: T, W and Y)	**20 initial contacts** across 17 sites	**4**	**0**	14 individuals - no longer in post. 3 individuals- responded to initial contact but did not commit to interview. Parental representatives - not sought.	1 individual (designated co-ordinator during Safe At Home) in 2 sites; 2 individuals (co-ordinator and equipment fitter) in 1 site. Parental perspective absent.
National Safe At Home stakeholders	**3** (senior management)	**3**	**N/A**	**N/A**	One representative from each of 3 stakeholder agencies.
National and international policy stakeholders	**6** (senior management)	**6**	**N/A**	**N/A**	One senior representative from each of 6 agencies.
Total number	**58**	**38**	**22**		

5.1.5 Timeline for data collection

Figure 7 shows the timeline for data collection and illustrates the two phase nature of the study. The five main sites comprised Sites A and B, recruited in Phase 1 of the study and Sites C, D and Z recruited in Phase 2. During the second phase interviews with key contacts in the three corroborating sites, Sites T, W and Y, also took place.

The majority of data collection occurred over a nine-month period, (January – September 2013), with one additional professional interview in each of sites B and Z taking place at months thirteen and fourteen respectively.

Figure 7 Timeline for data collection: all participants



5.2 CASE STUDY PROFILES

5.2.1 Site A

5.2.1.1 Setting, demography and injury epidemiology

Site A, a mixed urban and rural metropolitan district, has the second largest total population in the study (see Table 5.2a). Historically the area gained an international reputation for textile manufacture during the 19th Century. Subsequently it succumbed to those symptoms of decline, such as high unemployment, material deprivation and social unrest, often associated with post-industrial economies.

The number of young people in the district has steadily increased over recent years. The proportion of families from black and minority ethnic backgrounds is higher than the national average (32.6% compared to 14.7%), with the highest minority ethnic group being of Asian: Pakistani origin (20.4%). Many of these residents live in the central urban wards where there are also elevated rates of child poverty.

Emergency hospital attendance for children under five years of age was below the national average in the last two years for which figures were available (2010/11 and 2011/12). Site A ranked as the third highest of the 141 local authorities targeted by the national home safety programme, based on hospital admission for injury (see Table 5.3).

Among the five case study sites, Site A sustained the largest increase in public health budget as allocated by national government over the two year period 2013-2015, with a year-on-year increase of 10% compared to the national average of 5%.

5.2.1.2 Local policy context

Evidence of sustained local policy commitment to child accident prevention in Site A can be found in a series of strategy documents covering a seven-year period (2008 – 2014). The responsibility for reducing child injuries and deaths resides with the Local Safeguarding Children Board (LSCB) which has supported a part-time district co-ordinator post since 2006. The current accident prevention strategy links with the Child Poverty Strategy, particularly with respect to addressing sub-standard housing in the private rental sector. Tenancies with private landlords in Site A are high compared to the other case study sites (16.6% of total tenure). The average number of residents per household (calculated from the figures presented in Tables 5.2a,b and corrected for rate of homelessness), exceeds the national average (2.6 compared to 2.4), and is the highest among the case study sites. Potential overcrowding in some homes, together with poor state of repair contribute to environmental safety hazards for children.

5.2.1.3 Safety scheme history

Injury prevention activities in Site A have received considerable national publicity in recent years, with the district co-ordinator being particularly influential in the production of national guidance documents. The site registered with 'Safe At Home' in April 2009, delivering centrally co-ordinated safety schemes across the district through individual Children's Centres. The Children's Centre participating in this study had operated a safety scheme for several years prior to this. At the time of the current study, home assessments and safety advice were continuing and a limited supply of safety equipment was available, although not installed. Management

of the Children's Centre was sub-contracted by the local authority to a company limited by guarantee that operated as a registered charity.

5.2.1.4 Participant selection and data collection

A list of local safety schemes, together with levels of provision, was compiled with assistance from the district co-ordinator. The Children's Centre selected for this study fulfilled the criteria for Phase 1 and was considered likely to provide access to informative study participants.

Face-to-face interviews took place with three professionals, during three separate site visits. Three other professionals participated in telephone interviews and one follow-up telephone interview also took place.

Families were recruited by the local scheme co-ordinator, a process that was slow initially and required frequent follow-up. Of the seven family representatives, four recalled having safety equipment installed, suggesting that this had occurred during the national programme, some two years earlier. One family representative had not received the scheme at all. All participants contributed to the discussion session. Participant interaction was good and mutually supportive, possibly enhanced by the group having attended first aid training together immediately prior to the session.

5.2.2 SITE B

5.2.2.1 Setting, demography and injury epidemiology

Site B comprises a cluster of Children's Centres located three miles outside a large city and within the catchment of a borough-wide unitary authority. Following the decline of

heavy industry in the area, the service sector has become the main employer. Large council housing developments were created in the early part of the 20th Century, several of which have since been cleared as part of a programme of housing regeneration, though tenancy rates in the local authority sector remain high (22.3% of all households compared to 9.4% nationally).

Almost one third (31.5%) of children aged under sixteen years currently live in poverty, considerably higher than the national average of 20.6%, and the highest of the five case study sites (see Table 5.2a). The rate of homelessness is also higher than the national average (2.7 per 1,000 households compared to 1.7 nationally). The borough overall is more ethnically diverse than the population served by the local scheme, where a greater proportion of families are White British. Accident and Emergency attendance for children 0-4 years was lower than the national average (396.2 per 1,000 population compared to 483.9), however, the most recent figures show a sharp increase of 58.2% on the previous year.

5.2.2.2 Local policy context

Deprivation, poor housing and increased unemployment all feature as underlying causes of ill-health within the Joint Strategic Needs Assessment (2005), the Annual Reports of the Director of Public Health (2012, 2011) and the City Strategy (2011-2016). None of these documents make specific mention of accident prevention. A briefing document produced in 2011 identified opportunities for linking accident prevention with wider policies. This included the housing responsibilities of local government, and the work undertaken by Health and Wellbeing Boards and Local Safeguarding

Children Boards. No further action appears to have been taken.

The responsibility for child accident prevention in the under fives lies primarily with the Children's Centres, however implementation is currently challenged by city-wide reductions in staff capacity and service provision. Ofsted inspection reports (2013, 2011) for two of the Children's Centres in the study made specific mention of the home safety project. Positive feedback from parents was noted within these reports and substantiated within this study by local evaluations of the scheme and review of the parent testimonials available in the public area of one of the Children's Centres.

5.2.2.3 Safety scheme history

Site B has operated a safety scheme for almost ten years, originally funded as part of a Surestart Local Programme. When funding from the Primary Care Trust (PCT) ended, a cluster of Children's Centres pooled resources to enable scheme continuation. The present scheme co-ordinator took over in 2006, prior to which he was employed as equipment fitter.

In November 2009, with insufficient funds threatening scheme continuity, Site B registered with the 'Safe At Home' programme. When the national programme ended, the local scheme continued to operate within the Children's Centre cluster through a service-level agreement. Each centre contributes to the scheme's upkeep, including the full-time post of co-ordinator and a part-time post of equipment fitter. The scheme is managed by a third sector agency, sub-contracted by the local unitary authority. At the time of data

collection a period of uncertainty surrounding future funding sources and scheme management was contributing to workplace tensions for the co-ordinator.

5.2.2.4 Participant selection and data collection

The initial invitation to participate was made to the scheme co-ordinator who subsequently acted as site contact. Face-to-face interviews took place with five professionals during three site visits. One other professional was interviewed by telephone during one of these visits. Two of the participants completed follow-up interviews, one face-to-face, the other by telephone.

Families in receipt of the scheme were approached by the co-ordinator and informed of the study. In addition a summary of the study was included in the January 2013 edition of the Children's Centre family newsletter and interested individuals were invited to make contact. The researcher liaised directly with those that agreed to share their contact details.

Two focus group sessions took place, the first attended by six of the eleven individuals with whom contact had been made, and by one additional attendee who had heard of the session through word-of-mouth. Participants included a family group comprising two generations: a young mother, her cousin and the child's grand-mother. Eight individuals were contacted for the second session though only two attended on the day.

Of the nine family representatives that participated in total, all had received a home safety assessment. Six participants reported that they had received safety equipment, three were still awaiting installation. All participants were female and all

contributed to the discussion. Participant interaction was good, though additional moderator input was required to stimulate conversation at the second smaller session.

5.2.3 Site C

5.2.3.1 Setting, demography and injury epidemiology

Site C is a metropolitan borough formed of six towns, historically supported by the heavy industry that typified the area. From 2007 onward, it became the region in England most affected by the impact of the national economic recession, with a consequent rise in unemployment and social benefit claimants.

The population includes a higher than average proportion of families from black or minority ethnic backgrounds (30.1% compared to 14.7% nationally). At the time of recruitment this was expected to increase. Many households rent accommodation (39.5% compared to 33.1% nationally), with the majority (22.7%) having tenancy in local authority properties. Child poverty in Site C is higher than the national average (29.9% compared to 20.6%). The rate of homelessness affecting children is the highest among all five of the case study sites (3.7 per 1,000 households compared to 1.7 nationally).

Rates for injury-related hospital admission and Accident and Emergency attendance (all causes) for children under five years of age exceed the national average.

5.2.3.2 Local policy context

A review of local policy documents in Site C revealed a low profile for accident prevention. Although accidents featured

among the twenty areas that were specifically identified for public health improvement in 2008/09, this focus was subsequently lost with a shift in emphasis towards the impact of housing and environmental conditions on population health. These underlying factors also featured in the Joint Strategic Needs Assessment and the Joint Health and Wellbeing Strategy. The Local Safeguarding Children Board operated within the narrower remit of child protection, thereby limiting opportunities for cross-cutting collaboration in the prevention of accidental injury.

In August 2013, Site C gained membership of the World Health Organization's Healthy Cities UK Network, a global initiative aimed at prioritising health among local planners and policy makers *(www.healthycities.org.uk)*. This potentially offers a supportive policy environment for the future of the home safety scheme.

5.2.3.3 Safety scheme history

Prior to registration with the national 'Safe At Home' programme, safety scheme operation in Site C was limited to individual Children's Centres, some of whom offered low-cost equipment to families within their target area.

Children's Centres took a key role in family referral and safety education during the delivery of the 'Safe At Home' programme, with scheme co-ordination undertaken by a local authority employee. Equipment was installed by a local partner agency with whom a working relationship already existed.

When the national programme ended, funding from the revenue budget for the Children's Centres enabled local scheme provision to continue across the borough, adhering closely to the components of the original intervention. The equipment installation service was transferred in-house and an experienced local craftsman was appointed to the post of fitter.

In August 2012 the local authority initiated a re-tendering process for management of the Children's Centres. Efforts continued to maintain scheme provision over the next twelve months, despite the challenges arising from the ongoing changes. At the time of data collection it was envisaged that all Children's Centres would continue to participate in the scheme. Following the loss of the initial co-ordinator role, each Children's Centre has taken on direct responsibility for equipment delivery to its target community and for the associated scheme administration.

5.2.3.4 Participant selection and data collection

The initial invitation to participate was made to the identified contact in the national database for the 'Safe At Home' programme. He subsequently acted as site contact for the study.

Three participants were interviewed face-to-face during one site visit. It was the preference of two of the participants that they be interviewed jointly. One further participant was interviewed subsequently by telephone.

Despite efforts made by the site contact, it proved difficult to access participants for a family focus group within the timeframe of the study. A decision was therefore taken to

omit this element as a consequence of which the parental perspective is absent for this site.

5.2.4 SITE D

5.2.4.1 Setting, demography and injury epidemiology

Site D is a borough consisting of four principle towns governed by one unitary authority. Originating as market towns and with proximity to the river, the area developed as a port in the 17th Century and subsequently expanded to become a leading industrial, engineering and transportation centre. The establishment of a large chemical plant in the 1920s led to the building of extensive housing developments to accommodate the workforce. Towards the end of the 20th Century the demise of heavy, traditional industry was replaced by employment in the service and retail sectors, and in local government.

The population in Site D is the smallest of the 5 case study sites and is predominantly White British (93.4% compared to England average of 79.8%). Rates of long-term unemployment and low-paid work are high, as is the proportion of children living in poverty (22.5% compared to 20.6% nationally). Childhood homelessness, however, is lower than the national average (0.7 per 1,000 households compared to 1.7 nationally).

Rates of injury-related hospital admissions and Accident and Emergency attendance (all causes) for children under five years are both high compared to national figures. The rate of admission for falls among pre-school children is particularly high, with 212 per 100,000 population in Site D compared to a national average of 143.2 (2010/11).

5.2.4.2 Local policy context

Accident prevention features as one of the key commissioning priorities for children and young people within the Joint Strategic Needs Assessment for Site D, with mention made of the high rate of falls in young children. Commitment to accident prevention is carried through in the Joint Health and Wellbeing Strategy with plans to reduce childhood accidents featuring as an action point towards attaining progress for one of the prioritised areas. The Strategy pledges support for workforce training in order to capitalise on evidence-based interventions. It identifies the positive impact that housing improvements could potentially have for injury prevention. An Action Plan for child accidents is current and contains within it key indicators for the home safety scheme relating to the provision of advice and home assessments, though not in respect of equipment provision.

Ofsted inspection reports commend the scheme, noting its value to families and the integration of safety advice into wider activities:

"Information about child safety is woven into adult education" [Ofsted, 2012]

5.2.4.3 Safety scheme history

Prior to registration with the national programme, Site D operated a local authority-led home safety equipment loan scheme for families residing in the most deprived areas. Equipment items were available at a small cost to parents, although no installation service was offered. A dedicated worker based at one of the Children's Centres co-ordinated the

educational component and delivered larger equipment items to families.

When Site D registered with the 'Safe At Home' programme in September 2009, equipment installation was conducted in partnership with the social housing provider contracted by the local authority. The pre-existing scheme ran alongside 'Safe At Home' and continued when the national programme ended.

At the time of the study a range of equipment was available to parents following their attendance at an educational safety session. Some items were provided free of charge whilst others incurred a minimal cost. The installation service no longer operated. The same co-ordinator has remained in post throughout these transitions.

5.2.4.4 Participant selection and data collection

The initial invitation to participate was made to the scheme co-ordinator who became the site contact, helping to identify other professional participants.

One face-to-face interview took place during a site visit, one other professional was interviewed by telephone. Efforts made to recruit a further professional involved in making referrals into the scheme were unsuccessful.

Parents were recruited to the study by the scheme co-ordinator. Of the fourteen parents that were contacted, seven attended the discussion session. This was held at a central venue where the co-ordinator had negotiated free room hire and crèche facilities. The presence of two co-habiting couples contributed a paternal perspective to the study. All

participants had attended an educational safety session in the previous three months and all had received home safety equipment. One participant had also received a home safety visit, offered to families where additional support needs were identified.

To encourage additional contributions from quieter members of the group, contact details were requested at the end of the session. The four participants that provided these were sent a two-page summary of the discussion in the following week for further comment. Two participants responded confirming the accuracy of the summary but no additional information was forthcoming.

5.2.5 SITE Z

5.2.5.1 Setting, demography and injury epidemiology

Site Z comprised seven district council areas within a single unitary authority. The area has a lengthy history of coal-mining, though diminishing natural resources and tensions within the workforce resulted in its substantial decline from the mid-1980s onward. The current economy is based on diverse industries including healthcare, engineering and textiles.

Site Z has the highest population of the five case study sites and is situated within one of three regions in England where the population increased dramatically in the intervening period between the national censuses of 2001 and 2011. A high proportion of residents are registered as White British (95.5% compared to 85.3% nationally). Housing tenure differs from the national trend with fewer residents renting properties overall. Proportionately this appears to reflect lower rentals in the independent housing sector rather than from the local

authority (4.2% independent social housing providers compared to 9.4% nationally and 11.9% private landlords compared to 15.4% nationally). Site Z is the only case study site with a rate of childhood poverty lower than the national average (17.7% compared to 20.6%). The rate of homelessness affecting children is also lower than average (0.9/1,000 households compared to 1.7/1,000 households).

Site Z showed a trend for lower injury-related hospital admission for children over the last three years, with 85.2 per 10,000 compared to 103.8 per 10,000 nationally in 2012/13 (Chimat Child Health Profile, 2014). However, local documents identified a significantly higher rate of hospital stays for three days and over in children aged 0-4 years (145 per 100,000, 2008/9). Accident and Emergency attendance for children aged 0-4 years (all causes) was lower than the national average (446.5 per 1,000 population compared to 510.8 per 1,000 nationally, 2011/12).

5.2.5.2 Local policy context

In 2007, Site Z produced an accident prevention strategy that identified children and older people as priority groups, each addressed through a separate action plan. National policy targets in existence at that time (Department of Health 1999) were supplemented by local "stretch targets" under the Local Authority Agreement. These included a 10% reduction in age-standardised admission rate following accidental injury in children under fifteen years of age (from 1129.7 per 100,000 in 2002/3 – 2003/4 to 1016.7 per 100,000 by 2009). A second strategy developed jointly by the County and City Councils was launched in spring 2014. The new strategy acknowledged the sustainability of local intervention

programmes to be challenging, but did not indicate how this might be addressed. The strategy did not identify a lead for accident prevention nor did it make any commitment to staff training.

Accidental injury featured within several other local policy documents including the Joint Strategic Needs Assessments produced at both County and City levels. At County level the primary focus was on child protection and the needs of looked-after children. At City level, the absence of a safety equipment scheme following the end of the national programme was noted and recommendation made that a scheme be re-established to provide a co-ordinated focus for home safety advice to families with young children. The strategic plan for the public health department (2010) does not include accidental injury among the ten health outcomes and associated initiatives that it identifies. Similarly accidental injury does not feature in the county-wide strategy produced by the Local Safeguarding Children Board (2011-2012). At City level, the Children and Young People's Partnership recognised accidental injury within their objectives to strengthen safeguarding and early intervention (2010-2014), however this focus was lost in a subsequent revision that addresses only intentional injury and neglect.

5.2.5.3 Safety scheme history

A multi-agency accident prevention group co-ordinated by a designated officer from the health inequalities team was established in Site Z in 2004. Its Children's Sub-group had a supportive relationship with the local academic injury research unit, stimulating a high level of activity across the County.

One of the Sub-group's early priorities was the establishment of a home safety scheme for children living in low income families. Funding available at that time was insufficient for county-wide provision so the service focused on areas with experience of prior scheme operation.

In 2009, at a time when funding for the existing local scheme had become less certain, Site Z registered three areas collectively with the national programme. Local safety schemes had operated previously in two of these (Scheme 1 and Scheme 2), whilst the third (Scheme 3) was newly established.

Scheme 1 had operated through a charity established in 1996 to address high local injury rates. Lottery funding was secured for three years in 1999 and in 2001 a part-time co-ordinator was appointed. The scheme provided safety equipment, and employed a part-time fitter to install this. Subsequent funding sources secured by the scheme co-ordinator have all been short-term and include a range of charitable sources as well as the local PCT.

Scheme 2, originally run by a second charitable organisation, served a very deprived population. Safety equipment was provided but installation and education were not part of the scheme.

During registration with the national programme, Schemes 1 and 2 installed equipment through local arrangements. Scheme 3 used the services of a charitable organisation that supported delivery in several of the national sites. Scheme

operation was overseen by the county co-ordinator until she left her post prior to the end of the national programme.

Schemes 2 and 3 ceased operation soon after the national programme ended. Scheme 1 has continued to provide and fit a limited range of safety equipment.

Following the recruitment of Site Z to the current study a number of changes occurred that may have influenced scheme provision. The site participated in the RoSPA Safer Homes Programme, a national initiative aimed at supporting local development and integration of accident prevention work. In July 2013 a county-wide child accident prevention group was reconvened. In January 2014 funding was secured for two years to operate a City-based safety scheme, initially in areas of greatest need. The scheme commenced operation in August 2014 when data collection for this study had ceased. The recently produced county-wide strategy for child accident prevention (2014-2020) has been show-cased on a national website. The city is one of five that have recently qualified for substantial national funding for health improvement over a ten-year period, part of which will address accident prevention in young children.

5.2.5.4. Participant selection and data collection

The initial invitation to participate was made to the county co-ordinator for Site Z who had overseen the scheme during participation in the 'Safe At Home' programme. She became the site contact and assisted in identifying participants.

Five professional interviews took place, one further individual was nominated but was no longer in post. Since the level of scheme operation in Site Z was low at the time of recruitment,

no site visits were made and all interviews were conducted by telephone.

During the data collection phase, plans to resurrect the multi-agency accident prevention group became apparent. The registrar in public health with responsibility for this work was approached and consented to interview. Following publication of the Strategy (2014-2020) an informal telephone interview with the public health lead responsible for its production was also conducted. No audio-recording was made of this, however researcher notes were taken which were later coded and included as data.

Discussion with staff in Site Z raised potential problems with family recruitment. Since Schemes 2 and 3 had reduced their level of operation two years previously, when the national programme ended, it was considered unlikely that families taking part at that time would be available or willing to assist. Though Scheme 1 had continued, this served a small population and the local scheme co-ordinator was not confident that families would participate. It was therefore decided not to include a family perspective for Site Z.

5.2.6 Comparative data used in developing the site profiles

The tables presented below contain summaries of the data that was used to inform the individual site profiles. Tables 5.2a and 5.2b provide comparative demographic data across all five sites, whilst Table 5.3 provides epidemiological data and public health funding comparisons. All-England comparators are also provided. Table 5.4 presents contextual characteristics pertaining to the development and operation of

home safety schemes over time in each of the five case study sites.

Table 5.2a Comparative population demographics for case study sites A, B, C, D and all-England

Site	Total population[1]	Ethnicity[1]:		Housing Tenure[1]:				Population under 5 years of age[1] (%)	Children under 16 living in poverty[2] (%)	Homelessness (rate per 1,000 households)[3]
		% White British	Highest Minority Group (%)	Total households	% Social rented (local authority)	% Social rented (other)	% Private landlord/ letting agency			
ENGLAND	53,012,456	85.3		22,063,368	9.4	8.3	15.4	5.0	20.6	1.7
A	522,452	67.4	Asian/ Asian British: Pakistani (20.4)	199,296	5.9	8.9	16.6	6.3	25.5	0.8
B	249,470	67.9	Asian/Asian British: Indian (12.9)	102,177	22.3	5.7	12.3	5.4	31.5	2.7
C	308,063	69.9	Asian/Asian British: Indian (10.2)	121,498	22.7	4.8	12.0	6.0	29.9	3.7
D	191,610	94.5	Asian/Asian British: Pakistani (1.6)	79,159	9.2	8.0	11.9	5.2	22.5	0.7

Data sources:
[1] www.statistics.gov.uk/ (ONS Census, 2011) - Accessed 19/03/2014
[2] www.hmrc.gov.uk/statistics/child-poverty-stats.htm (2011) - Accessed 02/01/2014
[3] www. Chimat.org.uk/profiles (Child Health Profiles 2013) (Data from 2011/12)– Accessed 09/07/14

Table 5.2b Comparative population demographics for case study site Z and all-England

Site	Total population[1]	Ethnicity[1]:		Housing Tenure[1]:				Population under 5 years of age[1] (%)	Children under 16 living in poverty[2] (%)	Homelessness (rate per 1,000 households)[3]
		% White British	Highest Minority Group (%)	Total households	% Social rented (local authority)	% Social rented (other)	% Private landlord/ letting agency			
ENGLAND	53,012,456	85.3		22,063,368	9.4	8.3	15.4	5.0	20.6	1.7
Z	785,802	95.5	Black/African/ Caribbean/ Black British (0.6)	334,303	9.3	4.2	11.9	4.6	17.7	0.9
Scheme 1	*119,497*	*97.7*	*Black/African/ Caribbean/ Black British (0.4)*	*50,931*	*12.7*	*3.5*	*11.6*	*4.2*		
Scheme 2	*104,466*	*97.2*	*Asian/Asian British: Indian (0.5)*	*44,928*	*13.8*	*4.4*	*12.5*	*5.0*		
Scheme 3	*113,543*	*93.0*	*Black/African/ Caribbean/ Black British (1.5)*	*49,349*	*4.0*	*6.0*	*11.9*	*4.6*		

Data sources:
[1] www.statistics.gov.uk/ (ONS Census, 2011) - Accessed 19/03/2014
[2] www.hmrc.gov.uk/statistics/child-poverty-stats.htm (2011) - Accessed 02/01/2014
[3] www. Chimat.org.uk/profiles (Child Health Profiles 2013) (Data from 2011/12)– Accessed 09/07/14

Notes:
Figures for individual schemes in Site Z are presented in italics

Table 5.3 Comparative injury epidemiology and public health funding allocations for case study sites and all-England

Site	Number of excess hospital admissions for accidental injury (children 0-4 years) compared to national average of 88.82/100,000 population[1]	A&E attendance (all causes) 0-4 years (crude rate per 1,000 population)			Public health budget: comparison with previous year[4]	
		2010/11[2]	2011/12[3]	% change	% change 2013/14	% change 2014/15
ENGLAND	0.0	483.9	510.8	↑ 5.6	↑ 5	↑ 5
A	93.9 (3)	478.6	484.1	↑ 1.1	↑ 10	↑ 10
B	1.1 (131)	396.2	605.2	↑ 52.8	↑ 2.8	↑ 2.8
C	21.5 (19)	587.3	581.3	↓ 1.0	↑ 10	↑ 4.7
D	10.5 (49)	552.1	525.5	↓ 4.8	↑ 2.8	↑ 2.8
Z	*Scheme 1* 3.8 (94) *Scheme 2* 1.3 (126) *Scheme 3* 4.2 (88)	588.2	446.5	↓ 24.1	↑ 2.8	↑ 2.8

Data sources (top level local authority):
[1]'Safe At Home' Targeting and Distribution Strategy, RoSPA, February 2009. This was the basis for prioritisation of target areas for SAH.
Numbers shown in brackets refer to the position of each local authority area when ranked by excess admissions (out of a total of 141 targeted areas).
[2] Child Health Profiles 2013 (www. Chimat.org.uk/profiles) – Accessed 08/07/14
[3] Child Health Profiles 2014 (www. Chimat.org.uk/profiles) – Accessed 08/07/14
[4] Department of Health, Public Health Grants to Local Authorities 2013-14 and 2014-15, January 2013

Notes:
Hospital attendance data for children 0-4 years available in Child Health Profiles from 2010/11 onwards

Table 5.4 Comparative scheme characteristics of case study sites

Study Phase	Site	Lead agency[1]	PRE-'Safe At Home'		'Safe At Home'			POST-'Safe At Home'				
			Scheme history[2]	Local accident strategy	Date Registered with 'Safe At Home'	Equipment sets allocated (size of scheme)	Fitting service provided by:	Equipment installed[1]	Co-ordinator in post[2]	Local accident strategy	Sustainability anticipated?†	
											Equip	Advice
1	A	Third sector	√	√	April 2009	5736	Central agency	No	√	√	Unsure	√
	B	Third sector	√	No	November 2009	132	Local co-ordinator	√	√	No	Unsure	√
2	C	Local authority	Ad hoc	No	August 2009	1316	Partner agency	√	No	No	Unsure	Unsure
	D	Local authority	√	√	September 2009	638	Partner agency	No	√	√	√	√
	Z	County council/ charity	*√(1, 2)* No *(3)*	√	March-December 2009	783	Own fitter/ partner agency	*√(1)* No *(2,3)*	*√(1)* No *(2,3)*	√	*√ (1)* No *(2, 3)*	Unsure *(1)* *√ (2)* No *(3)*

√ - indicates presence of characteristic described
Individual schemes in Site Z are denoted by bracketed italics

Data sources:
†Survey of scheme leaders (October 2010) conducted within the evaluation of the national Safe At Home programme (Errington, Watson et al. 2011) (Question asked: When 'Safe At Home' finishes will you be able to continue offering equipment and advice?)

Notes:

[1] Criterion used in initial scheme selection – see Methodology (Chapter Four)
[2] Factors associated with sustainability based on from Phase 1 findings. Used in selection of Phase 2 sites.

5.2.7 Corroborating sites: T, W and Y

5.2.7.1 Site T

An outreach project for health visiting services was being sought in Site T around the time that the 'Safe At Home' programme was launched. This influenced the decision to register with the national programme. Prior to this safety schemes had operated on a small scale led by some of the local Children's Centres. The Centres continued to take a lead on scheme delivery during the 'Safe At Home' programme.

Following the end of the national programme, home assessments continued and limited equipment items were provided though no longer fitted. Funding came from individual Children's Centre budgets.

At the time of interview safety scheme provision was continuing on a very small scale, operated by a local charity. The 'Safe At Home' co-ordinator had taken up a new post within the local authority. Though she believed that there was still a need for the scheme, she identified barriers to its sustainability including a lack of local authority commitment and insufficient local capacity.

5.2.7.2 Site W

Registering with 'Safe At Home' provided an opportunity for the local authority in Site W to extend their existing home safety focus on older people, to include young families.

Following the end of the national programme a time-limited contract was established between the county council and the NHS to continue scheme provision. Referrals were made through Children's Services. The parental advice component

contined, however, equipment provision and fitting was limited only to safety gates.

At the time of interview very small numbers of families had received the scheme and the co-ordinator questioned its success. She identified the need for additional funding to extend current provision.

5.2.7.3 Site Y

Safety scheme provision in Site Y had been ad hoc prior to registration with the 'Safe At Home' programme. The decision to participate in the national scheme had been partially motivated by inclusion of the staff training and equipment installation components.

When 'Safe At Home' ended, some Children's Centres continued to offer safety equipment. A simultaneous period of restructuring within the local authority was regarded as a barrier to wider scheme sustainability.

At the time of interview the co-ordinator for the 'Safe At Home' programme was no longer involved in injury prevention work. She indicated that an imminent redesign of Children's Services might offer an opportunity to reconsider scheme provision, though local funding would need to be identified in order to action this.

5.3 CHAPTER SUMMARY

This chapter has presented an overview of the sixty individuals who participated in the study: 38 professionals, 22 family representatives. Data collection took place in two phases over the course of a nine month period (January – September 2013).

Individual profiles for each of the main case study sites provide an historical and social background for safety scheme development within each setting. The demographic and epidemiological data used to inform development of the site profiles is presented to enable cross-case and all-England comparisons to be made. Particular mention is made of any barriers or facilitators to participant recruitment that may have impacted on data collection within the individual sites.

CHAPTER SIX

FINDINGS: INTERNATIONAL AND NATIONAL POLICY PERSPECTIVE ON SUSTAINABILITY

6.0 INTRODUCTION

This chapter provides a policy perspective on the conceptualisation and relevance of programme sustainability. It is presented in two sections.

The first section reports on findings from a series of interviews with national and international stakeholder representatives who are involved in the development of child injury prevention policy (an overview of participants is provided in Section 5.1.2). Findings are presented according to the three main inductive themes that were identified: conceptualisation of sustainability, perceived influences on programme sustainability, and "making the case" for programme sustainability within a changing local, national and global context for public health. A summary of the categories and sub-categories associated with each theme is provided in Table 6.1 below.

The second section presents findings on programme sustainability based on an in-depth content review of international and national policy documents. The source documents reviewed were those identified in Chapter 3. Findings are presented according to the two main themes identified: the conceptualisation of sustainability and potential strategies for enhancing programme sustainability.

Table 6.1 Categories and sub-categories associated with the themes identified by policy stakeholders

MAIN THEME	Categories	Sub-categories	Section
CONCEPTUALISATION OF SUSTAINABILITY	**Defining sustainability**		***6.1.1.1***
	Terms used		***6.1.1.2***
	Relevance to agency		***6.1.1.3***
	Role of agency		***6.1.1.4***
	Assessing sustainability		***6.1.1.5***
INFLUENCES ON PROGRAMME SUSTAINABILITY	**Programme funding**		***6.1.2.1***
	Changes in the wider context		***6.1.2.2***
	Injury-specific challenges	Complex nature of injury	*6.1.2.3.1*
		Lack of evidence of public health impact	*6.1.2.3.2*
	Drivers for sustainability	Programme adaptability	*6.1.2.4.1*
		Partnership working	*6.1.2.4.2*
		Co-ordination	*6.1.2.4.3*
		Leaders and 'champions'	*6.1.2.4.4*
	Inter-relationship between influences		***6.1.2.5***
MAKING THE CASE FOR INJURY PREVENTION WITHIN A CHANGING CONTEXT	**Framing the intervention**		***6.1.3.1***
	Adopting a strategic approach		***6.1.3.2***
	Influencing the decision makers		***6.1.3.3***

6.1 FINDINGS FROM INTERVIEWS WITH POLICY STAKEHOLDERS

6.1.1 Conceptualisation of sustainability

6.1.1.1 Defining programme sustainability

Participant definitions of sustainability were compared to the three commonly identified manifestations that feature in the public health literature (Shediac-Rizkallah and Bone 1998), specifically:

i) the continuity of health benefits to the target population
ii) the continuity of the intervention programme
iii) continuing community capacity to support the intervention.

Definitions referred most frequently to capacity-building, human resources and wider support for a programme (in four of the six definitions), followed by an expectation that positive health benefits would be sustained (three of the six definitions). One respondent specified a desire to obtain

> *"…full public health impact out of the intervention"*
> [Alex, international health agency]

over a prolonged period of time, a situation acknowledged to be more achievable through legislative measures, designed by their nature to be effective in the longer term.

The continuity of the intervention itself did not explicitly feature within the interviewee definitions, though this may have been taken as self-evident given that the discussion was framed around the sustainability of programmes. One comprehensive definition of sustainability, provided by the

representative of a national injury prevention agency, appeared to encompass all three of the categories identified above. The underlying concept, later confirmed by the respondent during the interview, was of sustainability as an ongoing process throughout the life of the intervention rather than an end-point programme state:

"…some kind of initiative that is making a difference … where that initiative has been developed, it's been piloted, it's been evaluated through that process and seen to be effective in a robust-ish way and then there's a chance to develop it further, roll it out further, make sure that it's taken up by others in other places and also to ensure that it can continue to grow and learn from its work".

[Morgan, national injury prevention agency]

One other respondent, who similarly adopted a broad-based perspective, regarded sustainability as:

"not just surviving but thriving and maintaining a well operation [sic]".

[Sam, international injury prevention agency]

Two of the respondents that worked for charitable agencies made reference within their definition of sustainability to the challenge of obtaining funding as experienced by their own organisations. They highlighted the time and energy associated with identifying and securing funds in order to keep the operation running.

"Certainly at senior management level … among the executive directors, income is a major preoccupation for us in terms of how do we actually generate the income to do the

work that we know needs to be done?"

[Chris, national injury prevention agency]

The need to generate income was an influence on programme development, providing an impetus to demonstrate to funders the potential for benefits beyond health outcomes as a return on their investment. Chris referred to this as:

"that direct connection between cash and outcomes".

[Chris, national injury prevention agency]

6.1.1.2 Terms used to describe sustainability

Participants used a variety of alternative terms to convey the concept of sustainability. These included descriptors of the programme itself as displaying 'stickability'. The long-term traction for injury prevention as a wider issue was considered to require action across a range of levels:

"…traction at different levels, at national level, so that's making sure that we commission long-term research and shine the light, at a local level, local could also mean across a number of authorities …and then also at an individual level which is where I think we can yield more benefit…so you teach a mother and help her with safety around the home and hopefully that passes on to other people as well…We need to think about sustainability at those three levels".

[Pat, national health agency]

The term 'maintenance' was used with respect to sustaining supporting networks for agency activities. Terms such as 'embedding' and 'mainstreaming' appeared to indicate

progression towards the longer-term integration of programme activities.

"Well I guess it's about embedding practice and how things are done beyond the …beyond the kind of targeted, limited set of funds so it's like mainstreaming I guess".

[Jo, national health agency]

6.1.1.3 The relevance of programme sustainability

Five of the six respondents identified programme sustainability as highly relevant to the activities of their agency, expressing the importance of this through use of terms such as "absolutely" and "fundamental". The response of one participant was more cautious. He explained that his employing agency depended on the political will of national government for its existence. This effectively inhibited longer term planning, making its contribution to sustainability less certain:

"…this time next year…we'll be gearing up for the election, so who knows? Someone might make an announcement that [the agency] is to close down and we set something else up. I think because of the uncertainty around organisations like this it doesn't help with long-term planning".

[Pat, national health agency]

The comments of some of the participants suggested that programme sustainability was viewed as a positive attribute seen to contribute to the achievement of organisational objectives for the agencies concerned.

"Programmes in accident prevention … are very, very vulnerable to a host of factors that get them off the ground and then contribute to them floundering, even when they've done excellent work. And so I think an organisation like us, if we're really going to achieve our objectives, we have to be able to influence the way these processes work so that there is greater sustainability."

[Morgan, national injury prevention agency]

6.1.1.4 Agency role with respect to programme sustainability

Representatives were asked to describe the specific role of their employing agency in relation to programme sustainability. Responses fell broadly into three categories as shown in Table 6.2.

Table 6.2 Roles attributed to international and national stakeholder agencies with respect to programme sustainability

Key aspects of role	International agencies	National agencies
Provision of guidance and practitioner support	1	1
Development and delivery of injury prevention programmes	1	1
Raising awareness/advocating for injury prevention	0	3

Two respondents identified provision of guidance and practitioner support with the role of their agency. Neither of them had a mandate requiring that their guidance should be adopted, and as such, it took the form of recommendations. The process of implementing guidance was supported through the production of associated training resources and tools. Both agencies recognised that factors operating in the wider

environment could influence their role in programme sustainability. For example, at international level mention was made of an increasing expectation that donor countries should be able to influence how their funding contributions were spent. This could potentially influence the sustainability of specific programmes. At national level, the localisation agenda and devolution of decision-making meant that fewer policy recommendations now required government action, relying instead on local implementation.

Two respondents identified the development and delivery of injury prevention programmes with the role of their agency. Both were employed within agencies that relied on fixed-term, external funding sources, and as such were familiar with the challenges encountered in securing financial support for programme continuity within the not-for-profit sector. In discussion they drew extensively on personal experience, an approach commonly used by several of the participants, despite them having been asked to provide an organisational rather than an individual perspective.

"…you can only survive so long without money. I've worked within a lot of organisations and you can go on goodwill for a period of time but not for ever. That's where your networking and capacity and friends of your network are really important for those gaps and moments in between, it really can take you from one point in time to another… until those resources come back".

[Sam, international injury prevention agency]

Uncertainty associated with their own funding situation may have encouraged these agencies to address sustainability at

strategic level. As Sam went on to explain, sustainability was included within the planning process at both organisational and programme levels:

"We write business plans 5 years at a time and one of the actual objectives and actions that we write about is sustainability…Even in the very first business plan that we wrote…the word sustainability and actions towards sustainability have always been there".

[Sam, international injury prevention agency]

Three representatives from national agencies identified their organisation's role in awareness raising and/or advocating for injury prevention amidst many competing child health interests. One particular barrier to communication was perceived to be the complex nature of injury, arising from the multiplicity of its underlying risk factors. The need to engage a range of potential stakeholders brought further complications. The national agencies regarded themselves as well placed to highlight injury within the public health agenda, and to provide a steer for local commissioners in selecting evidence-based interventions.

"…we need to keep shining a huge torchlight on this to say that there is a series of known interventions, we should be applying more of those and saving lives and improving quality of life."

[Pat, national health agency]

6.1.1.5 Assessing programme sustainability

The review of the public health literature (See Chapter Two) had revealed a paucity of measures for assessing programme

sustainability. Participants were therefore asked to identify any indicators for sustainability that they might consider useful. This proved a difficult exercise for some, reflecting the complex and diverse nature of sustainability as a concept. One respondent talked of the interdependent nature of potential indicators and how this complicated efforts to define them individually. For another, long-term sustainability resulted from a broad range of activities, from capacity-building to the development of data collection systems, each of which may be associated with discrete indicators of progress. The variety of approaches used in injury prevention, coupled with the diversity of settings in which this takes place, had resulted in interventions of a very specific nature. This led to the suggestion that the development of general indicators for sustainability may not be appropriate for use in injury programmes.

"I think to a certain extent it would depend on the nature of the intervention because I do see interventions as being as diverse as a law on smoke detectors right down to giving somebody an LED lantern as opposed to a kerosene lantern. So some are legislative in nature and others are very practical… So if you then talk about building in sustainability from the outset I think that there's a very different kind of approach that would make sense dependent on what sort of level of intervention we are talking about".

[Alex, international health agency]

6.1.2 Influences on programme sustainability

6.1.2.1 Programme funding

There was consensus among participants that ongoing funding was necessary to sustain programme activities, and that whilst

operation may continue in the short-term without money, this position was not tenable in the medium to long term. Two of the respondents, experienced in working with agencies that relied on external funding sources, identified short-term funding as a particular drain on staff resources that could lead to organisational instability.

"...that constant looking, I've worked in the charity sector and that kind of year on year 'Have we got funding for these people that we're employing?, 'Will we be able to do this next year?' is really destabilising. And you end up with staff turn-over and all the rest of it, people don't know if they've got a job from one year to the next".

[Jo, national health agency]

Funding of a short-term nature was not seen as conducive to programme planning. The views of one respondent suggested that it may also compromise health outcomes.

"A flash-in-the-pan programme is not going to deliver sustainable results. So in effect sustainable funding so that the programme carries on for a long period of time seems to be really, really fundamental..."

[Chris, national injury prevention agency]

Representatives of agencies that operated in England acknowledged the current constraints on spending, particularly within the public sector. Increased competition for funds appeared to have influenced the way in which some charitable agencies approached the bidding process, encouraging a more business-based focus that factored in return on investment and cost effectiveness.

"We're very conscious as a campaigning organisation (that) our business case has got to be better than everyone else's, otherwise we won't even be considered. So from a position where we were very much ploughing our own furrow we now see ourselves as having to compete head-to-head with the mega-charities like Cancer Research, Imperial Heart Foundation and so on... they've got their messages really well-honed and a lot of it is cost based".

[Chris, national injury prevention agency]

Three respondents contrasted the approach taken in injury prevention with other areas of public health that appeared to generate greater public interest, such as tobacco control. The advocacy role identified in Section 6.1.1.4 was testimony to the ongoing challenge associated with prioritising injury, as one participant explained.

"I think the big thing is that we have to advocate very, very strongly as to why this is an important issue. And getting your issue higher up the pecking order in terms of many, many competing issues is absolutely essential, and I think it's widely recognised within [the organisation] that (while) we've done lots of great things in arguing the case, the case is still not accepted fully or understood fully and there's still a lot more to do".

[Morgan, national injury prevention agency]

6.1.2.2 Changes in the wider context

There was consensus among respondents that national policy can engender a supportive context for the delivery and maintenance of health promoting programmes. However, it was also acknowledged that the necessary cohesion and

consistency of approach has been largely absent in relation to injury prevention in the UK. The current focus on local identification of health priorities was regarded as appropriate. However, the discourse of all four respondents working in organisations in England reflected the current contextual challenges faced by programme providers as a result of the devolved decision-making process.

"We in this country are generally used to a certain amount of central direction and see that as kind of normal... the previous government obviously did a lot more of that but you can see people looking around wanting that. They haven't got their head round the idea that there aren't going to be those targets in that way."

[Morgan, national injury prevention agency]

"With [previous programme] it was all about convincing the national decision makers, today it's far more complicated in that we now have to convince very local partisan councils and local council leaders. So again, you need this combination of a message which is acceptable to every shade of political opinion at a local level, which fits with the professionals within public health and what the clinicians think is the right thing to do (and) what the evidence shows is the right thing to do".

[Chris, national injury prevention agency]

Change was seen to bring opportunity for innovation and the development of new partnerships that reflected the recent transfer of budgetary responsibilities for injury prevention in England. This was illustrated by the collaboration between a national charitable organisation and several local authority public health departments.

6.1.2.3 Challenges specific to injury prevention programmes

6.1.2.3.1 The complex nature of injury

Difficulties encountered in conveying the importance of injury as a public health priority were reported by three participants. The multi-factorial causes of injury and the range of approaches to its prevention created a complex health topic, considered less likely to appeal to decision makers and potential stakeholders.

"…there are multi factorial causes and remedies and people don't necessarily see why they have a stake in contributing to the solution".

[Alex, international health agency]

Paradoxically, since injury prevention is best approached through collaboration across different domains, effective communication to a range of agencies was also viewed as paramount in generating a supportive context for programme sustainability. In addition to securing 'buy-in' from stakeholders, participants regarded support from the media as important in influencing public health priorities. One participant spoke of the continuing challenge involved in balancing the independence of young people with the benefits of implementing safety measures. He highlighted how child safety could sometimes be portrayed negatively in the mass media as a result of perceived over-regulation.

"In terms of the debate about injury prevention, I think sometimes there's kind of a right-wing reaction about the nanny-state… probably in the next few weeks the Daily Mail will run a story about another school's ban on making paper

'planes in case someone gets their eye put out… and I think we need to be quite clear we're not talking about that. We're talking about preventing things we know cause significant injury". [Pat, national health agency]

Differences in the pace of progress between injury settings was considered to complicate matters further, with improved injury rates in the road environment being regarded by participants as a reflection of greater investment over time. The public domain of the road environment was seen to offer a more amenable setting for regulated intervention than the privacy of individual homes.

"...home injuries are happening in the privacy of people's homes. So …don't walk into my house and tell me what to do. Please stay out, this is my private domain".

[Sam, international injury prevention agency]

6.1.2.3.2 Lack of evidence of public health impact

The perception of a weak evidence base for the effectiveness of injury prevention was viewed as a barrier to gaining wider stakeholder support for programme sustainability.

"(For) so many of our programmes sadly, certainly in the field of injury prevention, the evidence is weak and there is no political consensus, you've got the left versus right having quite different views and the media, certainly sections of the media having a pop at it."

[Chris, national injury prevention agency]

The transferability of evidence from overseas was questioned by one participant, with the view that that greater emphasis

on what works within the UK setting would be more convincing. Health outcomes that focused on mortality or morbidity averted were not always considered to align with the key values of potential partner agencies, particularly given the shifting service context within which programmes currently operate. This led one participant to suggest adopting a more broad-based approach to injury prevention programmes that places value on their contribution to child health and wellbeing in general.

"It's difficult to talk outside the context of public health moving to local authorities because everything I hear…is that the topic-based approach is not for them. They're thinking about whole communities and whole populations …so …maybe in a way, just thinking out loud, kind of mainstreaming injury and tying it up with looking more generally at children and young people, health and wellbeing might be a good thing for injury prevention." [Jo, national health agency]

The values of the target group were seen as important when promoting the potential benefits of a programme, though again it was noted that these may not necessarily prioritise injury prevention. One respondent cited an example from within a low-income, rural community in India where the prospect of financial savings had motivated greater intervention uptake than the promise of health gain. Although the example referred primarily to programme implementation, it was felt that framing interventions in this way may improve their sustainability prospects by increasing the social demand for them.

" …if it's a child injury prevention thing and the intervention is framed to them as something about the welfare of their child or that this opens up other doors for the children, or there are cross-cutting benefits for health and socialisation…And so building on sustainability I think necessarily requires that there is a social demand for an intervention". [Alex, international health agency]

6.1.2.4 Drivers for programme sustainability

6.1.2.4.1 Programme adaptability

Only one participant explicitly identified programme adaptability as a driver for sustainability. His comments indicated an appreciation of the changes than can occur within the context for programme delivery over time, affirming his conceptualisation of sustainability as an ongoing process:

"…circumstances change because obviously the world changes, new dangers emerge ...I think adaptation is crucial and what worked in the '20s doesn't work in the '30s, '40s etc. So I see it as more of an organic thing in terms of sustainability…" [Morgan, national injury prevention agency]

In discussing how programmes might cultivate wider support, two other respondents stated that a degree of content flexibility was desirable to ensure that local priorities were addressed.

6.1.2.4.2 Partnership working

The benefits and economies of collaborative working were widely acknowledged by all participants. There was a tendency for participants to contextualise their comments in relation to previous personal experience, not always

associated with their current role, thereby providing an individual, as well as an organisational perspective. For one respondent, the importance of establishing and nurturing relationships between individuals was at the heart of collaboration. This formed a common thread throughout the interview, from funding decisions:

"…people give money to people, so in order to get money you have to form a relationship".

[Sam, international injury prevention agency]

to achieving productive outcomes through joint enterprise:

"It's relationships. It's all a question of how fast, in what timeframe people feel comfortable forming relationships amongst each other so there's a level of trust and respect".

[Sam, international injury prevention agency]

6.1.2.4.3 Co-ordination

Three of the respondents from agencies that operated in England highlighted benefits associated with the presence of an injury prevention co-ordinator. Though the post need not be a substantive one, nor be at management level, it was seen as important that senior management supported the role and that the individual therefore held influence and could act with authority.

"What we've noted is that generally these posts, and there aren't many of them as far as I'm aware, are not particularly senior but the people are operating at a level above their grade…and so the organisation can get good value from having such a post in that way provided there is backing at the top". [Morgan, national injury prevention agency]

The contribution that a co-ordinator could make in building partnerships and developing supportive networks was seen as a means of enhancing the prospects of programme sustainability. One participant attempted to explain his understanding of the mechanism at work here:

"I think that's how you get sustainability because if you can almost stain everybody in a good way and with a little bit of the colour that's needed and it sticks, then if they move around or go elsewhere they take that with them."

[Morgan, national injury prevention agency]

6.1.2.4.4 Leaders and 'champions'

Leadership and commitment to injury prevention at all levels of the organisation were identified as positive influences on sustainability by one participant. These were considered to provide consistency of approach and stability during the often lengthy processes that accompanied attempts to change practice, described as *"turning tankers"*.

Local 'champions' were viewed as important in maintaining a profile for injury prevention activities, though this role was not seen as the exclusive responsibility of a co-ordinator. Champions able to influence others and effect change were seen as a valuable asset at all levels of the organisation. Beyond this, in the wider national context, the role of lobbying agencies was recognised in having maintained momentum for injury at a time of political and economic change.

"You can't underestimate the influence and effect that lobby groups and charities like RoSPA and others can have to keep things on the agenda. So the work that RoSPA did…I

thought it was a really good effort to get injury on the agenda when councils might have been thinking about it. And it wasn't just children, it was injuries across the board …that was clever because councils were thinking about their elderly populations as well". [Jo, national health agency]

6.1.2.5 Inter-relationship between the influences identified

Participants identified increased competition for programme funding as a strong influence on the delivery and sustainability of injury prevention programmes. Compounded by the wider economic recession, this had presented challenges to programme operation at local, national and global levels. In the English context this was further influenced by the agenda for localisation: changes in the political environment that focused responsibility for the delivery of public health and social care services at a local, as opposed to national, level. Although respondents mentioned individual influences on sustainability, they also stressed the importance of the inter-relationships between these. Encouraging a more supportive context for injury prevention was therefore seen as fundamental to ensuring programme sustainability.

6.1.3 Making the case for injury prevention within a changing context

6.1.3.1 Framing the intervention programme

Some of the respondents regarded mortality and morbidity outcomes as inadequate incentives with which to mobilise decision-makers. The identification of cross-cutting benefits for partner agencies, or the potential to link benefits to alternative health agendas, was seen to offer a more attractive business proposition. These, in the words of one participant provided opportunity to

"…kill two birds with one stone".

[Jo, national health agency]

For example, alleviating the current pressure on accident and emergency departments within the National Health Service was suggested as a lever for funding that could work in favour of injury prevention programmes. In England however, the ongoing economic constraints within the public sector were seen as a barrier to investment opportunities, even when these might offer a prospect of longer term financial savings.

"I suppose what's working in [the organisation's] favour in this area is the fact that A&E departments are just bursting at the seams, what's working against us is severe constraints in terms of public spending. So on one hand everyone's agreeing, yeah you need to do more prevention to stop people from ending up in A&E, on the other hand there ain't no money". [Chris, national injury prevention agency]

Where organisations were reluctant to make an initial outlay on prevention, it was suggested that returns presented in the form of cost-benefits may hold some appeal. Chris explained how the agency had incorporated the financial cost of injury into bids for funding in order to substantiate the potential return on investment.

"…we commissioned … a piece of costing work that in effect put a price on the cost of accidents in home and in leisure and that was the first time that had been done, so that gave us standard figures, like £900 for an A&E attendance… (This) has been fundamental to a lot of the business proposals we've put in to try to maintain funding to justify things going

forwards." [Chris, national injury prevention agency]

6.1.3.2 Adopting a strategic approach

The two respondents that demonstrated a broader conceptualisation of sustainability, discussed in Section 6.1.1.1, also identified planning as important for developing injury programmes beyond the short term. A strategic approach to intervention planning that took into account population needs, policy implications and a supportive leadership context was advocated. Such an approach, monitored in respect of specific goals and objectives, was regarded as a good basis for enhancing the prospects of programme sustainability. As one respondent stated:

"I don't think you can do anything really without having some sort of plan … and I think what I've noticed having spoken with some of the organisations that seem to have more robust approaches to child injury prevention, (they) seem to be the ones that have looked at it in a much more strategic way." [Morgan, national injury prevention agency]

6.1.3.3 Influencing the decision makers

Two participants spoke of how different sectors of the population: politicians, the media and the public could determine the profile and level of support for injury prevention, with the views of one group often influencing another. Aligning the interests of such sectors with the benefits that injury prevention programmes can offer was considered a potential means of influencing supportive conditions for programme sustainability.

"The magic bullet is to try and come up with this consensus view, but the reality is that we're always trying to create that consensus. Without that virtually no injury prevention programme gets sustainable funding, they last for a few years and then they peter out."

[Chris, national injury prevention agency]

6.2 FINDINGS: SUSTAINABILITY WITHIN PUBLIC HEALTH POLICY

6.2.1 The conceptualisation of sustainability

6.2.1.1 Use of the term "sustain"

Of the forty-nine policy documents identified in Chapter Three, two were unavailable electronically (Department of Health 1992; Department of Health 1993), and one further document could not be accessed in a format that supported searching of the text (Royal Society for the Prevention of Accidents 2012). These three documents were therefore excluded from content analysis for terms associated with sustainability.

Of the remaining forty-six documents, thirty-six included the term "sustain" or its derivatives. In many cases this predominantly referred to its environmental meaning in terms of conservation of resources, or to the physical environment as opposed to the continuation of health programmes (Department of Health 1999; Department of Health 2003; Department of Health 2004; European Union 2004; Department for Children Schools and Families 2007; Department of Health 2009; Department of Health 2010; The Marmot Review 2010). The relationship between health and the environment was acknowledged, with action in one area offering a potential lever to influence the other.

Those documents featuring "sustain" or its derivatives neither defined the term nor made explicit reference to its meaning within public health. Extensive reference was made to other strategies or initiatives incorporating "sustain" within their title, for example Sustainable Communities (Department of Health 2003; Department of Health 2004) and Sustainable Schools (Department for Children Schools and Families, Department of Health et al. 2009), suggesting that the term may have been imported into public health usage from other settings.

6.2.1.2 Consideration of programme sustainability within policy

Despite widespread acknowledgement that improving public health outcomes was a long-term goal (Department of Health 2004; European Union 2004; Peden, Oyegbite et al. 2008; Sethi, Towner et al. 2008; Department of Health 2009; The Marmot Review 2010), relatively few documents focused on the need to sustain programme activity in order to achieve this. Among the English documents, those that did so were predominantly independent reviews or guidance as opposed to government policy documents, as illustrated here by the conclusions of the Accidental Injury Task Force:

"There are some quick wins to be made in reducing the numbers of people killed or seriously injured. However, long term commitment within a framework for action at all levels is necessary to bring about programmes that are sustainable over time." (Department of Health 2002): p.65

Where programme timescales were discussed these appeared arbitrary, employing descriptions such as *"long-term"* and

"short-term" but lacking in further clarification (Department of Health 2003; Mackay and Vincenten 2007). The Safe Communities Manifesto specified programme durability as one of twelve criteria for eligibility, requiring that:

> *"The programme must be long-term and not consist solely of short-term projects".*
>
> (World Health Organization 1998): p.24

However this provided no further definition of "long-term", nor did it suggest any means by which this might be achieved. Increased programme duration was associated with improved health outcomes, with long-running educational programmes specifically cited as having a positive impact on safety behaviour (Department for Children Schools and Families, Department of Health et al. 2009; Department of Health 2009; The Marmot Review 2010).

No direct evidence in respect of the benefits of programme sustainability appeared in any of the documents reviewed. The desirability of sustainable programmes was inferred however, and an appreciation shown of the need for ongoing policy commitment and resource provision to support this. One of the documents focused particularly on the negative consequences for sustainability in the absence of facilitating factors, describing a lack of funding and inadequate high level support as threats, concerns or challenges (Audit Commission and Healthcare Commission 2007).

"The lack of clear strategic intent threatened the sustainability of action, because funding was seldom found in mainstream budgets, but rather identified from one-off funding initiatives".

(Audit Commission and Healthcare Commission 2007): p.54

The emphasis here is on barriers to sustainability as opposed to enabling factors. This may reflect a defensive stance among the stakeholders who contributed to the report. The use of similar terminology has been noted by the researcher among injury prevention colleagues, particularly in circumstances where external changes in policy or funding have reduced levels of local safety activity.

Examining the co-location of "sustain" in the text revealed instances in both international and national documents where this appeared as the final point in a list of characteristics concerning injury programmes:

"...more widespread use in developing countries of ...safety equipment is likely not only to be effective but also affordable, feasible and sustainable".

(Peden, Oyegbite et al. 2008): p.113

"...stakeholders felt that prevention works best when it addresses the multiple factors that contribute to injury; encourages environmental and behavioural change; engages people who are most at risk; involves action across sectors; and is sustained and reinforced over time."

(Department for Children Schools and Families, Department of Health et al. 2009): p.33

This reinforces the conceptualisation of sustainability as an "end stage" in programme planning, a view identified within some of the earlier sustainability literature (see Chapter Two). Adopting this perspective may inadvertently discourage early planning for sustainability and the benefits that have been associated with this (Hanson, Vardon et al. 2002). There exists in England a history of providing time-limited government funding for national safety initiatives, with the intention that local support will enable these to continue beyond the initial period (Whelan, Towner et al. 2007; Errington, Watson et al. 2011; Mulvaney, Errington et al. 2011). It is of interest therefore to note that despite this, sustainability planning was not addressed in any of the national policy documents reviewed.

6.2.1.3 Use of alternative terms for sustainability

Within-text searches revealed the use of a range of alternative terms to denote sustainability. These included continuity, durability, ongoing, maintain, integrate and incorporate. Among these the use of *"integrate"* was prevalent in international and national documents, its meaning taken as extending the reach of a specific programme or service by including this in a wider framework. Integration of injury prevention into broader child health systems was a common theme at international level as illustrated within the WHO World Report on Child Injury Prevention:

> *"Injury programmes need to be integrated into other child health strategies, with ministries of health playing a pivotal role."* (Peden, Oyegbite et al. 2008): p.145

Although *"integrate"* appeared in some of the earlier English policy documents (British Medical Association 2001; Department of Health 2002), its use in respect of injury prevention in England subsequently became less noticeable. Following the publication of Every Child Matters in 2003, the term *"embed"* appeared, apparently with similar meaning:

> *"Similarly, although health inequalities have been the subject of a PSA target since 2002, it took time for the issue to be embedded in the policy and planning frameworks of the NHS".* (Department of Health 2009): p.15

"Embed" featured in only one of the international documents, relating to the Safe Communities Network (World Health Organization 1998). No examples of institutionalize or routinize (or their derivatives) were found in any of the documents. These two terms were identified in sustainability literature originating from the U.S. and Israel (Shediac-Rizkallah and Bone 1998; Scheirer 2005; Savaya, Spiro et al. 2008; Wiltsey Stirman, Kimberly et al. 2012) and suggest that the preferred terminology may reflect cultural differences.

6.2.2 Potential strategies for enhancing programme sustainability

6.2.2.1 The commitment of national government

A number of documents suggested that national government can assist in cultivating a supportive policy environment in which to implement safety action plans (European Child Safety Alliance 2004; World Health Organization 2005b; Council of the European Union 2007; Peden, Oyegbite et al. 2008). Supportive national policy has in turn been associated with a positive influence on programme sustainability (Nilsen, Timpka

et al. 2005; Gruen, Elliott et al. 2008). The World Health Organization has long considered the health sector to be the appropriate lead for health promotion (World Health Organization 1981; World Health Organization 1986; World Health Organization 2005a) and European documents addressing injury prevention have taken a similar approach (European Child Safety Alliance 2004; Sethi, Towner et al. 2008). However a survey assessing child safety across European member states showed no clear association between the nature of the lead agency and progress (MacKay and Vincenten 2012). The authors of the report suggest shared leadership as a more effective approach to developing national plans for action, bringing together for example government departments and non-governmental organisations. It is of interest to note that the recent move to transfer the responsibility for public health in England to local authorities is at odds with the health sector-led international stance.

Weak and fragmented national policy support for injury in England has been identified as a barrier to local action (Towner, Carter et al. 1998). A range of national non-governmental documents have been produced with the aim of addressing this (British Medical Association 2001; Audit Commission and Healthcare Commission 2007; National Institute for Clinical Excellence 2010a; National Institute of Health and Clinical Excellence 2010b; Royal Society for the Prevention of Accidents 2012; BMA Board of Science 2013; Buck and Gregory 2013; National Institute of Health and Clinical Excellence 2013). Assessing child injury prevention activities across England, the Audit and Healthcare Commissions concluded that:

"At present, there is no single, clear cross-governmental statement which draws together what has to be done to reduce unintentional injury."

(Audit Commission and Healthcare Commission 2007): p.6

Their report went on to identify local consequences for programme sustainability resulting from the lack of national policy support:

"As a result, those charged with developing and implementing strategies to prevent unintentional injury face a challenge in maintaining the profile of the issue at local level...Without high level support, the long-term sustainability of programmes was threatened".

(Audit Commission and Healthcare Commission 2007): p.6

Although achievements in injury prevention in England compare favourably with other European countries, a survey of member states re-affirmed weaknesses in government leadership and a lack of national strategy, citing these as barriers to further progress (MacKay and Vincenten 2012). Belated recognition of the specific needs of children and young people within a changing national service context may have further reduced the policy emphasis on child injury prevention (Kennedy 2010; BMA Board of Science 2013).

In addition to developing injury-specific policy, it has been suggested that national government may have a role in facilitating the wider incorporation of injury prevention into related strategies that influence child health (National Institute for Clinical Excellence 2010a).

"Ensure local and national plans and strategies for children and young people's health and wellbeing include a commitment to preventing unintentional injuries among them. In particular, the plans and strategies should aim to prevent unintentional injuries among the most vulnerable groups to reduce inequalities in health. This commitment should be part of a wider objective to keep children and young people safe."

(National Institute for Clinical Excellence 2010a): p.8

6.2.2.2 Partnership working

The WHO World Report on Child Injury Prevention advocated a multi-sectoral partnership approach (Peden, Oyegbite et al. 2008). This is a well-established mechanism for delivery of public health programmes, with the health sector identified as a key player (World Health Organization 1981; European Union 2004; World Health Organization 2005a; World Health Organization 2005b; European Union 2007).

Partnership working has long been a key concept in public health in England but has not been without its problems (Department of Health 1992). For example, the approach advocated in Health of the Nation was criticised for its focus on the health sector and for failing to appreciate some of the barriers associated with collaboration (University of Leeds Glamorgan and the London School of Hygiene and Tropical Medicine 1998). In addition the timetable for establishing new ways of working was considered ambitious, placing considerable budgetary demands on local providers (House of Commons Education and Skills Committee 2004). An extensive re-organisation of children's services was initiated following the publication of Every Child Matters (Department for Education and Skills 2003). This may have presented

challenges to local stakeholders attempting to maintain inter-agency partnerships in order to focus on specific health issues. Committed strategic support for injury at organisational level has been identified as a driver for co-ordinating local efforts, even where these take place in a context of wider change:

"Where preventing unintentional injury is a sustained organisational priority, networks have been broadened and responsibilities shared across the local system, leading to improvements in service delivery."

(Audit Commission and Healthcare Commission 2007): p.37

6.2.2.3 Building capacity and infrastructure for injury prevention

Reviews of health programmes suggest that capacity building and organisational support for skills training within the workforce can act as facilitators for sustainability (Greenhalgh, Robert et al. 2004; Lovarini, Clemson et al. 2013; Schell, Luke et al. 2013). Capacity in the context of injury prevention has been defined as the:

"development, fostering and support of resources and relationships at individual, organizational, inter-organizational and systems levels" (MacKay and Vincenten 2012): p.66

Based on a survey of eighteen European member states (England was not included, though did feature in a later survey), the authors further identified a significant inverse correlation between national capacity for injury and injury mortality rankings.

Several international documents identified the need to increase capacity for injury prevention at national level (European Child Safety Alliance 2004; World Health Organization 2005b; Council of the European Union 2007; Mackay and Vincenten 2007; World Health Organization 2009) In their Strategic Plan (2009-2013), the WHO identified that:

"Capacity building is one of the main challenges facing the injury prevention area today".

(World Health Organization 2009): p.1

Inter-agency collaboration and increased training for health and other professionals have been suggested as means of increasing capacity (European Child Safety Alliance 2004; Council of the European Union 2007). An injury-specific modular training course (TEACH-VIP) and a skills development programme (MENTOR-VIP) developed by the WHO are accessible to professionals via e-learning. A survey of forty-seven EU member states conducted in 2009 reported that 80% were providing courses to encourage capacity building for unintentional injury and violence prevention (Sethi, Mitis et al. 2010). However, detail of the course content, reach and number of individuals trained was not presented and without disaggregation of the results it is unclear to what extent the training addressed prevention of unintentional injury, as opposed to deliberate harm.

At a national level, reports on progress within injury prevention in England have also identified the need for increased training and capacity building (Department of Health 2002; Audit Commission and Healthcare Commission 2007; Department for Children Schools and Families, Department of

Health et al. 2009). However, this has not translated consistently into policy, with variation apparent in the levels of government support for national injury prevention training initiatives over time. For example, although financial investment in Early Years training to improve workforce quality and capacity formed part of the Children's Plan, the extent to which this addressed injury prevention was unclear (Department for Children Schools and Families 2007). The Staying Safe Action Plan included a commitment to provide professional guidance on injury risk and effective interventions for home safety, but it did not address the resource implications likely to be associated with their implementation (Department for Children Schools and Families 2008). A nationally certificated course in injury prevention supported by the Department of Health was delivered by the Child Accident Prevention Trust (CAPT) in England between 2001 and 2004, but this no longer operates. Subsequently the Department for Children, Schools and Families and Department of Health have provided fixed-term support for 'Making the Link', a national initiative led by CAPT, aimed at developing local capacity for injury prevention. A further call for local training to support injury prevention for Early Years professionals emerged in a recently-published document for local authorities (Public Health England, Royal Society for the Prevention of Accidents et al. 2014). This emphasised the leading role played by health visitors and Children's Centres in the delivery of injury prevention activities. As part of the Innovation Excellence and Strategic Development programme, the Department of Health has recently funded a three-year programme to deliver consultancy, training and intervention support on home injury prevention for targeted areas across England. To-date thirty

areas have taken part. A formal evaluation of this work is anticipated in 2015.

The establishment of regional co-ordinator posts to support injury prevention originated in Health of the Nation (Department of Health 1992). The development of these roles as "programme champions" offers a mechanism for sustainability that was identified in the literature review (See Chapter Two), as well as a commitment to increasing local capacity. The posts were often jointly funded by health and local authorities, though being short-term in nature many no longer exist. Several documents have recommended re-establishing the role as a focus for local activity (Department of Health 2002; Department for Children Schools and Families, Department of Health et al. 2009; National Institute for Clinical Excellence 2010a; Royal Society for the Prevention of Accidents 2013), though the effects of the current economic climate in England are likely to make this challenging. Potential barriers include reduced overall capacity within the front-line public sector, increased competition for alternative funding sources, and the ongoing impact of organisational change within local authorities and partner agencies (Department of Health 2005; Iacobucci 2014).

In addition to identifying issues of capacity, a need to strengthen the infrastructure for injury was recognised by the Accidental Injury Task Force:

> *"...it will be difficult to achieve significant, sustained reductions in accidental injuries unless work is done, over time, to improve the supporting infrastructure."*
>
> (Department of Health 2002): p.37

Whilst government policy has acknowledged that commitment over time is required to achieve positive, sustainable health outcomes across the population (Department of Health 2004; Department of Health 2009), this has not manifested in a national strategy to support and sustain injury prevention capacity at local level.

6.2.2.4 Integrating injury into the broader agenda

It has been suggested within the sustainability literature that linking programmes to a broader agenda may offer a potential mechanism for their sustainability, effectively mainstreaming what may otherwise become a marginalised issue (Shediac-Rizkallah and Bone 1998; Savaya, Spiro et al. 2008). This approach has been recognised at global and European level (World Health Organization 1998; World Health Organization 2005b; Peden, Oyegbite et al. 2008; Sethi, Towner et al. 2008; World Health Organization 2011). In a comparative survey of European member states, those countries whose injury action plans had been integrated with existing policy frameworks were assessed as having made greater progress on injury (MacKay and Vincenten 2012).

In England, home safety for children has traditionally been linked with the child health programme and in particular the role of health visitors, one of the few professions able to gain universal access to family homes (Department of Health 2004; National Institute for Clinical Excellence 2010a; National Institute of Health and Clinical Excellence 2010b; Public Health England, Royal Society for the Prevention of Accidents et al. 2014). Early Years provision in England will fall within the remit of local authorities from October 2015. In line with this

transfer of responsibility, a broader stance has been taken encouraging alignment between injury activities and local authority policies for public housing and the built environment (BMA Board of Science 2013; Buck and Gregory 2013; Department of Health 2013; Royal Society for the Prevention of Accidents 2013). The potential for injury prevention to achieve health goals in other sectors has been highlighted (European Child Safety Alliance 2012), and relevant connections have been made between injury and all seventeen of the other public health priorities identified within current health policy (Royal Society for the Prevention of Accidents 2012).

6.2.2.5 Funding for injury prevention

International documents did not directly address funding for child injury prevention, although both the WHO and Eurosafe commented that the field is currently under-resourced (Mackay and Vincenten 2007; Peden, Oyegbite et al. 2008; Sethi, Towner et al. 2008). Lack of funding is neither new nor unique to injury prevention, having long been associated with the wider field of health promotion (World Health Organization 2005a; The Marmot Review 2010). Recognising the vital role of funding, the Bangkok Charter urged local, regional and national governments to:

> " *provide sustainable financing for health promotion."*
> (World Health Organization 2005a): p.4

In England, considerable disparity has existed within the health sector between spending on treatment and prevention, with the latter comprising only 4% of the overall NHS budget (The Marmot Review 2010). Several national documents have

identified funding uncertainty as a threat to local action on injury (Department of Health 2002; Audit Commission and Healthcare Commission 2007; Department for Children Schools and Families, Department of Health et al. 2009).

"Developing and sustaining schemes such as these have brought several challenges. We have identified serious concerns about underfunding and the instability of funding streams ..."

(Audit Commission and Healthcare Commission 2007): p.46

In the absence of financial support to assist policy implementation, the pooling of resources from existing budget allocations has been recommended (Audit Commission and Healthcare Commission 2007). However, a subsequent review identified practical barriers that inhibited this approach, for example a lack of co-terminus boundaries between partner agencies (Department for Children Schools and Families, Department of Health et al. 2009). Government intervention was suggested as a means of facilitating the process:

"Whilst arrangements to pool funding between local authorities and PCTs were reasonably clear, it was more complicated when sharing with other agencies, and particularly when more than two parties were involved. It was felt this was not an efficient, sustainable or replicable way of working and that central government support was needed to assist local areas in finding easier ways of pooling resources, particularly across the full range of local agencies."

(Department for Children Schools and Families, Department of Health et al. 2009): p.27

A recent report from the Chief Medical Officer makes the economic case for prevention over healthcare, using injury as one area to illustrate current costs (Department of Health 2013). Despite the scarcity of cost-effectiveness evidence, this argument has also been used to promote accident prevention within local public health agendas (Royal Society for the Prevention of Accidents 2012; Buck and Gregory 2013; Royal Society for the Prevention of Accidents 2013; Public Health England, Royal Society for the Prevention of Accidents et al. 2014).

The current public health strategy proposes a ring-fenced budget amounting to £2.66 billion for 2013-14 and £2.79 billion for the following year (Department of Health 2013). This does not however apportion funding to specific health issues, nor does it acknowledge the internal competition that may arise between them. Furthermore, a history of "raiding" public health budgets has been identified, initially to meet demand for acute healthcare provision (Department of Health 2005). Recent evidence shows the continuation of this practice in an attempt to support underfunded local authority services (Iacobucci 2014).

6.3 CHAPTER SUMMARY

This chapter reported on programme sustainability from the perspective of public health policy and those involved in its development.

Whilst sustainability was seen as a relevant concern by representatives from policy stakeholder agencies, different views as to its conceptualisation and definition were apparent between individuals. Policy stakeholders identified increased

competition for funding as the primary barrier to programme sustainability. However, for those agencies working in England, the changing national context for health and social care provision presented an additional challenge. Factors considered to facilitate sustainability were: programme adaptability, partnership working, co-ordination, and leadership and champions. Adopting a strategic approach to programme planning and identifying ways in which interventions can integrate with wider activities were considered to enhance the prospects of sustainability.

The review of public health policy suggests that this fails to explicitly address the issue of programme sustainability at either global or national level. Strategies to enhance sustainability were identified within recommendations and guidance, however, these were not consistently incorporated into policy documents in England. Examples of such strategies include: securing high-level political commitment; strengthening the infrastructure through training and capacity building; re-establishing local co-ordinator posts and addressing issues of short-term funding. The range of terms associated with sustainability, and variation in the frequency of their usage between countries and over time, may have served to dilute attention to the issue.

CHAPTER SEVEN

FINDINGS: PROGRAMME FIDELITY AND BENEFITS

7.0 INTRODUCTION

The data sources for this chapter are as follows:

- Interviews with national Safe At Home stakeholders
- Interviews with local scheme professionals from the case study and corroborating sites
- Interviews with family representatives from the case study sites.

The chapter considers the nature of continuing programme activities and the ongoing benefits associated with these. These have been conceptualised here as manifestations of sustainability (Shediac-Rizkallah and Bone 1998; Scheirer and Dearing 2011), though their ability to act as influencing factors is also noted. In the literature review conducted for this study, continuing programme activities and ongoing benefits were the most prevalent manifestations used to define sustainability (See Table 2.3, Chapter Two).

The chapter is presented in two sections that correspond to the two categories identified within the main theme. The first of these is programme fidelity, a concept associated with varying levels of scheme activity within and between case study sites over time. Changes made to the original programme content and the impact of these on parents and professionals are described.

The second section looks at the ongoing benefits of the intervention, a universal feature within all of the case study

sites. The nature of scheme benefits are considered from the perspective of families receiving the intervention and from professionals involved in its delivery.

To assist in reader navigation the categories and sub-categories associated with the main theme of this chapter are presented below in Table 7.1.

Table 7.1 Categories and sub-categories associated with 'Programme activities and benefits'

MAIN THEME	Categories	Sub-categories	Section
PROGRAMME ACTIVITIES AND BENEFITS	**Fidelity to programme activities**	Variation in core programme components	**7.1.2**
		The evolution of programmes over time	**7.1.3**
	Ongoing benefits of the programme	The family perspective: - meeting the safety needs within the target group - more than just a safety scheme? - trust in professionals	**7.2.2** 7.2.2.1 7.2.2.2 7.2.2.3
		The professional perspective: - meeting the safety needs of service providers - benefits to individual professionals - accessing hard-to-engage groups - signposting to other services - role in monitoring and inspection	**7.2.3** 7.2.3.1 7.2.3.2 7.2.3.3 7.2.3.4 7.2.3.5

7.1 FIDELITY TO PROGRAMME ACTIVITIES

7.1.1 Overview of fidelity within case study sites

Programme fidelity provides an indication of the extent to which sustained programme activities adhere to those of the original intervention (Carroll, Patterson et al. 2007). The identification of subsequent changes to the original programme content and the reasons behind these may improve understanding of some of the mechanisms underlying sustainability. This study therefore included fidelity to essential programme components as part of the initial selection criteria for site recruitment (Saunders, Pate et al. 2012), specifically whether or not the equipment installation component had been sustained. The status of each site with respect to installation had remained constant from the end of the national programme (March 2011) to the point of recruitment for the current study. However, as data collection got underway it became apparent that intervention fidelity was liable to fluctuate in response to site-specific contextual changes. This manifested in varying levels of fidelity within and between sites, with scheme components being gained or lost over time.

Table 7.2 illustrates fidelity to the original core programme components at the point at which schemes were recruited into the current study. It was informed by preliminary data provided by the main contact in each site. An overall fidelity score has been allocated to each scheme based on the number of components sustained, up to a maximum score of 7 (complete adherence to the original programme). Scores were recalculated at the end of the data collection period. In four of the case study sites the overall fidelity score did not change

over the course of the study with the provision of core components remaining static (Sites B, C, D and Z(1)). In Site A, the reinstatement of a free equipment provision and installation service increased the fidelity score from 4 to 6. Towards the end of the study period a new safety scheme was planned for Site Z. Dependent on coverage, this may lead to an increase in fidelity for schemes Z(2) and Z(3), potentially from 1 to 6.

Over the course of the study period, parental education was the sole component sustained across all schemes. Professional training was least likely to be sustained. Where core components had been sustained the nature of these varied between sites and within sites over time. The nature of this variation is discussed in the following section.

Table 7.2 Fidelity to scheme components at the point of recruitment: case study sites and corroborating schemes

NATURE OF CORE COMPONENTS	'Safe At Home' Programme	Site A	Site B	Site C	Site D	Site Z			Site T	Site W	Site Y
						1	2	3			
Professional training linked to the scheme	√	No	No	No	√ (for volunteer home visitors)	No	No	No	No	No	No
Safety assessment at home visit	√	√	√	√	√ (for some families)	√	No	No	No	No	No
Family education and safety advice	√	√	√	√	√	√	√	√	√	√	√
Provision of equipment items	√	√	√	√	√	√	No	No	√	√	√
Equipment free of charge	√	√	√	√	No - low cost	√	No	No	√	√	√
Professional installation of equipment	√	No	√	√	No	√	No	No	No	√	No
Installation free of charge	√	No	√	√	No	√	No	No	No	√	No
Overall fidelity score (max 7)	**7**	**4**	**6**	**6**	**4**	**6**	**1**	**1**	**3**	**5**	**3**

7.1.2 Variation in core programme components

At the point of recruitment to the study, two of the sites continuing to provide equipment had ceased to offer an installation service (Sites A and D). The contrast in size between these two sites, and between Sites B, C and Z1 (shown in Table 5.4) where installation had continued, suggested little association between size of scheme and fidelity to this component. Economies of scale had been suggested by one of the national 'Safe At Home' stakeholders as a mechanism for sustaining the installation component, however the evidence from this study did not appear to support this.

The lack of an installation service in Sites A and D appeared to create few problems for parents who reported having fitted the equipment themselves, or having obtained assistance to do so from a relative or friend. One young, single mum who had installed a safety gate herself highlighted some of the practicalities associated with this:

"You have to wait until the child's actually in bed and then put it up and you're making loads of noise and they wake up". [Emma, mum to 2 children, Site D]

Amongst professionals there was acknowledgement that the loss of core programme components may potentially limit the effectiveness of the intervention. One national 'Safe At Home' stakeholder who had maintained an overview of local scheme development spoke of the importance of maintaining intervention fidelity:

"The national scheme included all the elements that I think are necessary for a local scheme so I would hope that anybody setting up a scheme would give thought to structuring it so there was a good home check and advice service and they would follow that with fitting of appropriate equipment … I think the training element was quite important…and the education side… I think the best schemes will be the ones that comprise all those elements really".

[Jamie, national stakeholder: host agency]

Jamie did however go on to qualify this view by stating that modifications to the original programme may have been made of necessity:

"I don't think anybody would have cut back on things like fitting if they'd had the resources to do it but it's been a way for them to keep something going and obviously there's a sense of something's better than nothing".

[Jamie, national stakeholder: host agency]

The potential impact on scheme effectiveness resulting from loss of the installation service was a concern for local professionals, as one home visitor in Site A stated:

"…I suppose one of the problems that we have got is that we don't install it and when we go back to make sure that the parent has got their equipment, the fireguard might still be in the box and it's like 'You know you need to get it fitted', 'Oh, yeah, I'll…' …you know…"

[Jackie, family support worker, Site A]

In the absence of an installation service the safety items provided by the scheme in Site A had been reviewed, as the scheme co-ordinator explained to parents at the discussion session:

"There's no point buying a safety gate if it's not going to be fitted correctly. You're just causing another hazard."
[Margaret, scheme co-ordinator, Site A]

When asked why the installation service was no longer provided in Site A, both the scheme co-ordinator and her line manager independently raised the issue of liability:

"There have been cases in the past where people have had gates fitted or fireguards fitted and there's been (an) accident…You know we had one in [district name] where the child fell into the fire… And so there's a thing that you've got to think of, if you're taking responsibility for actually fitting that gate you're also taking the responsibility for if anything happens." [Grace, Children's Centre manager, Site A]

Despite the expressed concern over liability, in this site and in others, it was availability of funding that appeared to be the major influence on scheme provision. Specific components, such as the installation service, were regarded as particularly resource-intensive. The district co-ordinator for Site A reflected on the limitations to scheme operation imposed by a lack of funding. She identified a dilemma whereby allocated funds could be used to either extend the scheme coverage at the existing lower level of fidelity, or to increase scheme intensity but make this available to fewer families.

"I personally would like to see installation but it depends on the amount of funding that we get. Do we use the limited funding to maximum effect across the number of families or do we use it in limited areas and do it properly with the fitting and everything?"

[Amanda, district accident prevention co-ordinator, Site A]

Her comments resonated with those made by the co-ordinator in Site D where a new source of funding had enabled modification of the existing scheme provision. The decision here to increase scheme coverage (from families living in the 30% most deprived areas to universal provision), rather than recommence the equipment installation service appeared to have been made primarily on a cost basis:

"The fitting was so expensive. I mean when we did it with RoSPA I think the fitting was about £50 per property… and that was regardless of what they fitted…What we're looking at is with the extra funding (recently secured additional funds) supplying it (the scheme) to the 70% as well as the 30%...so we're looking at just offering it to everybody."

[Maria, scheme co-ordinator, Site D]

As 'Safe At Home' neared completion, several sites had taken advantage of its surplus of supplies, thereby helping to sustain their equipment provision in the months immediately after the transition from national to local support.

"When the RoSPA scheme finished they had some surplus equipment …and we got as many fireguards as we could you know. They're in the loft here, so anything that was

going we just basically got on board... we got something like 200 fireguards, we got loads of window locks, cord winders…"

[Margaret, scheme co-ordinator, Site A]

However, once these supplies were exhausted, limited availability of local funding in some sites had proved insufficient to replenish stock levels. This had a direct influence on the range of safety equipment provided, with schemes opting to purchase smaller, less costly items.

"We try and look at what our data's showing us and that dictates what kind of safety equipment is bought but it is the kind of equipment that parents can take home and install themselves, it's not the larger pieces of equipment, we don't have the funding to be able to do that".

[Ellen, Public Health Officer, Site D]

One home visitor, who had been involved in delivering safety schemes in Site A for some time, noted that the reduced range of equipment available since the end of the national programme sometimes failed to meet with parental expectations in her area:

"Well, a lot of the parents are aware of the previous home safety scheme and they're like 'Well I know so-and-so who got two safety gates, they got a fireguard, they got all this…' and ours are like 'Well, why can't I get it?' and I say 'Well, it's just whatever we've got left'".

[Jackie, Family Support Worker, Site A]

7.1.3 The evolution of programmes over time

Fluctuation in the level of scheme provision was not unique to the 'Safe At Home' programme, having been experienced by those sites where safety schemes had operated prior to the national initiative. In Site D, for example, an equipment loan scheme operated before, during and after registration with the national programme. The co-ordinator, who had been in post throughout, spoke of how *"it changes all the time"*. Comments from parents revealed the uncertainty that this created as to whether the local scheme was still operating, and if so, in what form.

"Some people on Facebook… said they'd had the stairgates and bought them through Sure Start but a lot of people were putting Sure Start don't do them anymore. We rang them and they said they did".

[Deborah, mum to 5 children, Site D]

"You used to 'phone the Sure Start worker and they would contact the council and they'd come out and do a home safety check and see what they'd give you and then they'd come out and fit it". [Trisha, mum to 8 children, Site D]

In Site B, the 'Safe At Home' programme was viewed as a life-line for the existing local safety scheme which had been threatened with closure owing to lack of resources at the time that the national programme was launched:

"It (the scheme) almost finished to be honest with you. If Safe At Home hadn't have come along it would have finished, but Safe At Home saved it and then obviously they

saw the continued benefit of it and they tried to fund it out of their own centre budgets".

[Tom, scheme co-ordinator, Site B]

At the time of this first interview, Tom had been experiencing some uncertainty regarding future funding and support for the local scheme. He appeared uncharacteristically subdued when asked for his views about the scheme's prospects:

"It might carry on but not as it is. I can see it weakening and I can see it actually probably closing. I think they might reduce the service to a degree, they might try and keep the educational part of it, but the equipment scheme part might go …the fitting."

[Tom, scheme co-ordinator, Site B]

Tom's concern over the potential loss of core components was shared by his line manager who faced difficult choices within the current budgetary constraints:

"I'm looking at the moment at a supply-and-fit service… but it's about how that works logistically. I'm not happy about just giving people equipment and them not having the education and understanding that keeping a child safe in the home is about more than just putting in a safety gate".

[Dorothy, Children's Centre manager, Site B]

At the time of writing, some 18 months after these interviews took place, scheme provision in Site B remained unchanged though coverage had been reduced owing to fewer Children's Centres participating. In the interim, informal contact with both Tom and Dorothy revealed prolonged periods of

uncertainty as to the prospects of scheme continuity and level of provision.

During the course of data collection, two of the sites (A and Z) were successful in obtaining further funding, enabling future reinstatement of programme components that had previously lapsed. Plans in Site A to resume a comprehensive, district-wide scheme would enable the Children's Centre to reintroduce the equipment installation component after a 24 month interlude during which provision of this ceased. Specific allocation of funding in Site Z has yet to be decided, but may enable scheme provision to be intensified in the two areas where equipment provision and installation ceased following the end of 'Safe At Home'.

7.2 ONGOING BENEFITS OF THE PROGRAMME

7.2.1 Overview

Ongoing benefits were associated with the continuation of programme activities across all of the case study sites. Some of these, such as improved safety practice, took effect at the individual level, whilst others were acknowledged as benefits to the organisation. This section looks at the specific nature of the benefits identified by parents in the target group and by professionals involved in service delivery. It considers unanticipated benefits as well as those directly associated with the aims of the scheme.

7.2.2 The family perspective

7.2.2.1 Meeting safety needs within the target group

Sessions with parents revealed that they took their responsibility for home safety seriously, regarding this as a

relevant and important issue in caring for their children. Common safety concerns included scalds from hot drinks and bath water, strangulation from the cords on window blinds, falls down stairs, burns from hot electrical items such as hair straighteners and gaining access to sharp kitchen implements.

Influences on parental risk awareness included personal and shared experiences, as well as the abilities and characteristics of individual children within their care. Specific circumstances were acknowledged to elevate the risk of home injury, for example visits to the homes of friends or family where child safety was less of a priority. Parents identified supervision as a key strategy for avoiding and reducing injury, however the effectiveness of this could be compromised when the parent was distracted or otherwise occupied, such as when supervising several children.

"I've got three, different ages. I've got an 8-year old and a 5-year old, they're scrapping. Charlie's in the cupboard with something he shouldn't be having…"

[Eva, mum to 3 children, Site A]

Comments from some parents indicated that older siblings were given responsibility for supervising young children, acting in loco parentis:

"If the older kids are watching her we say make sure the stairgate's shut and things like that".

[Deborah, mum to 5 children, Site D]

In addition to supervision, parents reported using a range of safety equipment to modify the risk of home injury. They

appeared aware of the limitations of specific items, noting for example how children learned quickly to open safety gates and cupboard locks. Two of the mothers participating in separate sessions had larger families that included children with challenging behaviour. The additional demands that this created formed a common thread in their contributions to each of the group discussions.

"I've got a nearly 3-year old boy and it doesn't matter what you put there, a gate, those plug covers, it doesn't matter what you put there or what you take out of their way to try and reduce the risk, somehow he always manages…I've got to have eyes in the back of my head.. It doesn't matter what safety equipment you've got there, if you've got a child that's so adamant, so stubborn that he's going to get to that thing, he'll get to it". [Sarah, mum to 5 children, Site A]

For some parents, a lack of self-efficacy, as demonstrated by the need to obtain permission from a third party to install safety equipment, constituted a barrier to addressing injury hazards through environmental modification. Many of the parent representatives lived in rented accommodation and were therefore reliant upon landlords to maintain their properties. This responsibility was not universally adhered to, creating particular problems for those who had entered into private rental arrangements, as one mum from Site B explained:

"I moved into private (rented accommodation) and I had an electric box that wasn't covered up and they wouldn't come out and do the work, they were useless…all the wires from the fusebox were just hanging out".

[Ruth, mum to 2 children, Site B]

At the same session, another mother recounted similar experiences, but her safety concerns appeared outweighed by her greater desire to retain accommodation for her family:

"When you've got a private landlord they don't care…you'd get chucked out and 'cos you don't want to put your kids in a dirty B&B (Bed and Breakfast accommodation) you put up with where you live so they've got a roof over their heads". [Sandra, mum to 5 children, Site B]

Across all of the case study sites, sustaining scheme activities was regarded by parents as an effective means of raising safety awareness and of providing practical support to reduce hazards in the home. The anticipatory nature of the home safety advice was appreciated, especially by first time parents adjusting to their child's stages of development, although the reinforcement of existing knowledge was also valued. One grand-parent, responsible for the regular care of her daughter's children, noted how recommended practice for child safety had changed over time and referred to the advice provided as a *"refresher course".* Provision of safety advice through one-to-one or group sessions was reported to have been a positive influence on parental safety practice. On occasion, the home visits appeared to prompt immediate improvements in behaviour, particularly when there was no cost implication, as one mum who had been visited three weeks earlier recalled:

"Straight away I was unplugging sockets for safety and reading all the information…every time I ran her bath checking with my elbow". [Louise, mum to 2 children, Site B]

Some of the sites used visual material during their educational sessions, for example, during group sessions in Site D the co-ordinator would show to parents photographs of children that had sustained a burn or scald. Images such as these were readily recalled by parents and appear to have left a lasting impression. The extract below followed on from a question to the parent group about what they considered to be the most important part of the scheme:

> ***Trisha***: *"It's the pictures she showed us"*
> ***Lee***: *"The pictures of the burns"*
> ***Moderator***:*"Did you find that a bit upsetting?"*
> (participant expressions suggested this to be the case)
> ***Deborah***: *"Yeah but at least it shows you what can happen. It makes you think more."…*
> ***Ed***: *"…Yeah, it's better for parents to know."*
> ***Deborah***: *"It gets the message over."*
>
> [Focus Group, Site D]

The graphic nature of these images may have helped in sustaining some of the behaviour changes that required repeat action on the part of the parent.

Schemes were seen as an appropriate way of improving home safety, and were welcomed by parents who appreciated the supportive and non-judgemental way in which these were delivered.

"It's like a helping hand giving you help and saying 'You know you haven't got this, you really need to get them, you don't mind us telling you, do you?'"

[Sarah, mum to 5 children, Site A]

Whilst the educational component was of value to parents, it was often the offer of free or subsidised equipment that had attracted them to the scheme initially. As one parent in Site B pointed out *"everybody likes something for free"*, whilst another in Site D, where items were available at low cost, saw the equipment component as fundamental to the scheme's success.

"I don't think it would work if we didn't get the equipment, some people can't afford to buy it."

[Deborah, mum to 5 children, Site D]

Provision of free or low cost equipment helped to overcome financial barriers encountered by parents, particularly with respect to the larger and more costly items such as safety gates and fireguards. Although some of the parents indicated that they would have purchased these items for themselves, others admitted that they would have found this difficult owing to competing priorities for their limited household budget:

"I would have bought the stairgates. I would have had to work for two days to pay for them but I would have gone to buy them." [Kirstie, mum to 2 children, Site B]

"There's a lot of not-working mums and on benefits (state financial support) and for us to go out and buy two gates, all your window locks, bath mats, you'd never have done it all at once." [Sarah, mum to 5 children, Site A]

Satisfaction with the safety items provided by schemes was high, and parents particularly appreciated the flexibility in accommodating their preferred delivery and installation dates. The key benefit stated with respect to provision and/or installation of safety equipment was *"peace of mind"*. With regard to safety gates, it emerged that these were not always installed in the parent's preferred location. For example, they may be put on a child's bedroom door rather than at the top of the stairs to avoid trip hazards, although the reasons for this were usually explained and generally accepted.

7.2.2.2 More than just a safety scheme?

In addition to the safety benefits outlined above, some parents alluded to the schemes as a source of broader support that helped them to balance the multiple demands of child-rearing. The home visit component was highly valued since it gave parents an opportunity to raise specific concerns about topics other than home safety:

"…you think oh, I can't do everything, I'm going over the top and then somebody will come in and say "No this is what you need" and then it sort of reassures you".

[Lesley, mum to 1 child, Site A]

Most families had been referred into the scheme by a health professional or member of the Children's Centre staff. Children's Centre staff came in for considerable praise as a

source of advice and for the way in which they acknowledged individual needs, working alongside parents to support and empower their broader parenting skills:

*"In this particular area, because the staff in the Children's Centres care about the parents and the children, they'll say 'We've got a new scheme in – **you** should come, **you** should come and **you** should come. It will help you'. I've come to a lot of courses and to this workshop because the Children's Centre workers stop you as an individual, they come up to you and say 'This is what we're doing, I think it will help you. Go to it'".* [Ashley, mum to 2 children, Site B]
(emphasis is respondent's own)

Though professionals viewed the scheme as an opportunity to engage parents in broader Centre-based activities, many of the parents reported having pre-established links with their local Children's Centre prior to participating in the safety scheme. This may have reflected the comprehensive programme of activities offered by those Centres within the case study sites, or a bias in selection of parent representatives. Some parents clearly saw their Children's Centre as an essential source of support:

"I'd be lost without [Children's Centre]. I think they're the link that's keeping the chain together. 'Cos I struggle with my kids with everything 'cos they're naughty".
[Sandra, mum to 5 children, Site B]

7.2.2.3 Trust in professionals

Professionals involved in safety scheme delivery were accepted by parents either because of a pre-established relationship, or

through indirect transfer of trust from one "known" professional to another. This transfer of trust was experienced at first-hand by the researcher who found parents willing to be very open from the first point of contact. The level of trust invested in scheme staff appeared to be particularly important to parents and could vary depending on their perception of the professional group concerned. One mum in Site A spoke of her differing response to home visits from the scheme co-ordinator compared to her regular health visitor, whose role she associated more with inspection rather than provision of support.

"I've got 3 boys now and I won't tell the health visitor anything. The health visitor comes and everything's hunky dory, but [scheme co-ordinator] comes to the door and she says "Is anything wrong love?" and "Boo-hoo, yeah" (imitates crying) "How do you do this and how do you do that?" … But if the health visitor comes it's like I won't admit it".

[Eva, mum to 3 children, Site A]

A separate discussion session in Site B indicated that parental trust in some professionals may be negatively affected by their association with child protection. Some parents believed that having a Children's Centre as the focus for safety activities might inhibit certain members of the community from participating, with possible barriers to attendance including a lack of confidence and the fear of stigmatisation. The following conversational extract illustrated some of these points:

***Sandra**: "…a lot of people see these things as social services…because you've had something from them. Some people have a fear of bringing their kids to the groups"*

***Kirstie**: "'Cos this is an area of …"*

***Sandra**: "Run down?"*

***Kirstie**: "I was going to say deprived, so there are certain groups that have got that area round them, people do see Children's Centres as... It's a Children's Centre open for all and that goes back to the safety scheme, it's open to everybody. "*

***Sandra**: "And some people think they can't come to these Centres, 'cos it'll come in with child protection and all that but it's not like that."*

[Focus Group, Site B]

7.2.3 The professional perspective

7.2.3.1 Meeting the safety needs of service providers

Professionals involved in scheme delivery at local or national level regarded 'Safe At Home' as an effective, evidence-based intervention for addressing childhood injury. One national 'Safe At Home' stakeholder explained the basis behind the national pilot programme:

"…the idea was that this was such a no-brainer…but that we needed to demonstrate it by…kind of pump-priming it. The schemes would demonstrate their worth and any local

authority in its right mind would want to support it".

[Laurie, national stakeholder: commissioning agency]

The safety schemes had proved popular with operational staff across all five of the case study sites. Partner agencies had benefitted from the kudos and associated publicity of being involved in the national programme. The perception amongst staff was that schemes could help the host agency to meet specific targets for reducing hospital admissions.

"Have we made houses safer and do people feel that their homes are safer? Definitely".

[Robert, commissioning manager, Site C]

One participant referred to the beneficial *"knock-on effect"* that had become apparent once the scheme in his area was fully operational. He defined this as a raised awareness of safety that went beyond those in the immediate target group:

"…something that an individual picks up but they talk to a neighbour etc…and it's making the community more aware of the dangers".

[Richard, Children's Centre manager, Site Z]

The mechanisms used for scheme delivery were seen as complementary to the existing ethos within Children's Centres. Universal concern with child safety among parents made this a useful way to open a dialogue with family members, helping to break down the mistrust that was sometimes encountered by professionals working in the target areas. The district co-ordinator in Site A touched on these issues when explaining

why they had decided to develop a standardised safety checklist for home visits:

"We're not going in and saying we want to have a look around your house and tell you what you're doing wrong …it's about a conversation with somebody about how they can keep their own child safe and it's an easy opener really …anybody can have an accident, it doesn't matter what background you're from, what you do, who you are…it's everybody's issue. Everybody knows somebody who's had an accident".

[Amanda, accident prevention co-ordinator, Site A]

The subsidised provision of safety equipment was regarded universally by professionals as a benefit of the schemes, helping families to overcome financial barriers. Three of the sites (A, B and C) continued to provide equipment free of charge, a situation that for one at least was not likely to change given their stated ethos towards service provision:

"*We don't charge for anything that we do for parents."*

[Grace, Children's Centre manager, Site A]

Other benefits similarly reflected the way in which specific scheme components met the needs of the target group. This was recognised by the local co-ordinator of Scheme 1 in Site Z, where both equipment provision and installation had continued:

"…they like that we bring it (the equipment) to them, we fit it for them. Many of them said that they wouldn't be able to afford all the items…plus a lot of them don't have

transport and if you have a pushchair you can't get two gates and a fireguard on…" [Adele, scheme co-ordinator, Site Z]

Two professionals in Site B talked independently of how the scheme had improved skills and self-efficacy among parents in managing their children's behaviour:

"For us it's the raised awareness around parental responsibility for keeping their children safe, that it isn't down to the landlord or to somebody else… (we have) parents telling us that it's linked into their routines about how they manage their parenting, boundaries etc".

[Eileen, Children's Centre manager, Site B]

Professionals saw the provision of equipment as an incentive for families to take part in the scheme, echoing parental views with comments such as *"getting something for nothing"*. It was also suggested that receiving equipment might make families more amenable to further intervention:

"Well, I think with anything that you're doing like this with a family, your relationships are built, you know they become stronger don't they? Because, you know it's awful to say, but if people think they're getting something out of you they tend to lean more towards you."

[Grace, Children's Centre manager, Site A]

7.2.3.2 Benefits to individual professionals

General comments from staff, particularly those working at an operational level, indicated that the scheme had helped them to achieve their professional objectives. In addition,

participation brought personal satisfaction for some, particularly front-line staff:

"Personally for me I get a good rapport from it 'cos I feel as though I've achieved something. If I can keep a child out of A&E or stop him from being burned or scalded or falling through a window and cracking his skull, I've done my job".

[Tom, scheme co-ordinator, Site B]

A similar perspective was expressed by one of the co-ordinator's colleagues who worked for a partner agency in Site B. As on other occasions, similarity in the language that they used to express their views was noted, as well as the apparent alignment of beliefs and values behind these. Comments from the representative of the partner agency suggested that whilst the efforts of dedicated individuals may be of benefit to his employer, the level of commitment invested by the agency as a whole may not be so high:

"The reality is they (the employees) want to make a difference…The volunteering stuff they do, it's infectious. The organisation appreciates and uses the kudos that goes with it, I'm not sure that they're committed to the process".

[Stuart, representative of partner agency, Site B]

7.2.3.3 Accessing hard-to-engage groups

A major benefit of the schemes was the improved access to the target community reported by professionals, and in particular to groups and individuals that had proved harder to engage. Among the case study sites these included recently-arrived immigrants, transient populations (such as travelling families) and minority ethnic groups. Resistance to service

contact among families within these population groups could compound their sense of social and cultural isolation. The safety scheme was seen as non-threatening in nature, allaying fears and the mistrust of authority that were sometimes characteristic of families within the target group demographic.

Participation in the safety scheme potentially led to increased uptake of other services, and in this respect the home visit provided a literal *"foot in the door"*. Variations on this expression were commonly used by professionals when discussing the benefits of the scheme in those sites where the home visit component had been sustained:

"We have difficulty in engaging some of our families through the new birth process and safety is something that is almost a paramount thing when you have a new baby and it reduces some of the barriers that some families will put up to any engagement. Sometimes we can gain access easier through using the safety route than we can through other systems …and once we get in… it opens the door around other issues and then we're in as family support".

[Grace, Children's Centre manager, Site A]

Whilst home visits presented the opportunity to tailor advice to the circumstances observed, they could on occasion prove a challenging setting in which to deliver safety messages. Maria, the co-ordinator in Site D, provided education mainly through workshop sessions, though with an option to conduct visits to families referred by social services or where additional needs had been identified. She provided a light-hearted summary of some of the distractions to educating families in the home setting:

"When you go to do the visit in the home although those people might need the information…they'll have the TV on, the child's there watching, sometimes the whole family and the dogs and cats and frogs…(laughing) whatever. And you don't actually get their attention".

[Maria, scheme co-ordinator, Site D]

Comments from professionals revealed the considerable effort that they had invested to make schemes available and accessible to those who were eligible. In Site B, however, a different perspective emerged with one interviewee suggesting that the onus on safety education should lie with the parent rather than the provider. To encourage scheme uptake among families more resistant to professional intervention, he suggested that receipt of government financial support for parents should be conditional on them receiving safety education:

"They want their money don't they? They don't go to the Children's Centre but they go to get their Child Benefit paid". [Stuart, representative of partner agency, Site B]

7.2.3.4 Signposting to other services

Professionals talked of the opportunity to signpost families to other service providers once initial contact had been established through the safety scheme. This enabled specialist services such as health visiting, environmental health and housing to address specific concerns and could enhance family interaction with the wider community. Examples of signposting included the scheme co-ordinator mediating on behalf of a tenant in Site B whose landlord was not fulfilling the required responsibilities:

"The landlord was playing up and she was really frightened…but in the end we got her rehoused and the landlord prosecuted. He wasn't very happy but it had a positive outcome". [Tom, scheme co-ordinator, Site B]

The home visit component was particularly valued in this respect, enabling observation of areas of the home that usually remained private. The identification of child safeguarding issues by those involved in the home visits was a topic that recurred during the professional interviews in several sites:

"If there are any safeguarding concerns he (scheme co-ordinator) will pick that up because he sees the whole home whereas the family support worker inevitably only sees the lounge which will be spruced up in time for the visit".

[Dorothy, Children's Centre manager, Site B]

Whilst this was not the original intention of the national 'Safe At Home' programme, it was evident that schemes were now perceived to fulfil this function and safeguarding actions were cited by several of the sites. The key contact in Site W provided an example, attributing the non-threatening nature of the equipment fitter as key to gaining an insight into family circumstances:

" …in fact we did have one family where the children were put into care as a result of our intervention… I think when you go in they're not quite on their guard 'cos they think oh, you're just a handyperson. But this particular person was drinking neat spirits in the morning, there was a child lying naked on a cot-bed and it was just, you know…I think if it (the

scheme) was with social services they would probably try and hide it. Not that we're going round looking for it but it's so much in your face you couldn't do nothing about it…"

[Jean, scheme co-ordinator, Site W]

The provision of social support attributed to the schemes by some parents (see Section 7.2.2.2) was substantiated during discussions with front-line professionals. In Site B, for example, the co-ordinator spoke of a home visit made to one family who had previously resisted service engagement. During the safety assessment his observations had given him cause for concern as to the wellbeing of family members. Gentle encouragement had enabled the parents to take him into their confidence and provided an opportunity for him to link them with wider social support. He described his experience after having viewed the upstairs of the property accompanied by the mother:

"And then we came downstairs and she opened up and she'd, er, she'd lost a set of twins and she'd had a still-born and she'd had depression and stuff … and she put her arms round me and she was crying. I said 'It's ok'. You know the house was an absolute tip, it was in an absolute state. I said 'Ok, let me go back and I'll see what I can do for you.'"

[Tom, scheme co-ordinator, Site B]

7.2.3.5 Role in monitoring and inspection

In two of the sites, (A and D), the co-ordinators talked of how the safety schemes could be used by the host agency as a means of monitoring organisational performance. Along with the co-ordinator in Site B, both participants spoke of the scheme being show-cased during Children's Centre

inspections, in the process *"ticking a box"* against the performance objectives for the host agency.

"…I think the organisation realises and they fall back on it a lot when they write reports and things, you know like OFSTED and SEF (Self Evaluation Form)"

[Margaret, scheme co-ordinator, Site A]

Comments within the OFSTED reports for several of the sites appeared to support this, including comments such as:

"(scheme is an) invaluable asset to enabling staff to reach families that otherwise may not have engaged with the service".

[Ofsted Report, Site B, 2011]

7.3 CHAPTER SUMMARY

This chapter explored programme fidelity (the extent to which a programme remained faithful to or had adapted its original mandate) and ongoing benefits (the extent to which the programme continued to be valued by local families and programme staff) as two of the ways in which sustainability is manifested.

Variation in programme fidelity was apparent between settings and over time. Professionals acknowledged the relationship between programme fidelity and effectiveness, however attempts to maintain fidelity were mediated by contextual influences. Parental education was the programme component most likely to be sustained.

Continued benefits associated with scheme operation were identified in all study sites, suggesting that these may be a pre-requisite for sustainability, although insufficient to support it alone. For the agencies involved, schemes helped to achieve organisational objectives and improved access to hard-to-engage families within the target community. Families reported positive experiences of the safety schemes. Improvement in safety practices within the target group was reported by both parents and professionals. The role of the scheme in providing wider social support was also identified by both participant groups.

CHAPTER EIGHT

FINDINGS: FACTORS THAT INFLUENCE SCHEME SUSTAINABILITY

8.0 INTRODUCTION

Following on from the manifestations of sustainability presented in Chapter Seven, this chapter presents the multiple and inter-related factors that were seen to influence scheme sustainability within the case study sites. It is informed by the following data sources:

- Interviews with national Safe At Home stakeholders
- Interviews with local scheme professionals from the case study and corroborating sites
- Interviews with family representatives from the case study sites.
- Review of local policy documentation within the case study sites

The chapter is structured around the four categories identified from analysis of the data. These begin with programme funding, universally identified as a critical factor for sustainability. Within this the sources and nature of funding, the efficient use of resources and changes in resource status over time are considered. The second category considers influencing factors that exert their effect on the local setting. These are identified as: the influence of historical activity; organisational support and support from the target community. The third category focuses on influences that operate within the national environment and includes the role of national policy and the national context for service delivery. The fourth category relates to factors specific to the

intervention, and in particular identifies the lack of evidence for effectiveness as a potential barrier to the sustainability of home safety schemes.

The categories and sub-categories associated with the main theme of this chapter are presented below in Table 8.1.

Table 8.1 Categories and sub-categories associated with 'Factors that influence sustainability'

MAIN THEME	Categories	Sub-categories	Section
FACTORS THAT INFLUENCE SUSTAINABILITY	**Funding**	Relevance for sustainability	**8.1.1**
		Sources of funding	**8.1.2**
		Nature of funding	**8.1.3**
		Efficient use of resources	**8.1.4**
		Status over time	**8.1.5**
	Support within the local setting	Influence of historical activity	**8.2.1**
		Support from organisations - at the operational level - at the strategic level - organisational culture	**8.2.2** 8.2.2.1 8.2.2.2 8.2.2.3
		The target community	**8.2.3**
	The influence of the national environment	Role of national policy	**8.3.1**
		National context for service delivery	**8.3.2**
	Factors specific to the intervention: evaluation and effectiveness		**8.4**

8.1 FUNDING

8.1.1 Relevance for sustainability

There was universal agreement among participants across all sites that funding was a critical influence on sustainability. The absence of adequate funding was often cited as the main barrier to ongoing scheme provision:

"It's the funding that's the problem. I think the need's there… it's all about keeping children safe..."

[Pamela, representative of partner agency, Site Z]

A range of strategies had been developed by local schemes in response to the funding challenge. These form the basis of Chapter Nine.

Funding availability was itself subject to the influence of other factors operating at local or national level. Respondents reported that a lack of funding compromised intervention fidelity and was the main factor associated with loss of scheme components.

Following withdrawal of support for the national programme, the initial transitory phase was identified as a particularly vulnerable point in the sustainability process. This necessitated transfer of responsibility, and in particular funding for scheme operation, from a national to a local level and placed specific demands on the agencies involved:

"We knew that it (sustainability) was going to be a very difficult thing to achieve in that once the requirement to fund the continuation of the scheme transferred to local authorities,

or whoever the local partners were, that would be very challenging to them".

[Jamie, national stakeholder: host agency]

Some sites had operated their own safety schemes for several years prior to registering with the national programme. In one of these, Site Z, professionals expressed concern that accepting national support would result in a diversion of local resources away from their safety scheme, with little chance of reinstatement when the national programme ended:

"One of the things that was raised at that initial meeting when RoSPA were persuading [Site Z] to come on board was the problem of if you get a new source of funding and you change over from your current source…then when the new source of funding stops you may not be able to pick up the old source again".

[Richard, Children's Centre manager, Site Z]

This had proved prophetic in Richard's area where the level of scheme provision was lower at the time of his interview than it had been prior to participation in the national programme.

By contrast, in Site D, the local authority had maintained funding to its pre-existing scheme throughout the duration of the national programme, with the two schemes operating in parallel. Following the withdrawal of national support, the local funding continued to sustain scheme operation, albeit without the equipment installation component that had formed part of the national programme.

8.1.2 The sources of funding

Financial support for local schemes at the time of data collection came primarily from public health, local authority or individual Children's Centre budgets. The substantial budget reductions within the public sector, invoked by the economic recession, were of concern to those involved in scheme delivery:

"Nationally we're going through service reviews, service changes and reductions in staff and that does put a pressure on what we can provide with the funding that we have. I think there'll probably be more pressures on that going into 2014, because as the local authority we're still going under our reviews and having staff changes".

[Ellen, public health officer, Site D]

Within Site B, the health benefits of scheme operation appeared to have been insufficient to secure financial commitment from the health sector, despite them being viewed as a key partner by one respondent:

"I would like to see health actually support some of the provision and safety equipment because it would save (reduce) the Accident and Emergency admissions. There's always been talk around health making contributions but I don't think it's actually happened yet".

[Susan, Family Support Worker, Site B]

Only one of the schemes relied solely on external funding sources, the origin of which had varied over time (Site Z, Scheme 1). This scheme operated as a charity, and was the only one of the three registered with the national programme

in Site Z that had continued to provide equipment and installation. Securing external funds to maintain scheme operation comprised a substantial part of the local co-ordinator's role:

"I am fundraising all the time, I've applied for quite a lot of funding, so I would like to keep it going, but it has always been uncertain even when I first started in 2001. I was initially only employed on a year's contract from the Lottery so it has always been down to me to keep fundraising".

[Adele, scheme co-ordinator, Site Z]

8.1.3 The nature of funding

The unpredictability of funding sources comprised a common theme across all of the sites. This led to difficulty in planning for future scheme delivery. Margaret, the scheme co-ordinator in Site A, who referred to her own funding as *"ad hoc"* explained the situation as follows:

"I don't actually know what the budget is for the year, I don't think there is a budget actually. I think they just get money from other things and give me it".

[Margaret, scheme co-ordinator, Site A]

The lack of a designated budget for scheme operation was a familiar story across the case study sites with a strategy emerging of funding being diverted from other areas in order to support scheme provision. The budget-holder in Site C alluded to this when discussing plans for the future of the scheme in his area:

"I can't give a guarantee that this will be here in the future but we're obviously continuing to operate it by robbing Peter to pay Paul here and there".

[Robert, commissioning manager, Site C]

Irrespective of its source, funding was universally temporary in nature and often provided for a fixed period of only one or two years, thereby necessitating constant effort in order to identify the next funding stream. The challenges associated with short-term financing were familiar to those professionals who had been involved in a local safety scheme prior to registration with the national programme. One of the participants in Site Z had been involved for some time with the multi-agency injury prevention group that pre-dated the national programme. He relayed his experiences relating to the development of the original safety scheme in the area:

"It seems to be that they were always looking for money and it had to be agreed each year. So that saps people of energy if they're looking for money all the time just to keep it going". [Bruce, strategic partner, Site Z]

8.1.4 Efficient use of resources

Chapter Seven identified that budgetary constraints could lead to sites having to choose between component fidelity and scheme coverage. In reality this may result in rationing of scheme eligibility among the local community. This compromised the desire for universal inclusivity expressed by some professionals:

"I've had one particular family who 'phoned up. I've been told you can't advertise this, it's not for everybody…and

then you're having to refuse and I don't like that".

[Charlotte, family support worker, Site C]

Making the most of scarce resources was of paramount importance to those involved in scheme delivery. One Children's Centre Manager in Site A commented that *"We're very, very good at how we use our money".* Common cost-cutting measures included minimising travel expenses and journey times by grouping together home visits in nearby locations. More innovative ways to reduce costs were also identified, for example in Site C where families took responsibility for disposing of the equipment packaging following delivery and installation of their safety items. Only one of the schemes, (Site D), routinely asked parents to contribute to the cost of equipment, however the revenue raised was insufficient to support scheme operation and local resource input remained essential to sustainability.

8.1.5 The status of scheme funding over time

As part of the national evaluation of 'Safe At Home', a survey of local scheme leaders was conducted in October 2010, five months before the programme ended. At that time two of the case study sites, Sites A and B, reported that bids had been submitted to secure funding for ongoing scheme provision. Some twenty-two months later during data collection for this study it became apparent that neither of these bids had been successful and that scheme operation in both sites was being funded by alternative local sources. Over the course of the current study, changes in funding status were noted within several of the sites. At the time of writing, two sites were hoping to secure public health funds (one as an additional source, one as the main funding stream). Two other sites had

secured funding, one from the budget of the district Child Poverty Group and the other as part of a successful bid for an extensive external grant. Both of these offer the opportunity to extend scheme coverage and/or provision.

One of the national stakeholders in 'Safe At Home', who had retained an oversight of scheme provision following the end of the programme, spoke of the "stop-start" nature of scheme operation in some sites. He suggested that this might reflect the time needed for providers to argue their case for local funding:

"…it shows that probably the immediate reaction when Safe At Home funding came to an end was to say 'Well we can't afford to do it', so a lot of areas stopped. I think perhaps with the passing of time some of them have been able to make the case that it was a worthwhile service and it helped to reduce accidents in their area".

[Jamie, national stakeholder: host agency]

8.2 SUPPORT WITHIN THE LOCAL SETTING

8.2.1 Influence of historical activity

A close alignment between scheme benefits and health priorities for the local population appeared to positively influence the prospects of sustainability. Three of the case study sites (A, D and Z) had an established multi-agency injury prevention group prior to registration with 'Safe At Home'. In two of these, (A and D), the group remained active during and after the national programme, evidencing an ongoing locally-based drive to address injury prevention. In Site Z the injury prevention group had ceased to exist towards the end of the national programme following the loss of the

local co-ordinator. She herself acknowledged a shift in priorities that had reduced the focus on injury as a public health issue:

"Personally I think the drive isn't there, from anybody. What has happened within the local authorities and within the health service means that the priority isn't there anymore, there's very little recognition now and it will probably take another 10 years of children's deaths and emergency admissions before it'll be seen as important again".

[Kathy, district co-ordinator, Site Z]

In all three of the sites where injury prevention groups existed (A, D and Z), and in Site B, local safety schemes had operated prior to registration with the national programme. Following the withdrawal of national support, scheme provision in all of these sites was sustained at the pre-existing level of intensity (that is the level that existed prior to site involvement in the national programme). As example, the sustained scheme in Site D no longer provided an installation service and equipment items that were available free under the national programme were once again offered to parents for a small charge. Similarly in Site Z, only Scheme 1 continued to provide and fit equipment, as it had done prior to the national programme, whilst in Scheme 3, an area where there had been no previous equipment provision, this component subsequently ceased.

The experience within these sites suggests that prior scheme history may influence choices with respect to sustaining intervention fidelity. This proposition was corroborated by interviews with key contacts in Sites Y and T where the

equipment fitting component of the scheme had also reverted back to its pre-'Safe At Home' level. The mechanism for this may be a "revert to type" which in promoting familiar, and therefore more readily accepted ways of working, proves resistant to change. In the current economic climate where funding is limited, several providers appear to have opted for partial scheme sustainability despite their expressed understanding that maximum effectiveness depended on fidelity to all of the core intervention components.

Site C proved an interesting exception in this regard. Prior to registration with the national programme, injury prevention had not been considered a particular priority in the district, rather as *"something that's raised its head occasionally"*. The history of scheme provision across the borough was described as patchy:

"There were a few bits is how I would describe it… it wasn't connected…so our goal was to create something which was across the borough and was consistent".

[Robert, commissioning manager, Site C]

Twenty-seven months after support for the national programme ended, the scheme in Site C was continuing to operate at a high level of fidelity. The site contact attributed this to the demand generated by operational staff following a very positive experience as part of the national programme. Together with his comment above, this suggests that rather than being influenced by scheme history, participation in the national programme had changed local perceptions and increased capacity for injury prevention in Site C, creating a supportive context for sustainability.

The relevance of "fit" between scheme operation and local priorities is given further credence by the experience reported in Site T. Although the safety scheme for young families had continued to operate here, beyond the period of national support, the co-ordinator reported few referrals and voiced dissatisfaction with its delivery. In general discussion she identified the welfare of older people as a local priority for the lead agency, suggesting that they may therefore lack full commitment to scheme sustainability.

Children's Centres took the lead in scheme delivery across all sites and their changing role challenged sustainability efforts. Increasing diversity in service provision led to Centres becoming *"all things to all people"*. As a consequence of this, even for those staff working in sites where injury prevention was a recognised priority, there remained considerable competition for limited resources:

"I feel it's just in the melting pot with everything else but I still feel I have to fight for a lot of it".

[Margaret, scheme co-ordinator, Site A]

Changes in outcome targets were regarded as a key influence in shaping the services provided by Children's Centres:

"Instead of child welfare they're all around educational push and achievements it seems".

[Kathy, district co-ordinator, Site Z]

This move away from health-based targets presented a potential barrier to the promotion and sustainability of safety-based initiatives. However, an appreciation of the broader

contribution that a safety scheme could make, beyond health improvement outcomes, was evident in some sites. For example, the public health representative in Site D explained why her department had elected to support the safety scheme:

"It meets our wider themes…giving every child the best start in life…making sure they can access early education because they're not missing it because of an injury, there's nothing stopping them accessing those other services which will support their wider development".

[Ellen, public health officer, Site D]

8.2.2 Support from organisations

8.2.2.1 Support at the operational level

Across all of the case study sites, there was strong support for the schemes among staff working at an operational level. This was mitigated however by the organisational capacity within each area. Limitations on staff capacity imposed a range of restrictions on scheme delivery. These were variously observed as reduced eligibility for home visits (Site D), an inability to monitor correct installation of equipment items by families (Site A) and a waiting time of up to four weeks for equipment fitting (Site C). One front-line worker commented in respect of the latter:

"God forbid anything happened to those children in the meantime". [Charlotte, family support worker, Site C]

Ongoing organisational change and service review were common experiences reported by the professionals involved in

scheme delivery. The impact of these could have a substantial effect on operational capacity for scheme provision:

"In terms of this particular authority the whole health team was deleted". [Kathy, district co-ordinator, Site Z]

The effect of budget cuts within both lead and partner agencies limited the personnel and resources available to the scheme. One professional spoke of how the need to focus on core business within his own organisation had reduced the capacity for prevention activities:

"If you look at what we did five years ago …and what I perceive will happen in the next eighteen months, people will think we've just vanished".

[Stuart, representative of partner agency, Site B]

In some sites, changes in working practice had an adverse effect on elements of the scheme that relied on inter-agency collaboration. For example, in Site D the co-ordinator explained that the requirements of new funders now necessitated a more formal tendering process. Her concern was that this may jeopardise the existing satisfactory relationship she had with the current equipment supplier. Changes to contractual arrangements with another partner in the area had interrupted the provision of local injury outcome data, resulting in a potential charge being introduced for a service that was previously cost-free, as Maria explained:

"Contracts have changed and suddenly things that we could easily get for our JSNAs, we have to make sure that we can access without a significant cost".

[Maria, scheme co-ordinator, Site D]

Change within agencies that affected the role and responsibilities of individuals could also alter the nature of established partnerships. Giving as example the changes within Children's Centres, one equipment installer appeared to regret the loss of personal contact that had resulted:

"We used to deal with Surestart Centres on a regular basis and they used to have their own budget. But when they closed and the PCT took it over as more centralised funding, the individual centres…for us it's like they lost their voice. We weren't speaking to individual centres, we were just dealing with one person within the PCT who covered several children's areas". [Pamela, representative of partner agency, Site Z]

In some areas, the management of Children's Services was contracted out by the local authority to third sector agencies. The processes associated with this could be protracted and had proved unsettling for staff in Site C who were attempting to maintain scheme provision in the interim:

"We hadn't got [colleague] around to co-ordinate it, we hadn't got the people power to do it and we didn't know what we were going to have. Everything was all up in the air, I didn't know where I was going to be, our fitter was due to take a transfer…" [Robert, commissioning manager, Site C]

With a climate of change ongoing in Site C, it was seen as testimony to the level of demand for the scheme that operational staff willingly accepted additional responsibility for its co-ordination:

"It shows how much the Centres wanted it by the fact that they're actually prepared to do the administration of it. They've taken on the extra work…so they're making sure the gates and equipment are delivered, they're making sure the appointments are made".

[Olivia, 'Safe At Home' co-ordinator, Site C]

Within the climate of organisational change experienced by all the sites, commitment to scheme delivery from the lead agency appeared to be a particularly important influence on sustainability. The challenge for local scheme staff was therefore how to encourage and sustain this, an issue that is addressed further in Chapter Nine. Management support for the scheme offered a means of protecting resource allocation in the face of competing demands:

"I think one of the main influences (on sustainability) is that the Children's Centre manager actually believes in the project and believes in the value of it. I think that's the biggest thing when they are assigning money and things like that". [Susan, family support worker, Site B]

This view was endorsed by the Centre manager herself. However her additional comments suggested that belief in the value of the scheme should be embedded at organisational level in order to safeguard against future changes in personnel that may compromise sustainability:

"…it's about the legacy as well because regardless of which people are in the driving seat and making the decisions, the impact should determine whether or not it continues. So if it's me managing the service or someone else it should speak for itself really". [Eileen, Children's Centre manager, Site B]

8.2.2.2 Support at the strategic level

Commitment to scheme operation from staff working at strategic level appeared to further strengthen the prospects of sustainability. Leaders, referred to in Site B as *"higher ups"*, had the potential to act as gatekeepers by facilitating or denying access to funding sources. As the scheme co-ordinator succinctly put it:

"..they're in charge of the purse".

[Tom, scheme co-ordinator, Site B]

Interviews with professionals in two of the sites, (A and D), revealed a commitment at strategic level to the continuity of scheme delivery. In both sites child injury prevention had historically been a local priority, evidenced by sustained local policy commitment and implemented through local action plans that included indicators relating to safety scheme provision. As example, in Site D two of the scheme's key components were identified as priorities within the Joint Strategic Needs Assessment (JSNA):

"home safety assessments and education aimed at vulnerable families with a child under five years"

[JSNA (2010), Site D]

In Site A, interviews with professionals from several agencies revealed a universal understanding regarding the aims of the local injury prevention strategy and the resulting expectations on individuals. One participant highlighted the relevance of securing commitment at both strategic and operational level:

"You've got to have a commitment to do it, you've ideally got to have some kind of target that someone's paying attention to that drives it all…And you've got have both strategic leadership and some kind of delivery mechanism…it doesn't have to be huge so long as you've got the commitment of all your partners".

[Angela, consultant in public health, Site A]

Angela went on to indicate that obtaining high level support from local government and policy makers had acted as a lever for releasing funds to address injury:

"When it comes to a leading member of the cabinet scrutinising it, they're not going to go 'oh, hang on a minute, what are we spending this money for?' They'd go 'Good! It's a priority for us, good'".

[Angela, consultant in public health, Site A]

Top level commitment for injury prevention was less consistent over time in Site Z. An initial multi-agency accident prevention strategy, developed in 2007, had supported local activities during the time that a co-ordinator was in post. However, when this post lapsed towards the end of the national programme, there was a marked reduction in the level of scheme activity and injury became less of a strategic

priority. Following the appointment of a new accident prevention lead and with external support provided by RoSPA as part of The Safer Home Programme[3], interest in accident prevention was re-invigorated and a new strategy was launched early in 2014. As in sites A and D, this provided a supportive local policy context for safety schemes, specifying in the action plan for young children the establishment of:

"consistent, equitable and sustainable home safety education and equipment schemes beginning in the areas of greatest need". [Site Z, Injury Prevention Strategy, 2014]

At the time of writing, all three of the sites with current accident prevention strategies (Sites A, D and Z) had received recent funding to support the continued operation of their safety schemes.

In marked contrast, the lack of commitment from senior staff and policy makers was perceived as a barrier to sustainability in Site B, despite the co-ordinator there reporting intense efforts to raise the profile of the existing scheme:

"I shout it from the rooftops, I tell everybody but nobody seems to listen. It's like banging your head against a brick wall". [Tom, scheme co-ordinator, Site B]

Communication problems between operational and strategic staff were independently identified by two Site B participants and may have contributed to this situation. Each participant

[3] In 2012 RoSPA received funding from the Department of Health to develop innovative approaches to health and wellbeing. The Safer Homes Programme works with local authorities to raise the standard of accident prevention.

spoke of the difficulty in conveying the complex needs within some local families to decision-makers who operated at a more remote level from the community:

"When you see some of the things we see, you think it doesn't happen but it does. Only yesterday I went out and…on the top of the gas fire there's a syringe, there's medicines, there's baby's drinking cups, the fire's on…so what's going to happen? How do you get injury prevention over then to somebody at the council? This is what's happening…'No it doesn't'". [Tom, scheme co-ordinator, Site B]

This lack of top-level "buy-in" was similarly identified as a barrier to sustainability by the scheme co-ordinator in Site T, and had created problems for the implementation of the 'Safe At Home' programme since its inception:

"The main problem was that whereas other local authorities had bought into it, in this case it hadn't which meant there was a lot of work done to set-up points of contact in the various areas covered by the different CCs".

[Isobel, scheme co-ordinator, Site T]

Isobel went on to describe how, despite demand for the scheme from the target community and from operational staff, this had not been sustained at the desired level of intensity. This appears to suggest that the presence or absence of top-level commitment can influence scheme sustainability from the earliest stages of intervention planning.

8.2.2.3 The role of organisational culture

Two factors associated with organisational culture: innovation and autonomy, appeared to exert an influence on scheme sustainability in several of the sites and may be of greater importance than the actual nature of the lead agency.

As one of the earliest sites to adopt a co-ordinated strategic approach to injury prevention, Site A provided an ideal example of an innovative culture that appeared to permeate through all levels and across all agencies involved in scheme delivery. Coupled with a pragmatic stance to dealing with set-backs, this resulted in a proactive approach in the face of contextual challenges that may otherwise have impeded progress. The point is illustrated in the following comment regarding the production of the original injury prevention strategy in 2008:

"…we took the decision we could spend another 5 years trying to be 100% confident about our data and still probably not being, so we launched our strategy based on our best available information…We just felt we had to be pragmatic about this, we could spend forever trying to achieve perfection and not moving off square one".

[Bryan, strategic manager, Site A]

Contributions from a second strategic representative in Site A provided further evidence of a positive, solution-oriented approach:

"…the times are austere and there's cuts everywhere but sometimes there are ways we can work differently that don't

cost money, they're just a different way of working".

[Angela, consultant in public health, Site A]

Innovative practice was also in evidence at operational level within the Children's Centre involved in scheme delivery. As example, the Centre had been the first in the area to refer families on to the Fire and Rescue Service for assessment as part of the safety scheme. It was also the only Centre to have a staff representative on the district child accident prevention group.

Since a culture of innovation appeared to be a positive influence on sustainability in some of the sites, the potential that this may have manifested in these sites being "early adopters" to the national programme was considered. Information provided by the host agency revealed that fifty schemes in total had registered within the first six months of 'Safe At Home' (by September 2009). The case study sites comprised five of these (A, C, D, Z: Scheme 1 and Z: Scheme 3). Comparison of these five "early adopters" with the two schemes that had registered later (B and Z: Scheme 2) suggested no obvious association with the overall level of programme fidelity, identified as a potential manifestation of sustainability (see Table 7.2, Chapter Seven).

A degree of autonomy in the day-to-day operation of several schemes was detected. In some cases this arose from the management arrangements within the lead agency, for example in Sites A and B where the Children's Centres were operated by a registered charity and a housing provider respectively, affording a more arms-length relationship with the local authority. In Site C, where the local authority acted

directly as host agency, continued funding for the scheme was attributed largely to support from one individual who appeared to be invested with a high level of financial autonomy:

"We had some financial management support but really we were very much left to it".

[Robert, commissioning manager, Site C]

Robert's strong personality and his mild disregard for protocol became apparent in the early stages of his recruitment for the present study. Both of these initial impressions were further substantiated during the face-to-face interview, where he appeared to relish taking on the role of a maverick. Robert's position had enabled him to access central funding to support ongoing scheme delivery in response to operational demand, however in the light of organisational change and new management arrangements for the Children's Centres, the continued viability of this strategy was uncertain.

8.2.3 Support from the target community

Whilst parental comments indicated that they welcomed the scheme, their role in its development and delivery remained largely passive. Some parents had provided feedback on their experience of the scheme, although a lack of time was identified as a barrier in Sites A and B, both to this and to further engagement in scheme provision. Site B had included parent representatives on a steering group that existed prior to registration with 'Safe At Home', but once the national programme was adopted this ceased to meet. The co-ordinator wondered whether the advent of the national programme had inadvertently made the role of this group redundant:

"We did have a steering group before the Safe At Home scheme and one or two of the mums came on board. When we were going to get television brackets, we asked them to design them because there weren't any on the market at the time…and then Safe At Home came on board and they lost interest". [Tom, scheme co-ordinator, Scheme B]

In Sites A and Z it was hoped to stimulate increased participation and greater scheme ownership by providing feedback on injury outcomes to local community groups. Amanda, the district accident prevention co-ordinator in Site A outlined the intended process:

"…looking at the statistics and breaking them down and taking them to meetings where parents and carers would be involved and getting feedback as to what are their priorities. What do they want to see happening? How can they get involved in taking more community ownership of the issue?"
[Amanda, accident prevention co-ordinator, Site A]

In Site D, Maria, the scheme co-ordinator, reported that she was engaged in training volunteers from third sector agencies to conduct home safety assessments as a means of increasing capacity for scheme delivery. When asked about the possibility of using members of the target community in a similar role, Maria considered this unlikely owing to the bureaucracy associated with assuring security issues for home visits. She also voiced doubt that community volunteers acting in this capacity would be dependable given the time commitment involved.:

"I'm sure there are people who would like to be more involved…but we have family forums and it's quite hard to get people to attend once a month and I think if you were asking them to do something it would have to be quite a lot more than just an hour or two a month".

[Maria, scheme co-ordinator, Site D]

The suggestion of involving peer educators in scheme delivery was also put to parents at three of the four focus groups. Despite having been receptive to advice given by their peers within the discussion sessions, the response to the proposal was mixed. Suspicion about the motives for the home visit appeared likely to constitute a barrier to accessing some families:

"I wouldn't let them in my house…when people live in your area and they know where you live and things like that, they come into your house and they see what's around. I just think of theft actually…I'd still talk with them but I'd talk on my doorstep". [Louise, mum to 2 children, Site B]

8.3 THE INFLUENCE OF THE NATIONAL ENVIRONMENT

8.3.1 The role of national policy

National leadership and policy direction were perceived as drivers for identifying priorities within local health and wellbeing strategies. The potential impact of the new national public health policy framework remained unclear, with some indication that full implementation of this had yet to be achieved.

"The problem is it's not yet working at a local level. They know the need's there but there aren't yet the parameters in place or the finances to support it at a local level". [Pamela, representative of partner agency, Site Z]

Professionals involved in scheme delivery at both strategic and operational levels expressed disappointment at the low status of unintentional injury within the current national policy agenda.

"Injury prevention's way down the pecking order in terms of public health priorities".

[Bruce, strategic partner, Site Z]

A shift in the national policy focus for child health was identified, attributed to prioritisation of safeguarding and child protection requirements within local authorities. This was regarded as having simultaneously reduced opportunities to address unintentional injury. In addition a shift in the local discourse regarding the conceptualisation of child safety was noted:

"When there are conversations about the safety of children it is really the safeguarding of children …and home safety is playing second fiddle to something that has a far higher, bigger profile".

[Dorothy, Children's Centre manager, Site B]

The vicarious nature of political support for injury prevention was identified by national stakeholders who questioned whether the timeframes usually associated with policy implementation enabled this to be fully translated into local

action. Current policy was compared unfavourably with policy directives from previous governments, where for example a structure of public sector agreements had supported progress towards injury-related targets. The loss of emphasis on unintentional injury had resulted in a disparity of resource allocation between intentional and unintentional injury that was felt to undermine the scale of the problem:

"…in a rational world where we're looking at what kills or disables or causes our children to spend days in hospital, you wouldn't be spending all that money on deliberate harm. It's very important but you'd be spending a lot more on accident prevention". [Bryan, strategic manager, Site A]

Further discrepancy was noted between the statutory provision for road safety compared to safety in the home setting. The co-ordinator in Site A had been active in developing national guidelines on injury prevention and expressed her personal disappointment at the disparity:

"…home safety is not given the kind of status nationally as road safety is and we can see the difference that's made in terms of injury rates…we've got road safety teams but there's no focus on home safety teams…you're so undervalued really". [Amanda, accident prevention co-ordinator, Site A]

Professionals identified a need for ongoing national support for local scheme delivery, based on the value that they placed on the role of the host agency during 'Safe At Home'. It was suggested that this support could take the form of co-ordinating activities, evaluating local schemes, training staff and sharing information. The latter was of particular

importance to one national 'Safe At Home' stakeholder who expressed concern over persistent myths and misapprehensions associated with the risk and treatment of injuries to children:

"There's all this information going around the country which is phenomenal in terms of prevention, but there's nobody from health or anywhere that cares that it's up-to-date." [Ali, national stakeholder: equipment supplier]

8.3.2 A changing landscape for scheme delivery

Professionals made frequent reference to the *"cuts"* or *"changes"* within the context for scheme delivery, though whether these originated from national or local influences was rarely elaborated. The changing landscape for provision of public health services in England, together with a downturn in the national economy, had presented particular challenges to scheme continuity at the point of transition from national to local responsibility. These changes had impacted on the original expectations for sustainability held by the national stakeholders:

"Barriers have increased partly because of the economic climate at the moment and because without exception, pretty much all local authorities and health services have seen reduction in budgets over the last 2 years and so that makes it even more difficult for them to be able to make the case for funding to be able to sustain a home safety equipment scheme". [Jamie, national stakeholder: host agency]

"It's a different world we're in now…the whole world of local authorities has changed a lot and the fact that they need to be

much more focused on their statutory responsibilities…I think if we were trying to do this, you know start this again tomorrow, I think we'd really struggle".

[Laurie, national stakeholder: commissioning agency]

The wider influences of the economic recession and review of service provision affected all sites. For some this had resulted in a reduced contribution to the scheme from partner agencies. The Site D co-ordinator spoke of changes within the Fire and Rescue Service that had impacted on scheme intensity in the area:

*"At one time the fire brigade had what was called an advocate and they specifically had young people and families…(**Interviewer:** "As a responsibility?) Yeah. So I worked really closely and we went on a lot of joint visits but that's changed and now they don't have that. We still have the facility to ring up and say this house needs smoke alarms or they'd like a visit and they'll pop along but…Some of the sessions I'd get the advocate to come in, now the advocate's gone. It's a shame because the level of understanding's gone"*. [Maria, scheme co-ordinator, Site D]

Changes in national policy direction and service provision were reflected by changes in the remit and responsibilities of local organisations. These local changes often challenged the establishment of new working relationships in support of scheme delivery. The ongoing climate of change necessitated considerable investment of time and resources on the part of local stakeholders, particularly where changes in personnel led to the re-negotiation of working arrangements. This was

demonstrated in Site C when the management of Children's Centres was contracted out by the local authority:

"When the whole process changed and we had new agencies in, other people were involved in setting this up who perhaps didn't fully understand the work that they were trying to commission at that stage".

[Robert, commissioning manager, Site C]

8.4 FACTORS SPECIFIC TO THE INTERVENTION

Local scheme evaluations had been conducted in most sites, with a primary focus on process and impact measures. The examples observed suggested that the collated information could be of value to scheme development, however, there was little evidence to indicate that this was routinely undertaken in a structured way. One national stakeholder identified a need for training and support on evaluation skills within the workforce:

"I just don't think they know how to do it…if there was a very simplistic model for evaluating …it would help provide evidence on an ongoing basis, these schemes would do it. But I think there's very little evaluation, true evaluation that goes on". [Ali, national stakeholder: equipment supplier]

Although a national evaluation of the 'Safe At Home' programme had taken place, the original scope of this had been reduced so that the eventual remit did not include injury outcomes. This was regarded as a shortcoming by both local and national professionals. Inadequate evidence of scheme effectiveness was commonly identified by professionals as a

barrier to sustainability. There was a perception among professionals that stronger evidence of effectiveness may act as a positive influence on stakeholders and policy makers, thereby increasing the chances of obtaining funding. The problems inherent in collating local injury outcome data were, however, widely acknowledged, the situation being referred to as:

> *"two steps forward, one step back"*
>
> [Bryan, strategic manager, Site A].

In Site C, the commissioning manager for the Children's Centres *"knew that it was going to be an impossible task"* and had therefore opted not to collect local outcome data. This had not affected the decision to fund the scheme from the central budget, a fact that was attributed to an appreciation of its wider contribution to the Ofsted monitoring process. Nevertheless, the inability to evidence scheme effectiveness remained a frustration for operational staff in several sites. The co-ordinator in Site D summed up her experience thus:

> *"I'll be called into inspections for all the Children's Centres…one of the inspectors asked me how I could evaluate the service. How can I prove that it's effective? I said I can't. I can prove that the parents have learned something from some of the comments, we've got the equipment out there and we've got the information and they've (the target group) got ideas of how to prevent accidents happening. But I can't prove it…"* [Maria, scheme co-ordinator Site D]

Several sites reported ongoing efforts to improve the quality of outcome data. The potential for alternative indicators of

scheme performance was also raised. The co-ordinator in Site B indicated that a move away from injury outcomes would be welcomed. In Site D, this had in part been achieved with performance indicators included in the childhood injury action plan that focused on intermediate measures associated with the scheme, such as the delivery of safety information and home safety assessments.

In addition to the inadequacies associated with outcome data, one participant had encountered problems arising from the ineffectual use of information technology and communication systems within Children's Centres. Since her involvement had been as a partner agency within several schemes it is difficult to know whether her comments applied specifically to any of the case study sites. This may however suggest a further training need among staff associated with scheme delivery.

8.5 CHAPTER SUMMARY

This chapter has identified multiple factors capable of influencing sustainability. Many of these were able to operate as either barriers or facilitators depending upon their presence or absence.

The availability of adequate funding was critical for sustainability. In its absence fidelity to the core components of the intervention was compromised. Funding for scheme provision was universally short-term in nature and future funding sources were often uncertain. Addressing these barriers to sustainability presented a significant challenge to those involved in local scheme delivery.

Within the local setting a range of contextual factors were identified that influenced funding availability. Among these, support within the organisational context played a significant role. The role of the target community in influencing scheme sustainability appeared to be mainly passive.

Local factors were subject to the influence of wider changes currently taking effect within the national environment for public health in England. These included a perceived loss of focus for injury prevention within national policy.

Inadequate evaluation was identified as an intervention-specific barrier to sustainability. This in turn constrained the ability to advocate for additional funding.

CHAPTER NINE

FINDINGS: STRATEGIES FOR SUSTAINABILITY

9.0 INTRODUCTION

Chapter Eight identified a range of factors capable of influencing scheme sustainability. Whilst some of these were observed to operate within the local setting, others exerted a wider influence at national level. All of the case study sites employed active strategies in an attempt to modify these influences, thereby enhancing the prospects of local scheme sustainability.

This chapter is structured around the three main strategies that were identified: programme adaptations; presence of a local co-ordinator or champion and extending collaborative links. These categories and their associated sub-categories are presented in Table 9.1 below.

The findings within this chapter were based on the following data sources:

- Interviews with national Safe At Home stakeholders
- Interviews with local scheme professionals from the case study and corroborating sites
- Focus groups with family representatives from the case study stites
- Review of local policy documentation within the case study sites

Table 9.1 Categories and sub-categories associated with 'Strategies for sustainability'

MAIN THEME	Categories	Sub-categories	Section
STRATEGIES FOR SUSTAINABILITY	**Programme adaptations**	Reasons for adaptations	**9.2.1**
		Adaptations to parental education	**9.2.2**
		Adaptations to home assessment	**9.2.3**
		Adaptations to equipment provision	**9.2.4**
		Adaptations to eligibility criteria	**9.2.5**
	Local scheme co-ordinators and champions	Establishing and distinguishing the roles	**9.3.1**
		Contribution to scheme sustainability - establishing and maintaining a local scheme profile - facilitating relationships - enhancing access to funding opportunities	**9.3.2** 9.3.2.1 9.3.2.2 9.3.2.3
		Continuity of personnel	**9.3.3**
	Extending collaborative links	Involving volunteers in scheme delivery	**9.4.1**
		Broadening inter-agency partnerships	**9.4.2**

9.1 OVERVIEW

Table 9.2 summarises the sustainability strategies adopted by each of the case study sites. These are then discussed in the sections below, beginning with programme adaptations. This explores the various modifications made to the content of the original intervention and considers how these might improve "fit" within each local setting. The roles of local scheme co-ordinators and champions are then discussed, along with the ways in which individuals can make a critical contribution to sustainability. The final section looks at how extending collaborative networks can facilitate scheme sustainability.

Table 9.2 Strategies for sustainability adopted by the case study sites

Site	Sustainability strategy		
	Programme adaptations	**Local co-ordinator/ champion**	**Extending collaborative networks**
A	√	Co-ordinator + champions	√
B	√	Co-ordinator	√
C	None identified	Champion	Not apparent
D	√	Co-ordinator	√
Z(1)	None identified	Co-ordinator	Not apparent
Z(2) **Z(3)**	None identified	Intention to adopt this strategy*	Intention to adopt this strategy*

* Changes in Site Z towards the end of the data collection period indicated intent to adopt these strategies in the near future.

9.2 PROGRAMME ADAPTATIONS

9.2.1 Reasons for programme adaptation

In this chapter programme adaptation refers to an intentional change made to the intervention content in order to improve the degree of "fit" within the local setting. This is regarded as distinct from those modifications to the core components described in Chapters Seven and Eight that arose from limited

resource availability. As a strategy for sustainability, programme adaptation offers a means of keeping pace with contextual change that may occur over time, for example in behavioural practices within the target group.

Although the original 'Safe At Home' programme comprised a standardised intervention that was developed by the organisers, the means of delivery was determined at local level. During data collection for this study it became apparent that the original programme content had been intentionally modified in several of the case study sites, manifesting in a range of changes that are illustrated in sections 9.2.2 – 9.2.5 below.

In the majority of cases these adaptations were designed to respond to the needs of the target population, although this appeared to be primarily informed from a professional perspective. Professionals involved in scheme delivery identified several factors associated with elevated risk of injury within their target communities. These included over-crowding, social or cultural isolation and poorly maintained properties. For example, in Site B, property maintenance gave particular cause for concern, especially within the private rental sector. Tom, the co-ordinator explained how an appreciation of the physical condition of local housing stock had shaped the direction of scheme development in his area:

"I realised from the beginning it was the houses that were the problem as much as the families. It's like putting a sticking plaster on it. You've got sockets and stuff hanging off the wall; you've got electrics, bare wires, boilers hanging off the wall. It's no good putting a safety gate in when you've got

that kind of thing, you've got to tackle some of the bigger issues". [Tom, scheme co-ordinator, Site B]

The needs of local service providers appeared to have exerted less of an influence in driving scheme adaptations across the case study sites. In one of the examples identified, a standardised home safety assessment checklist had been developed in Site A to encourage a consistent approach by professionals to safety education across the district. This had proved a useful tool for front-line staff, helping them to introduce the topic of safety to families in a sensitive and non-judgmental way:

"A lot of it does break down the barriers because then actually you can say, 'Right I've got to ask you these questions' and you'll go through (it). And it's about being relaxed as well with the parent and saying 'You know I'd never have thought of this' and sometimes they appreciate that and they'll be like 'Yeah, well, I never thought about that either'.

[Jackie, family support worker, Site A]

The checklist had integrated readily with the existing child health programme, becoming an accepted part of standard practice for professionals involved in home visits.

9.2.2 Adaptations made to parental education

All of the case study sites had continued to provide safety education and advice for parents with the means of delivery adapted to suit the target group. A common experience reported during 'Safe At Home' had been that the group safety sessions were *"not for everyone"*, in response to which several sites now offered tailored one-to-one advice in the home

setting. Updated educational resources were used to reflect current injury trends, with sites including additional material to stimulate parental engagement in the process. As an example, the co-ordinator in Site D explained how she had developed the content of her group sessions to include topical injury cases reported in the media. She also used visual images of injured children designed to stimulate discussion. In Site B, the educational content had been modified to include local issues depicted in photographs taken by the co-ordinator of real-life situations from homes in the area. He explained how these introduced the topic of safety to parents in a more objective and less threatening way. In representing home settings that parents could relate to, the photographs helped to break down any initial mistrust and encouraged a more natural, shared dialogue between the family and the co-ordinator:

"'You look at the photo, you tell me what's wrong with it'. Then they start to read into it, they'll look through it and they'll see the glass cabinets – 'You shouldn't have that there' and they'll see stuff on top of the gas fire 'You don't put things on top of the fire'. I say 'But it's happening. This is what I've seen in other people's houses'. Then they calm down and they can see where you're coming from and they open up. 'Well my so-and-so had a burn yesterday'".

[Tom, scheme co-ordinator, Site B]

9.2.3 Adaptations made to home assessment

The development of a standardised tool for home safety assessment in Site A was described previously in section 9.2.1. Modifications to the home assessment component were also apparent in other sites, most extensively in Site B. Here

staff talked about adopting a more comprehensive approach to the property survey:

"…looking at gas boilers, challenging private landlords to get things moving. That's been part of the service although it hasn't actually been the remit of the project, it's something that's grown as time goes on".

[Dorothy, Children's Centre manager, Site B]

The modifications in Site B had been driven primarily by Tom, the scheme co-ordinator, who had observed that maintenance issues contributed extensively to the risk of injury in many local properties. Prior training in the use of the Housing Health and Safety Rating System (HHSRS) enabled Tom to contribute specific skills in this respect. This risk-based evaluation tool was developed by the national government (Department for Communities and Local Government 2006). It aims to help local authorities to identify and protect against potential health and safety hazards that may arise from deficiencies in homes. The System was introduced under the Housing Act 2004 and applies to residential properties in England and Wales.

Following home assessment, issues of concern were taken up through contacts that Tom had established with the local housing provider and the Environmental Health Department. He indicated his willingness to act as advocate on behalf of private tenants where landlord action was required to improve safety. The extended assessment conducted in Site B also included safety in the immediate outdoor environment. The manager of one of the participating Children's Centres explained how this modification addressed safety issues

arising from recognised practices within families in the target community:

"I think for some parents (Safe At Home) was quite limiting …In the home it's a child's environment, there's only certain space that you're looking at and parents weren't able then to explore other issues. OK, they're safe in a controlled space, what about in the garden? On our estate particularly, a lot of the young children play out in the street late at night. You've got toddlers being cared for by teenagers…"

[Eileen, Children's Centre manager, Site B]

9.2.4 Adaptations made to equipment provision

The national evaluation of 'Safe At Home' identified a desire for increased flexibility in equipment choice to enable schemes to meet locally identified needs (Errington, Watson et al. 2011). This was echoed by professionals in the current study. One participant from an equipment installation agency commented in respect of the safety items provided that *"one size doesn't fit all"*. Whilst some of the sites offered additional smaller safety items, such as socket covers and bath-water thermometers, provision of these appeared driven primarily by a desire to offer alternatives in instances when funding for larger equipment items unavailable.

In other instances the selection and availability of equipment reflected an ongoing awareness of national or local trends, often attributed to the efforts of the scheme co-ordinator:

"[He] keeps his finger on the pulse in terms of what's happening around the country and what the potential issues are". [Dorothy, Children's Centre manager, Site B]

This was illustrated in Site B where both professionals and parents perceived the current popularity of large, flat-screen televisions to be a potential injury hazard to young children in the home. To address this locally identified need, the co-ordinator had recently introduced retaining straps, designed to secure television sets to the wall, into the range of equipment provided by the scheme. The same scheme had also accommodated specific requests for equipment arising from design features associated with less conventional property layouts. This had delighted one parent who had doubted whether her particular safety concerns could be addressed:

"I live in an apartment so I haven't got any stairs but my living room and kitchen is all on one (level). It's right through and it's quite wide. That's the only place where I'd actually like a stairgate, just going across from the kitchen to the living room. Because it's so wide he [scheme co-ordinator] wasn't sure, but he's found out and they'll do it which I'm really chuffed about". [Erin, mum to 1, Site B]

9.2.5 Adaptations to the eligibility criteria

Professionals in some of the case study sites were critical of the eligibility criteria for the national programme. These were considered too restrictive since they excluded, for example, families on low incomes but who did not qualify for government financial support. There was a widely held view that scheme eligibility should be discretionary, making better use of local professional knowledge of family needs. In some sites the eligibility criteria had been relaxed accordingly, although resource allocation remained a key influence on provision:

"I think what's good with our home safety scheme compared to the last one (the national scheme) is we're saying it doesn't matter what benefits you get or what your income is…I mean I know it's all down to funding and what can be provided, but in an ideal world every family should have the same access to all the equipment".

[Jackie, family support worker, Site A]

In Site D, following the end of the national programme, scheme coverage was initially restricted to families residing in priority areas of the borough, as assessed by level of material deprivation. However, in creating a 'post-code lottery' this excluded poorer families living within areas defined as more affluent. To address inequity in provision it was intended to use additional funding secured from the public health department to make the scheme available universally, irrespective of area of residence or income. Families would be asked for a nominal fee to contribute towards the cost of equipment provision.

9.2.6 Site C – an anomaly

Professionals in Site C reported making little change to the original components of the national programme as a result of which the level of fidelity was one of the highest of the five case study sites. This was attributed to a high level of local satisfaction experienced with the national programme:

"The nub of it was right and all we've done is try and keep to that as far as possible and just done a few changes to how the process works for us".

[Robert, commissioning manager, Site C]

The lack of adaptation in this site contrasted with the findings from elsewhere (A, B and D). This may suggest a less flexible approach among service providers in Site C, although other evidence appeared to dispute this. For example, following the loss of the central co-ordinating role established during the 'Safe At Home' programme, individual Children's Centres in Site C had taken on additional responsibility for administering the scheme themselves. This constituted a significant change and demonstrated willingness to adapt their established working practice in order to retain the benefits of the scheme. An alternative explanation for the lack of programme adaptation in Site C may lie in the comparative history of the case study sites. Site C was purposively selected for this study on the basis that it lacked a history of scheme provision prior to registration with the 'Safe At Home' programme. Furthermore, analysis of local policy documentation revealed injury prevention to have a low priority within the district. The inexperience of local providers in both these areas may have discouraged them from experimenting with the content of the national programme at this relatively early stage. In other sites, where independent safety schemes operated prior to the national programme, the intervention content had evolved continuously over time, supporting the conceptualisation of sustainability as a process rather than an end point.

9.3 LOCAL SCHEME CO-ORDINATORS AND CHAMPIONS

9.3.1 Establishing and distinguishing the roles

The role of a local scheme co-ordinator or champion was identified as a positive influence on sustainability across all of the case study sites. Common characteristics shared by both

co-ordinators and champions included determination, enthusiasm for the scheme, an ability to motivate others and to establish and nurture alliances. The way in which the roles originated did appear to differ however.

In four of the sites (A, B, D and Z), the appointment of a local co-ordinator with responsibility either for the safety scheme, or with a wider remit for injury prevention, had occurred prior to registration with the national programme. Appointing a co-ordinator necessitated senior level commitment as well as a dedicated funding source to support the post-holder. In Site A, where the Local Safeguarding Children Board took a lead on unintentional injury, the timing of the decision to appoint a co-ordinator was seen as important in the face of competing demands:

"We took the decision right at the start of the Board being established that we wanted to appoint a child accident prevention co-ordinator and I think that if that decision had been delayed by a year or two, the general busy-ness (sic) of the world of safeguarding would probably have meant that we'd have found other things to do with the money. But we took that decision, we made an appointment and that postholder is still with us".

[Bryan, strategic Manager, Site A]

As an alternative mechanism to creating a substantive post, it may be possible for other professionals to adopt the essential elements of the co-ordinator's role. This approach was apparent in Site Z, where following the loss of Kathy's post as county-wide injury prevention co-ordinator towards the end of the national programme, levels of activity had declined.

Amidst current attempts to re-invigorate injury prevention efforts it was seen as important to ensure that the responsibilities of a co-ordinator were adequately addressed:

"I think it all depends on who's tasked with it and how much of a priority they can make it in their role, because priorities change and if it's just a case of 'We'll do this until something else comes along' then it's not going to work. But if someone's got that as part of their role and says 'Yes I'm taking this forward', then I think it's got a chance".

[Richard, Children's Centre manager, Site Z]

In the absence of an identified co-ordinator in Site Z, efforts were being made to assign elements of this role to others, as the public health representative taking the strategic lead on injury prevention explained:

"Through our discussions with individual stakeholders there hasn't been one identifiable co-ordinator or champion but there is capacity for people in existing jobs to take on an additional role. And I think that's how we'll try and get our co-ordination". [Emily, Registrar in Public Health, Site Z]

In contrast to the appointment of co-ordinators, local scheme champions tended to be recognised as such by their fellow professionals. These individuals held established positions and had assumed a supportive role for the scheme alongside their usual duties. The champions identified in Site A occupied senior positions that appeared to lend gravitas to their ability to influence others, particularly those involved in policy and high level decision-making:

"They have leadership skills and passion, (they) make a huge difference to conveying a vision and engaging staff and partner agencies on issues that people have perhaps previously regarded as too intractable or too difficult or beyond them". [Bryan, strategic Manager, Site A]

In some cases champions played a direct role in the allocation of financial resources. This was evident in Site C, where the commissioning manager for the Children's Centres had assumed the role of champion when the national programme ended. He spoke of direct involvement in *"diverting the spend",* whilst colleagues involved in scheme delivery recognised his role in sustaining the scheme:

"Some have to work harder at it than others. [Robert] is one. He's definitely pushed it and made sure that he can get the money to make the scheme work".

[James, equipment fitter, Site C]

The contributions to scheme sustainability made by co-ordinators and champions appeared similar and are discussed in section 9.3.2 below. The means by which these were achieved did sometimes vary however and where possible examples have been included to illustrate the subtle differences between the two roles.

9.3.2 Contribution to scheme sustainability

9.3.2.1 Establishing and maintaining a local scheme profile

Both co-ordinators and champions provided a focal point for injury prevention activity, helping to establish and maintain a profile for local initiatives such as the safety scheme. The

provision of practical support for scheme implementation and sustainability was core to the role of local co-ordinators. In addition, the involvement of the co-ordinator in the delivery of scheme components or in the monitoring of these provided mechanisms for quality assurance. In Site Z the role of the county co-ordinator prior to and during the delivery of the 'Safe At Home' programme was described as:

"…instrumental in leading and supporting the group and leading the safety equipment scheme"

[Bruce, strategic partner, Site Z]

The loss of a co-ordinator post was seen as a significant factor impacting on the subsequent decline in local activity levels, with one professional commenting:

"I think there's less willingness now to come together. There's no-one to pull it together and properly co-ordinate things…" [Richard, Children's Centre manager, Site Z]

Both co-ordinators and champions played a role in generating positive publicity for their safety scheme. Though this most often impacted at local level, the involvement of some individuals in wider initiatives, such as the development of national guidelines, could serve to broaden awareness. In Site A, despite the part-time nature of her post, the accident prevention co-ordinator was highly visible and proactive in establishing cross-disciplinary links and show-casing the safety programme in her area. Her contribution to raising the profile of the scheme had been particularly influential in gathering support for ongoing sustainability efforts, as her line manager explained:

"I think we evaluated as being one of the highest performers of the scheme. A lot of that was down to the work of [Amanda] and people she met and worked with…it provided a really positive political message as well. People could see resources coming into the district and into the poorest wards and the most disadvantaged families…people really valued it".

[Bryan, strategic manager, Site A]

Awareness of the scheme and of the desire to sustain it had generated high level policy support from senior staff within several agencies across the district. These champions ensured that the scheme retained a visible profile across the wider community, taking advantage of media opportunities. It was a source of particular pride in Site A that despite changes in succession to individual posts, the strategic commitment to injury prevention had been maintained, as support for current initiatives testified:

"Next week, for Child Safety Week, we've got the premier public space in the district made available to us at a hugely reduced rate... We've got the leader, we've got the Lord Mayor, we've got the Director of Children's Services, we've got the Lead Member all coming to support our events. All happy to be that talking head, and to have the photographs taken". [Bryan, strategic manager, Site A]

9.3.2.2 Facilitating relationships

Co-ordinators and champions contributed to the prospects of sustainability by nurturing a supportive environment for scheme delivery from the point of implementation onward. Co-ordinators were more often attributed with facilitating support at an operational level, whilst champions were mainly

associated with encouraging stakeholder support at strategic level.

The co-location of co-ordinators with relevant colleagues, such as health visitors and family support workers, may have helped to form supportive working relationships with operational staff. In Site A, for example, the district co-ordinator shared office space with social service staff. This had encouraged the development of joint initiatives to address some of the underlying causes that were common to both intentional and unintentional injury. There was also some evidence from Site A of the co-ordinator's potential to influence strategy, mediated through her direct responsibility to the Chair of the Local Safeguarding Children Board. The experience here suggested that the seniority of the co-ordinator's post was less important in influencing sustainability than her access to and support from high level decision makers. Further support for this interpretation came from Site B where the co-ordinator, despite persistent effort, was unable to generate strategic support. The main barrier in this case was considered to be difficulty in communicating with decision makers, in part because of the perceived remoteness of their position.

Both co-ordinators and champions enhanced the opportunities to access existing networks, as well as offering the potential to develop new relationships. Where roles were already established, for example in Site A, where Amanda had been appointed as co-ordinator three years previously, the pre-existing links had proved advantageous when the national programme was launched:

"…working with a co-ordinator who'd been in place for some time and had made links with lots of people in Children's Centres and other places, we were in a really good position to go for it with the national scheme".

[Bryan, strategic manager, Site A]

The nature and personality of individuals was an important influence on establishing and maintaining successful partnerships. This was particularly evident in the development of informal relationships as demonstrated in Site B where Tom, the co-ordinator, displayed enormous enthusiasm, passion and commitment for the scheme. Coupled with an engaging manner this had won him considerable support among operational staff within his own and other agencies. Tom's vision had driven development of the current intervention and evidence of his 'can-do' attitude peppered his conversations as the following examples illustrate. He explained his decision to invest in developing new partnership links with Environmental Health: *"I just saw the value, I had to go for it"*. His desire to extend the remit of an existing partner agency: *"I thought we need to do more than that"* had initiated a productive working relationship with one colleague in particular. Although these two individuals were interviewed independently, the similarity in their characters and approach to their work was striking. They often used identical phrases such as *"the higher ups",* (to describe management) and *"under the radar"* (with respect to certain sections of the target group). Asked about the basis of their collaboration, both responded simply *"we got on"*.

In establishing more formal partnerships, individual skills and characteristics also played a role. Describing the process of

signing up partners in support of the local child accident prevention strategy in Site A, the co-ordinator's line manager paid tribute to her skills:

"I've sat in rooms with people that have said 'This is going to be really difficult', and that's where the benefit of having a co-ordinator …who is very resilient and determined to get things done, and good at sharing the common vision with people and getting them to sign up for it made a difference".

[Bryan, strategic manager, Site A]

Persistence was particularly important since the processes associated with building relationships proved to be gradual. In Site B the co-ordinator described *"chipping away"* at some of the preconceptions that had inhibited cross-disciplinary collaboration in order to form productive links with the Environmental Health Department:

"There used to be a barrier – who are you? Where are you from?" [Tom, scheme co-ordinator, Site B]

Tom's efforts had paid off eventually, benefitting the safety scheme and enhancing the prospects for other joint working initiatives. His colleagues were quick to attribute the consolidation of local partnership arrangements to his determination and perseverance:

"[Tom] has done an awful lot of work in building links with environmental health, trading standards, the local housing provider… so we all do tend to work together. Because the links are stronger and get better, when we have meetings they're invited in to give updates on what their

services are doing and it just makes things a lot easier. So a lot of that work is down to [Co-ordinator] really, whereas before it was just in little pockets".

[Susan, family support worker, Site B]

Other influences, such as funding, assumed importance when it came to maintaining more formal relationships. One of the main opportunities for establishing formal partnerships during the 'Safe At Home' programme was in the installation of safety equipment. Though two of the sites (B and C) were able to provide this using in-house services, in the remaining three sites (A, D and Z) formal contracts were established and external installation agencies received payment for their contribution. Although key to the successful delivery of the 'Safe At Home' programme, none of these external relationships survived beyond the end of the nationally funded period. This resulted in reduced intervention fidelity in all three sites (A, D and Z). Contracted partnerships therefore appear to constitute a potential weakness for scheme sustainability in settings where the level and duration of funding is uncertain.

9.3.2.3 Enhancing access to funding opportunities

One of the key contributions of scheme co-ordinators and champions was in helping to address funding issues, identified as the main barrier to sustainability by professionals in the study. Whilst this could be achieved indirectly by strengthening partnership links and identifying potential stakeholders in scheme delivery, there was also evidence of more direct involvement. Scheme champions with a responsibility for the allocation of financial resources could directly influence funding for scheme provision, as had been

the case in Site C. For co-ordinators, who often lacked any budgetary control, proactive involvement in identifying and applying for scheme funds was a major responsibility that required considerable investment of time and effort. Adele, co-ordinator for one local scheme in Site Z that relied on charitable funds both before and after participation in the national programme, described her involvement in seeking funding as:

"…a full-time job. It's incredibly time-consuming"

[Adele, scheme co-ordinator, Site Z]

In the absence of a co-ordinator, progress with funding applications was liable to stall:

"I took a period of time off and that meant it kind of went off the boil really".

[Amanda, accident prevention co-ordinator, Site A]

Amanda was credited with having established and nurtured the relationships that had resulted in a new short-term source of funding that would offer intensified scheme coverage and provision in Site A. In attributing this to:

"…my direct access to people at strategic level"

[Amanda, accident prevention co-ordinator, Site A]

Amanda affirmed the suggestion made earlier in section 9.3.2.2 that local strategic support can enhance the positive influence of a co-ordinator on scheme sustainability.

9.3.3 Continuity of personnel

Sustainability may also have been enhanced by continuity of personnel, as was apparent among co-ordinators in several of the case study sites (A, B, D and Z Scheme 1). These post-holders had experienced scheme delivery through various transitions with regard to funding and level of provision. This had afforded them a wealth of local knowledge and contacts. Continuity of personnel could help in maintaining a local profile for the safety scheme, with the individual becoming synonymous with the intervention:

"…she was Safe At Home, she was pre-Safe At Home and she was post-Safe At Home".

[Ali, national stakeholder: equipment supplier]

However, investing in one individual could render a scheme vulnerable to future changes in personnel. This was seen to be the case in Site B, where reduced resources compromised Tom's co-ordinator role and led to uncertainty that he would remain in the post. The potential loss of this one skilled and experienced individual was recognised by his colleagues as a major barrier to scheme sustainability:

"The biggest threat to us right now in terms of the continuity of the project is that fact that we have [Scheme co-ordinator] who's very experienced, very knowledgeable and brings with him a unique set of skills that we would struggle to replace. But as part of a restructure… we've had to look at his role… and looked at reducing his hours. That's not something that he wants to go with so we will lose him. Which means we will lose that vast knowledge…this is the biggest challenge from our perspective".

[Dorothy, Children's Centre manager, Site B]

In contrast, the contribution of local champions appeared less dependent on continuity of personnel. The experience in Site A demonstrated that within a supportive strategic context the role of champion could be adopted by successive individuals with no apparent detrimental effect to scheme sustainability.

9.4 EXTENDING COLLABORATIVE NETWORKS

9.4.1 Involving volunteers in scheme delivery

Given the investment of time required to establish and maintain effective partnership arrangements, any new collaborations are required to yield sufficient benefit to make this effort worthwhile. One national 'Safe At Home' stakeholder suggested making use of volunteers as a means of increasing local capacity and potentially enhancing the prospects of scheme sustainability. Making reference to an un-named safety scheme, where a partnership with the probation service had engaged young offenders in the installation of safety equipment, the potential gains for each party were described as a *"win-win situation"*.

Among the five case study sites only one, (Site D), reported involving volunteer workers. Here the co-ordinator spoke of having recently delivered training to volunteers for the "Troubled Families" programme run by the Children's Society, helping them to identify safety issues during home visits. This was viewed as an opportunity to increase the reach of the scheme and to reinforce educational safety messages. Comments from her colleague in public health indicated that adopting this approach had necessitated a trade-off between

increased capacity versus the higher quality and intensity of the intervention as delivered by the more experienced co-ordinator:

"We're trying to support the sustainability by linking with services in the voluntary sector…It still doesn't replace the quality or depth of support that someone like [Co-ordinator] can give but it's about getting those wider messages out as much as we can. So we're trying to relieve that ever-increasing pressure on resources and on people that are able to deliver". [Ellen, public health officer, Site D]

Elsewhere potential barriers to the use of volunteers in scheme delivery were identified. The importance of commitment and fulfilling the expectations of local families in the target group were emphasised:

"We can't be letting families down. If you say you're going to be there, you've got to be there".

[Adele, scheme co-ordinator, Site Z]

Potentially exposing untrained volunteers to sensitive issues, such as child protection, in the home environment also gave cause for concern. This had influenced the decision taken in one of the corroborating sites to employ equipment fitters in preference to involving volunteers in home visits, as the key contact explained:

"They're paid and they're trained because I … I'm not against using volunteers but we had a lot of safeguarding issues in the beginning with RoSPA and in fact we did have

one family where the children were put into care as a result of our intervention…".

[Jean, scheme co-ordinator, Site W]

9.4.2 Broadening inter-agency partnerships

Investing in partnerships with agencies not traditionally associated with child safety had enhanced the opportunities for scheme sustainability in several of the sites. The experience in Site A, where funding from a new partner agency had recently been received to support scheme delivery, is presented here as illustration. In Site A, the accident prevention co-ordinator had invested heavily in establishing and nurturing collaborative relationships over several years. Her efforts, together with those of local champions had ensured that a high profile for the scheme was maintained within the local setting. Over time the nature of several of the working relationships had changed, with partner agencies taking a more proactive role in promoting safety. As her line manager explained:

"Obviously we're not complacent, we do keep reminding people about the issue, but we're finding that it's not so dependent on us so much to go around and knock on doors…People say to us 'Shall we work a strand in here about accident prevention?'". [Bryan, strategic manager, Site A]

As support for injury prevention gathered momentum, opportunities to recruit new partner agencies were explored, capitalising on the safety scheme's potential to contribute to health and wellbeing outcomes other than those associated with injury, for example in respect of addressing the impact of

child poverty. Obtaining strategic commitment from these new partners was regarded as a key step in the process of integrating injury into a broader policy agenda:

"It was people outside of the traditional child accident prevention agenda saying to us 'Do you want something in here about the correlation between poverty and disadvantage and the high rate and high impact of accidents on children?'…'How can we put this in our strategy in a way that will assist you in maintaining some momentum and profile?'"

[Bryan, strategic manager, Site A]

Despite the extensive groundwork that had been undertaken, Bryan referred to the recent funding success as *"serendipitous"*, implying that factors arising spontaneously may also influence sustainability. These are likely to remain beyond the control of those implementing the scheme, thereby leaving a certain element to chance. In this case a chance encounter between the co-ordinator and a member of the new partner agency had resulted in diversion of a budgetary underspend to support the safety scheme.

In other sites, extending collaborative links to agencies such as Environmental Health (Site B), and the Children's Trust (Site D), had provided opportunities to develop joint initiatives and increase capacity for scheme delivery. The experience of those areas with more established safety schemes appeared to be informing the approach taken in Site Z, where efforts were underway to support the recent launch of the new injury prevention strategy. Professionals involved in the development and implementation of the Site Z strategy reported that partnerships were being considered with both

the Local Safeguarding Children's Board and the Children's Trust as a means of incorporating injury into the broader child health agenda.

Broadening collaborative partnerships in Site A appeared to have positively impacted on scheme sustainability. The experience in Site B however, suggested that trying to do so in the absence of a supportive strategic environment may be less productive. The co-ordinator in Site B identified a need for more joined-up thinking to promote the contribution that safety schemes could make to other priority areas within child health:

"Child poverty leads to accidents and tackling the two together head-on…it'd help. But they don't, it's all pigeon-holed into "That's that one, oh we've got a bit of funding for that and you've got a bit of funding for that, that doesn't overlap with that"…but it does".

[Tom, scheme co-ordinator, Site B]

Tom challenged the traditional notion of a 'home safety scheme', regarding this as a narrow label likely to discourage prospective partners and investors who may not recognise a role for themselves within this type of initiative.

The safety scheme in Site C once again proved something of an anomaly. Here Robert, the commissioning manager for Children's Centres, had made a conscious decision not to integrate this with other local initiatives. He justified this on the basis that it gave him better control over the scheme content and budget:

"It operates in its own little environment…but I don't necessarily see that as a bad thing. Yes there are opportunities to link it with Adult Services which we toyed with. But I know I made the right decision not to get into that because I could see it was a system that would actually cost a lot of money to run and it was going to cost me money to be in that. There were certain advantages, but actually I could keep my costs down and make something more focused if I kept out of it". [Robert, commissioning manager, Site C]

It was suggested previously, in Section 8.2.2.3, that the financial autonomy invested in Robert enabled him to directly influence funding decisions that had supported sustainability efforts to-date. The findings here would appear to confirm this, however the associated dependency on his continued commitment may prove detrimental to scheme sustainability should the circumstances change.

9.5 CHAPTER SUMMARY

This chapter identified three main strategies that were used in the case study sites to enhance the prospects of scheme sustainability: i) programme adaptation, ii) the presence of a co-ordinator or champion and iii) extending collaborative networks. The strategies adopted for sustainability varied between sites and at different points in time.

Programme adaptation occurred as part of an ongoing process that enabled schemes to meet the current needs of their target population. Adaptation was apparent in three of the core programme components: education, home assessment and equipment provision.

The presence of a co-ordinator or scheme champion was a positive influence on sustainability in all of the case study sites. Co-ordinators were associated mainly with the provision of support at operational level whilst champions exerted strategic influence.

Collaboration with agencies beyond those traditionally associated with injury prevention provided opportunity to integrate with other initiatives and local agendas, and proved a successful mechanism for securing short-term funding for scheme delivery.

CHAPTER TEN

DISCUSSION OF STUDY FINDINGS

10.0 INTRODUCTION

The aim of this research study was to identify factors contributing to the sustainability of home safety equipment schemes for young children living in communities at higher risk of injury in England.

In Chapters Seven, Eight and Nine cross-case findings from the analysis of qualitative data in the five case study sites were presented thematically. The wider policy perspective, obtained from a review of international and national public health policy documents and from interviews with policy stakeholders, was presented separately in Chapters Three and Six.

This chapter synthesises all of the above findings and articulates the key insights that they deliver (referred to as 'principal findings'). The main discussion is then sub-divided into two sections. The first of these considers the contribution that the findings make to the evidence base on programme sustainability within public health in general. The second looks at their relevance for community-based injury prevention programmes. Finally the strengths and limitations of the study are considered.

10.1 STATEMENT AND SUMMARY OF PRINCIPAL STUDY FINDINGS

10.1.1 Low priority for programme sustainability in public health policy

Programme sustainability was regarded as highly relevant to those agencies involved in the development of child health policy. This did not translate into global and national public health policy documents however, since review of these revealed a low priority for programme sustainability. Variation in the conceptualisation of sustainability was apparent among those involved in policy development. This may have reflected individual standpoints as well as professional expectations.

10.1.2. Variability in the manifestations of programme sustainability: fidelity and benefits

The study explored two main manifestations of sustainability. Firstly, the extent to which the original programme components continued or had subsequently been adapted (scheme fidelity), and secondly the continuation of associated participant benefits.

None of the five case study sites had sustained all of the original programme components. Differential component fidelity was apparent between sites and over time, with the more costly elements, such as equipment installation, less likely to be sustained.

The nature of benefits associated with the scheme varied with fluctuations in fidelity. Benefits to the target group and to participating agencies were identified in all sites but were of themselves insufficient to ensure sustainability. Raised awareness and improved safety practices were reported by participating families and confirmed by professionals. Unanticipated benefits included provision of wider social support for families in the target group and improved access

to hard-to-engage families for those agencies involved in scheme delivery.

Temporal variation in programme fidelity levels, and the associated benefits that these may provide, has implications for assessing sustainability. It also raises for consideration the issue of a sustainability 'threshold', a concept that is likely to be both context and intervention dependent.

10.1.3 Multiple, inter-related influences on scheme sustainability

The study identified a range of inter-related influences on the sustainability of home safety schemes, many of which could act as barriers or facilitators depending on their presence or absence. These influences operated at different levels including national, local, organisational and community.

The critical conditions for sustainability were found to be the availability of adequate funding, and the existence of a supportive local context for scheme delivery.

Intervention-specific barriers to sustainability identified by professionals included the complex nature of injury and the lack of evidence for effectiveness of home safety schemes.

Substantial and ongoing change within the wider context for public health provision in England challenged local scheme sustainability over the course of the study. The level of programme engagement among families was found to be low across all sites.

10.1.4 Active strategies required to support sustainability

Ongoing contextual change has triggered the development of specific strategies designed to enhance local scheme sustainability. The three main strategies for sustainability identified within this study were: programme adaptation, the presence of a local co-ordinator or scheme champion and extending collaborative networks. Strategies were adopted independently or in combination, varying in response to changes in contextual factors over time. The existence of these strategies suggested that programme sustainability does not occur automatically but rather is reliant upon active and ongoing support mechanisms.

10.2 INSIGHTS INTO PROGRAMME SUSTAINABILITY FOR PUBLIC HEALTH

10.2.1 The public health policy perspective

10.2.1.1 Low priority for sustainability

The content review of public health policy (reported in Chapter Six) revealed a low priority for sustainability within documents that addressed child public health, at either global or national level. Recommendations from several independent agencies that may have supported sustainability efforts, for example re-establishing a role for local programme co-ordinators (Department for Children Schools and Families, Department of Health et al. 2009; National Institute for Clinical Excellence 2010a; Royal Society for the Prevention of Accidents 2013), had not been adopted within recent public health policy in England. The priority afforded to sustainability in policy failed to match that assigned by representatives of the public health organisations involved in its development, supporting

suggestions that such agencies have little political influence (Kickbusch 2015).

Reference to sustainability within policy documents primarily related to the conservation of environmental resources. Where programme sustainability did feature, a range of alternative terms was used, some of which appeared to illustrate cultural preferences. This diverse terminology, together with the absence of a definitive definition for sustainability (as reported in Chapter Six), supports the recommendation made for standardisation within the field (Shediac-Rizkallah and Bone 1998; Johnson, Hays et al. 2004; Wiltsey Stirman, Kimberly et al. 2012).

10.2.1.2 Personalisation of sustainability

Public health policy stakeholders in the current study universally identified programme sustainability as an issue relevant to the activities of their organisation. However, they also revealed an individualised perspective on the nature and conceptualisation of sustainability. This appeared to be influenced by both personal and professional experience, with respondents drawing on examples of each to support their own understanding. Other studies have attributed variation in the conceptualisation of sustainability to differences between professional groups (Leurs, Mur-Veeman et al. 2008; McMillan 2013). Personalisation may have consequences for addressing programme sustainability, with differences in stakeholder perspectives necessitating the adoption of an explicitly agreed definition between the parties involved.

The low priority for programme sustainability identified within public health policy, together with a varied understanding and

conceptualisation of the phenomenon among individual public health policy actors, combine to create a challenging policy environment for those looking to enhance the sustainability of existing interventions.

10.2.2 Programme fidelity: implications for assessing and defining sustainability

10.2.2.1 Variability in programme fidelity

Sites within the current study were assigned an overall 'fidelity score' based on the extent to which core programme components remained faithful to the original intervention. These ranged between 1 and 6, where 7 represented 100% fidelity. Scores were calculated at the point of recruitment and again at the end of the study period (See Chapter Seven). An increase in fidelity score was noted in two of the sites (A and Z) during the relatively short study time frame of ten months.

Where core components had been sustained, a range of adaptations to the nature of these were apparent in several of the case study sites. Most modifications aimed to improve acceptability among the target group (these form the basis for further discussion as a potential strategy for sustainability in Section 10.3.6.2). Adaptations appeared to be part of an ongoing process that continued throughout the data collection period, and was also in evidence in those sites where schemes existed prior to Safe At Home. These findings support the conceptualisation of sustainability as an ongoing evolutionary process (Chambers, Glasgow et al. 2013) rather than one in which programme change ceases at a particular point beyond implementation (Cohen, Crabtree et al. 2008b).

The conflict arising from the merits of fidelity and the benefits associated with adapting a programme to a specific setting have received prior attention in the literature (Mowbray, Holter et al. 2003). Programme fidelity has been associated with maintaining the effectiveness of multi-component, community-based interventions (Carroll, Patterson et al. 2007; Durlak and Dupre 2008). Furthermore, high intervention fidelity has been suggested to encourage institutionalisation, thereby supporting sustainability (Johnson, Hays et al. 2004). Partial fidelity and variation in the nature of sustained activities have however been reported as common features of complex intervention programmes (Wiltsey Stirman, Kimberly et al. 2012), a finding that this study supports.

Programme fidelity remains an area that is often overlooked in sustainability research (Scheirer and Dearing 2011; Wiltsey Stirman, Kimberly et al. 2012). It is of particular note that fidelity levels are not addressed within any of the existing publications that report on sustainability within injury prevention programmes.

10.2.2.2 Variable fidelity produces variable benefits

The current study explored the benefits of scheme sustainability from a range of participant perspectives, thereby avoiding the potential bias that may result from using a single informant, particularly where that individual may be reluctant to acknowledge shortcomings of the intervention (Rissel, Finnegan et al. 1995).

An association was identified between programme fidelity and the nature of the benefits reported by local professionals and families. Whilst it is wise to exercise caution owing to the

non-experimental nature of the study, this would appear to confirm the need for continuous support for programme activities in order to sustain benefits at their original level. The link between programme activities and the benefits that these may confer has been reported previously in the sustainability literature (Mancini and Marek 2004; Scheirer and Dearing 2011). As illustration, one Safe Communities initiative in Sweden reported a reduced effect associated with a drop in programme activity towards the end of the 7-year intervention period (Bjerre and Schelp 2000). In common with the findings from the current study, the authors concluded that continued programme activities are necessary in order to sustain benefits.

The fluctuating levels of programme activity and associated benefits that were a feature of the current study support the conceptualisation of sustainability as a process. Accordingly, it would seem appropriate that any assessment of sustainability should take place on an ongoing basis (Pluye, Potvin et al. 2004; Scheirer and Dearing 2011; Wiltsey Stirman, Kimberly et al. 2012). Lengthening the timeframe for assessment of programme activities and benefits would however increase the requirement for funding, in what some already regard as a resource-intensive research area (Green and South 2006; Schell, Luke et al. 2013).

10.2.2.3 Identifying a fidelity threshold for sustainability

Variation in the level of fidelity to the original Safe At Home programme, both between and within case study sites over time, has implications for establishing a threshold for sustainability. 'Threshold' has been defined as the point

beyond which the programme diversifies so significantly from the original intervention that this can no longer be considered to be sustained (Scheirer 2005).

For the current study the sustainability threshold was set low, requiring fidelity to only one of the core components and not specifying which this should be:

"*the continuation, beyond the period of national support, of one or more of the core components of the Safe At Home programme with the aim of benefitting the health of the target community***".**

Establishing a sustainability threshold for future use with local programmes would be contingent upon agreeing the primary objectives of the intervention. Participants within the current study reported that both active (educational) and passive (equipment installation) programme components produced benefits associated with improved safety practice among the target group. In keeping with the concept that 'essential elements' may maintain programme effectiveness (Carroll, Patterson et al. 2007), this would suggest that for those sites where injury prevention remains a primary objective, the threshold set for sustainability should require fidelity to both of these components.

Unintended scheme benefits, such as increased access by professionals to hard-to-engage families, were also widely recognised in the case study sites. These could be seen to have influenced the direction of programme development, in some sites extending the programme objectives beyond the original injury prevention remit of Safe At Home. In such

cases the threshold for sustainability may need to be increased accordingly. For example, fidelity to a third programme component, home assessment may be required in order to meet the revised programme objectives. Assigning a sustainability threshold is therefore likely to be both intervention and context specific, since it is contingent on the identification of primary programme objectives relevant to a particular setting.

The findings of the current study did not attempt to differentiate between 'levels' of sustainability, though other authors have taken this approach (Pluye, Potvin et al. 2004; Savaya, Elsworth et al. 2009). The potential for programme fidelity to act as a mediating factor in determining sustainability, was however recognised, with temporal fluctuations in fidelity lending support to the concept of a sustainability continuum (Leurs, Mur-Veeman et al. 2008; Savaya, Spiro et al. 2008).

10.3 RELEVANCE FOR COMMUNITY-BASED INJURY PREVENTION PROGRAMMES

10.3.1 Variations in sustainability between programme components

The findings from the current study indicated differential levels of component sustainability, with the educational elements (safety advice and home assessment) more likely to be sustained than those involving environmental modification (equipment provision and installation). A similar variation based on the nature of programme components was reported in an assessment of the sustainability of LEAP, a school-based physical education programme (Saunders, Pate et al. 2012). One explanation for these findings may be the relative cost of

scheme components, with the educational element being cheaper and therefore easier to sustain (Evashwick and Ory 2003), whilst the more resource-intensive components are particularly susceptible to fluctuations in funding. Within the current study the educational elements were seen to integrate easily into existing practice, enabling them to become a readily accepted part of the normal professional routine (Chen, Sheu et al. 2010). Educational approaches may be susceptible to decay of impact over time (Green and South 2006; Kendrick, Mulvaney et al. 2009). It is interesting therefore that the current study reported ongoing benefits for the target group associated with the parental educational component, up to two years after delivery of the intervention. The professional training component was not sustained by schemes in any of the case study sites. A recent systematic review of home safety programmes for young children identified the high financial and staff costs associated with ongoing training as potential barriers to programme implementation (Ingram, Deave et al. 2012). An alternative explanation for this may be that the low rate of turnover among staff occupying key posts within the case study sites reduced the perceived necessity for ongoing training.

Environmental modification in combination with educational measures has been shown to enhance positive behaviour change in home safety programmes (Kendrick, Coupland et al. 2009). The loss of either of these components may therefore be expected to reduce the overall effectiveness of the intervention. Resolution of this would require further evaluation of injury outcomes in order to determine the impact that specific programme modifications might have on effectiveness within different settings.

10.3.2 Consideration of programme effectiveness

Professional participants in the current study identified difficulties associated with monitoring injury outcome data at local level. This, together with a lack of conclusive evidence in the literature regarding the effectiveness of home safety programmes for young children, was perceived as a barrier to securing ongoing programme funding and support.

Despite the lack of comprehensive local evaluation, scheme provision in several of the study sites had nevertheless been sustained. This finding appears to contradict the evidence-based culture that has become associated with public health (Killoran and Kelly 2009). It does, however, support the suggestion that the perception of programme benefits among professionals may be of greater influence on sustainability than objective evidence of effectiveness (Nilsen, Timpka et al. 2005; Schell, Luke et al. 2013).

Comprehensive programmes such as Safe At Home have been associated with improved parental safety practice (Hubbard, Cooper et al. 2014). However the relative effectiveness of individual components, such as equipment installation, remains unclear with respect to both injury outcomes (Pearson, Garside et al. 2009) and safety behaviour. Despite the limitations of current evidence, professional installation of safety equipment is a recommended component in practice guidance (Mackay, Vincenten et al. 2006; National Institute for Clinical Excellence 2010a). Further, it has been suggested to play a facilitating role in improving the uptake of home safety programmes among the target group (Smithson, Garside et al. 2011; Ingram, Deave et al. 2012).

Incomplete evidence of the effectiveness of home safety programmes is potentially problematic for those involved in making decisions about future programme support. To address this it has been suggested that intervention and sustainability research should proceed in parallel, with interim results from each made available to assist programme managers in making decisions regarding resource deployment (Scheirer and Dearing 2011).

Several of the agencies involved in scheme delivery within the current study indicated their willingness to accept programme benefits other than reduced injury outcomes. This broader appreciation of programme benefits may have influenced their decision to sustain scheme provision. As example, in providing improved access to vulnerable families, the safety scheme addresses one of the major current challenges identified by professionals working within Children's Centres (4Children 2013).

10.3.3 Injury prevention or safeguarding?

One example of an alternative programme benefit was illustrated by the home visit component of the safety scheme. This was highly valued, presenting professionals with an opportunity to identify safeguarding concerns. Using schemes in this way raises two issues. Firstly, that of the need for adequate training for personnel involved in conducting home visits to enable them to recognise safeguarding concerns and act appropriately. Secondly, and more controversially, the inclusion of a safeguarding element within an unintentional injury programme may potentially compromise parental trust. Establishing trust was regarded by parents and local professionals as an important factor for scheme acceptability.

Mistrust of professionals within low income communities has been identified as a barrier to the uptake of injury interventions with a home visit component (Mullan and Smithson 2000; Roberts, Curtis et al. 2004; Odendaal, Van Niekerk et al. 2009). Other studies suggest that low-income mothers may fear that unintentional injury could be construed as abuse-related (Hendrickson 2008), or may avoid accessing safety advice because of fear that this may lead to the involvement of social services (Ablewhite, Kendrick et al. 2015).

The sensitivity surrounding injury prevention suggests that caution should be exercised in incorporating child protection into safety schemes operating in low income communities, since this may negatively influence programme acceptability within the target group.

10.3.4 Critical conditions for local programme sustainability

10.3.4.1 The availability of adequate funding

The current study identified funding as an essential element for scheme sustainability, in common with the empirical literature for injury prevention (Barnett, Van Beurden et al. 2004; Nilsen, Hudson et al. 2005; Hanson and Salmoni 2011; Lovarini, Clemson et al. 2013) and that for wider public health initiatives (Shediac-Rizkallah and Bone 1998; Scheirer 2005; Wharf Higgins, Naylor et al. 2007; Schell, Luke et al. 2013). Limited resource availability elicited a response to reduce either intervention intensity or scheme coverage. Similar strategies that redefined programme scope in response to resource constraints were reported in a study of tobacco treatment programmes (Lapelle, Zapka et al. 2006).

The availability of funding to sustain local schemes was itself influenced by other factors operating within the wider environment. Securing continuing funding during a period of national austerity presented a major challenge for all of the schemes in the current study. Professional stakeholders reported barriers to sustainability associated with internal budget reductions and increased competition for external resources. Funding was often short term and unpredictable in nature necessitating a constant effort to identify alternative sources of support. Whilst it has been suggested that multiple funding sources may encourage sustainability (Savaya, Spiro et al. 2008), the schemes in this study were reliant mainly on one funding source, often of uncertain duration.

The reduced internal capacity associated with deprived communities has been identified as a barrier to sustainability (Shediac-Rizkallah and Bone 1998). This can lead to greater reliance on the commitment of external resources in order to sustain health improvement programmes (Shea, Basch et al. 1996). Multiple social problems that have been associated with less affluent communities, such as poor quality housing and high population mobility, were apparent within the case study sites participating in the current study. These may place added pressure on already limited internal community resources (Whitelaw, Graham et al. 2012). It has been suggested that implementing home safety programmes in deprived communities may necessitate increased intervention effort (Ingram, Deave et al. 2012). The justification for this may lie in a greater obligation to support and sustain programmes in such areas given their increased prevalence of mortality and morbidity (Edwards, Roberts et al. 2006; Audit Commission and Healthcare Commission 2007; Peden,

Oyegbite et al. 2008) and their own lack of internal capacity to address this (Mancini and Marek 2004).

Professional participants in the current study identified a range of competing interests for local resources, both within the child health agenda and with respect to wider health and wellbeing issues. Several of these appear to have achieved higher profile status than injury prevention, despite the persistent efforts of national organisations such as RoSPA and CAPT to raise awareness of the childhood injury problem. The identification of multiple influences on the public health agenda has led to the suggestion that priorities emerge from a social constructionism (Shiffman 2009). Within this the role of pressure groups and the media may carry greater influence on political decisions than the existing body of public health evidence (Krug 2015). This may explain why issues such as children's safeguarding have captured social interest despite the greater health burden associated with unintentional injury. Participants in the current study highlighted the complex and fragmented nature of injury, reflected in its multiplicity of causes, diversity of settings and range of intervention strategies, as a barrier to communication with potential stakeholders. Furthermore a tendency to create sub-divisions within injury, based on injury type, setting and the characteristics of those affected was identified. This may dilute the perceived overall burden of injury. Support for these opinions can be found in the injury prevention literature and has led to the suggestion that a unified stance within the field might help to raise the injury profile, enabling it to compete more fairly for resources against other public health priorities (Stone 2014).

10.3.4.2 Support within the local setting

Socio-ecological approaches to the conceptualisation of sustainability commonly distinguish between factors operating in the local context and those that exert their effect at a wider level (Shediac-Rizkallah and Bone 1998; Scheirer and Dearing 2011; Chambers, Glasgow et al. 2013). Since all sites in the current study were exposed to the same national context for scheme delivery, the varying levels of sustainability that were observed suggest differences in the level of support within individual local settings.

Recognition that safety schemes can contribute to achieving non injury-related objectives appeared to provide added impetus for agencies to commit to scheme sustainability. The extent to which programmes are compatible with organisational aims and values, sometimes referred to as programme 'fit', has been previously associated with sustainability in reviews of the empirical literature (Shediac-Rizkallah and Bone 1998; Johnson, Hays et al. 2004; Scheirer 2005; Wiltsey Stirman, Kimberly et al. 2012).

Organisational support from management at all levels was identified as a positive influence on scheme sustainability within the current study. Support at a strategic level appeared to enhance the sustainability efforts of operational staff in sites A and D, whilst in Site B the lack of strategic support was identified as a barrier to sustainability, with one senior individual adopting the role of gatekeeper. All three of the case study sites that secured additional funding sources during the course of the study (Sites A, D and Z) had a local injury prevention strategy in place. This suggests that strategic support may act as a driver for resource allocation. Support

from management has been positively associated with sustainability in the literature (Greenhalgh, Robert et al. 2004; Savaya, Spiro et al. 2008; Whelan, Love et al. 2014). It has also been suggested that local strategic support can help to overcome a lack of wider policy support for injury prevention (Audit Commission and Healthcare Commission 2007).

In Site C, where no co-ordinated safety scheme existed prior to 'Safe At Home', sustainability was attributed to the efforts of a local champion and a desire among operational staff for scheme continuity. The latter was evidenced by a willingness to change existing practice and accept additional responsibility. It has been suggested that factors associated with the organisational culture, such as devolved decision-making and increased autonomy, may be capable of supporting sustainability in settings where strategic support is lacking (Greenhalgh, Robert et al. 2004; Savaya, Spiro et al. 2008). The Normalization Process Theory may offer one explanation as to the underlying mechanism for this (May and Finch 2009). The theory proposes that continuous investment in new ways of working enables these to become embedded into everyday life. The resulting benefits, realised at both individual and organisational level, can help to overcome any initial resistance to making the original change, a common barrier identified in implementing new health practices (Ross 2012). Examples of innovative practice by individuals and within agencies were common across the case study sites. However the suggestion that scheme sustainability may be associated with an early adopter effect (Scheirer 2005) was not supported by the current findings.

One of the longer term aims of the national 'Safe At Home' programme was to build community capacity for injury prevention. One possible approach to this may be through increasing the level of parental engagement, found to be low across all schemes in the current study. By encouraging enhanced programme ownership, community participation may offer a mechanism for sustainability (Johnson, Hays et al. 2004; Harris and Sandor 2013). Peer education, in which members of the target community take an active role in the delivery of the intervention, can lead to high level engagement for some individuals and has been used successfully in other community-based injury prevention programmes for disadvantaged families (Mullan and Smithson, 2000; Carr, 2005; Swart, 2008; Odendaal, 2009). Involving members of the local community can help to respect cultural sensitivities within the target group and may improve programme uptake (Harvey, Aitken et al. 2004). A mixed response was received from professionals and families in the current study when peer education was suggested, indicating that this may be an area worthy of further investigation. The main barrier to increased participation identified by families was lack of time. Other challenges that have been associated with engaging hard-to-reach populations may also be relevant however, such as those resulting from lower socio-economic status (Bonevski, Randell et al. 2014; Mytton, Ingram et al. 2014). These might include issues that impact on parental independence, for example, transport issues and lack of childcare.

10.3.5 The influence of the national context

10.3.5.1 A transitional period for public health in England

The current study identified changes within the national context for public health that had a significant influence on local scheme sustainability. During the study, and at the time of writing, responsibility for public health services in England was undergoing transfer from the health service to local authorities. Support for injury prevention activities during the transition was available in the form of guidance documents and planning initiatives, with key contributions from national agencies such as RoSPA and CAPT (Royal Society for the Prevention of Accidents 2013; Public Health England, Royal Society for the Prevention of Accidents et al. 2014). During the same period, several of the agencies responsible for scheme provision were involved in extensive service review, the outcome of which could impact on funding availability and staff capacity. These changes resulted in periods of organisational instability, a recognised barrier to partnership working (Cameron and Lart 2003; Griffin and Carpenter 2007), and future uncertainty for scheme personnel. In their systematic review of health and social services collaboration, Cameron and Lart identified potential barriers arising from the differences between professional cultures and their expectations (Cameron and Lart 2003). The experience of integrating other health and social care services in England, such as those for older people, highlights the difficulties that can arise when attempting to work across organisational cultures (Glendinning 2003).

The climate of organisational change was generally perceived as a barrier to sustainability by participants in the current study. However, some professionals viewed change as an opportunity to engage with new stakeholders, thereby offering a potential mechanism for strengthening scheme support.

Change is not a new phenomenon for public sector agencies in England (Coram and Burnes 2001). As a consequence, some professionals involved in scheme delivery may view change positively, associating this with progress and innovation. It has been suggested that this perspective may create resistance to the concept of sustainability, regarding it as a form of stagnation (Buchanan, Fitzgerald et al. 2005). Although this possibility was voiced by one participant in the current study, it was not supported by the findings.

10.3.5.2 A reduced policy focus on injury prevention

The review of public health policy documents conducted within the current study revealed that whilst childhood injury prevention remains a global priority, this has not translated to national policy in England. Here the profile for unintentional injury has gradually declined despite the continued efforts of national organisations, most notably RoSPA, to maintain a political and media focus on this topic (Royal Society for the Prevention of Accidents 2012).

Injury prevention in England has historically involved a multiplicity of agencies and the current study, along with previously published research, identified poor co-ordination of policy and activities at national level (Towner, Carter et al. 1998; MacKay and Vincenten 2012). In addition the field currently lacks a high profile national champion, a feature that has been associated with more effective injury prevention strategies elsewhere in Europe (Parekh, Mitis et al. 2014).

Several potential explanations may account for the reduced policy focus on unintentional injury in England. Both the policy review and the practitioner perspective revealed a shifting

national discourse for child safety following the publication of Every Child Matters (Department for Education and Skills 2003). This resulted in the reorientation of resources and service provision towards intentional injury and children's safeguarding. Coupled with policy indicators that combine the outcomes for both intentional (deliberate harm or neglect) and unintentional (accidental) injury, this may have diminished the national profile for unintentional injury. A recent content analysis of injury prevention policies across Europe recommended quantifying specific objectives to enhance the prospects of achieving these (Parekh, Mitis et al. 2014). This is not currently done for the injury-related targets within public health policy in England.

It has been suggested that a change in national government can challenge continuing commitment for national injury prevention plans (Mackay and Vincenten 2012). This was evidenced in the current study when in 2010 the new Coalition government dissolved the Department for Children, Schools and Families and revoked the child health policies for which it was responsible within days of being elected, rapidly following up with a new public health strategy (Department of Health 2010). This form of immediate government hand-over is an unusual feature of the English political system and has created a history of sudden events that can result in disruptive and expensive departmental reorganisations (Riddell and Haddon 2009). Incomplete policy implementation has also been identified as a barrier to achieving progress on injury prevention (Parekh, Mitis et al. 2014). The appointment of individuals to government positions for a relatively short time may act as a disincentive to supporting policy implementation, since ministers do not always remain in post long enough to

see the results of this (Richardson 2012).

Despite the present government's stance on devolving responsibility to local authorities, the strength and direction of central policy remained a major influence on the prioritisation of local health issues within the current study. Professionals attributed the reduced impetus for local action on injury to a lack of national policy support. This was also perceived to create barriers to programme sustainability at a local level. These findings may reflect an ongoing expectation of government intervention within the wider discourse for public health in England, particularly where national effort is perceived necessary to reduce social inequalities (Jochelson 2005).

Disparity in resource allocation and in the responsibilities undertaken by statutory agencies between injury settings was also highlighted in the current study. For example, increased investment in the road environment compared to the home setting is reflected in higher levels of safety activity and injury reduction at both national and European levels (Council of the European Union 2007; Royal Society for the Prevention of Accidents 2012). This additional investment of resources may have been driven by an ongoing policy commitment to road safety that is currently absent with respect to home safety (Sethi, Mitis et al. 2010; Krug 2015).

10.3.6 Strategies to enhance sustainability

10.3.6.1 Development of a range of strategies

Three main strategies for sustainability were identified within the case study sites. These were programme adaptation, the presence of a local scheme co-ordinator or champion and

extending collaborative networks. These strategies were often adopted in combination, with the decision to adopt a particular strategy driven primarily by local contextual factors at a given point in time.

The concept of strategies, or 'supporting interventions', designed to modify pre-existing conditions and enhance the prospects of programme sustainability, has featured within other community-based injury prevention studies (Nilsen, Timpka et al. 2005; Lovarini, Clemson et al. 2013). The use of such strategies supports the assertion that sustainability does not occur as a spontaneous process but is one that requires a continuous investment of time and resources (Pluye, Potvin et al. 2004; Scheirer and Dearing 2011; Lovarini, Clemson et al. 2013; McMillan 2013).

The similarity that exists between the sustainability strategies identified in the current study, and facilitators associated with programme implementation, lends support to the argument that sustainability planning should commence early in programme development rather than being regarded as a final stage (Pluye, Potvin et al. 2005; Scheirer and Dearing 2011; Whelan, Love et al. 2014). The extent of planning for sustainability in the current study varied between case study sites. This may have reflected the nature of the national 'Safe At Home' programme as a pilot intervention with a focus on initial scheme implementation and the achievement of performance targets, rather than sustainability.

The individual strategies for sustainability that have been identified are discussed below.

10.3.6.2 Programme adaptation

Two distinct reasons for programme adaptation were apparent. The first concerned reduced programme fidelity and occurred as a consequence of resource limitations. This was discussed earlier in Section 10.3.1. The second reason for adaptation, apparent in four of the five case study sites, involved tailoring the national programme to better meet locally identified needs. This type of adaptation has been associated with the improved implementation of home safety interventions (Smithson, Garside et al. 2011; Ingram, Deave et al. 2012), and may help to overcome some of the barriers that can adversely affect participant recruitment and retention in low income communities (Mullan and Smithson 2000; Watson, Kendrick et al. 2005; Cagle, Davis et al. 2006).

Reviews of the empirical literature acknowledge that programme adaptation, or flexibility, can facilitate sustainability by providing a means of keeping pace with contextual change (Shediac-Rizkallah and Bone 1998; Savaya, Spiro et al. 2008; Wiltsey Stirman, Kimberly et al. 2012; Schell, Luke et al. 2013; Whelan, Love et al. 2014). Programme modification was identified as one of the five key factors, in addition to programme funding, that influenced sustainability in one systematic review of 19 US and Canadian health initiatives (Scheirer 2005). The review reported that changes were made to programmes over time in response to perceived local needs, or to make the intervention easier to deliver within a specific setting. Adaptation was further highlighted as *"crucial"* to the sustainability of injury prevention programmes in a study of ten Swedish Safe Communities initiatives, some of which had been in operation for almost three decades (Nilsen, Timpka et al. 2005).

A range of scheme adaptations were identified within the current study. Examples of these included tailoring the parental advice to reflect local concerns and childcare practices, and offering increased flexibility in the range of safety equipment provided. Modifications had been made primarily to address the needs of the target group, specific characteristics of which were shared with those identified in other low income populations. These included suspicion of strangers and mistrust of professionals (DiGuiseppi, Slater et al. 1999; Mullan and Smithson 2000; Roberts, Curtis et al. 2004; Odendaal, Van Niekerk et al. 2009); high levels of mobility (Carr 2005); low literacy levels (Georgieff and Maw 2004); reduced self-efficacy (Olsen, Bottorff et al. 2008) and social isolation associated with non-native linguists (Hendrickson 2008). In addition, professionals in the current study reported that chaotic lifestyles, contributing to less safe practices, were part of the lived experience for some of the families within their target communities. The recognition that poor housing quality can influence injury risk reflected other findings from home safety studies in low income populations (Gielen, Shields et al. 2012).

Within some of the case study sites, programme adaptations had extended the scope of the original intervention. This was illustrated, for example, where professionals had adopted the role of safety advocates. By facilitating communication between landlords and tenants, this addressed one of the major barriers associated with the implementation of home safety interventions in socially disadvantaged populations (Smithson, Garside et al. 2011). Adaptations such as this may be helpful in gaining and maintaining the trust of the target group, an issue highlighted by professionals in the current

study, that has also been identified as an important feature of programmes serving disadvantaged populations (Hendrickson 2008).

It has been suggested that an adaptation phase is required within programme development in order to translate evidence-based research into a real-world setting (Shediac-Rizkallah and Bone 1998; Scheirer 2005; Scheirer and Dearing 2011). The identification of programme adaptability as a facilitator for both implementation and sustainability indicates that this is likely to play a key role in bridging these processes.

10.3.6.3 Presence of a local co-ordinator/scheme champion

The presence of a local co-ordinator or scheme champion was a positive influence on sustainability across all of the sites in the current study. In Site Z, an immediate reduction in the level of scheme provision followed the loss of the injury prevention co-ordinator post. Programme champions feature widely as facilitators for sustainability in reviews of the empirical literature (Shediac-Rizkallah and Bone 1998; Greenhalgh, Robert et al. 2004; Johnson, Hays et al. 2004; Scheirer 2005; Savaya, Spiro et al. 2008; Whelan, Love et al. 2014).

Four of the current study sites had a history of safety scheme operation prior to registering with the national programme and all had supported pre-existing co-ordinator posts (Sites A, B, D and Z). The individuals employed in this capacity demonstrated a range of generic networking skills, such as those associated with communication and negotiation. The co-ordinators in Sites B and D and the local co-ordinator in Site A

all took active roles in scheme delivery, demonstrating programme-specific skills in addition to those competencies identified above. There was continuity of personnel within the co-ordinator posts for four of the schemes (A, B, D and Zi). The individuals concerned were familiar with scheme delivery in their local setting, likely to be an advantage when identifying appropriate strategies for sustainability. The importance of individual skills was similarly identified in a study of long-running community-based injury prevention initiatives in Sweden in which the authors refer to handing over programme responsibility to *"the right people"* at local level (Lindqvist, Timpka et al. 1996).

In his Dynamic Sustainability Framework, Chambers advocates engaging stakeholders and monitoring programme content on an ongoing basis in order to encourage a culture of continuous quality improvement that he associates with *"learning organizations"* (Chambers, Glasgow et al. 2013). The concept of the learning organisation has emerged from a systems thinking approach to management (Senge 1990). It encourages a shared vision, decentralised leadership and employee engagement that focuses on continuously assessing and improving performance. The remit of local co-ordinators appeared to contribute towards achieving this. However, the propensity for individuals in this study to occupy co-ordinator posts for several years may also create reliance on the characteristics and skills of key individuals. This dependency has been identified as a potential weakness for sustainability in studies of injury prevention programmes (Nilsen, Timpka et al. 2005; Hanson and Salmoni 2011). Should it become necessary to replace these individuals in the future, programmes will need to recruit others who are similarly

committed to supporting sustainability efforts (Evashwick and Ory 2003).

10.3.6.4 Extending collaborative networks

The extent of collaboration between individuals and agencies in the current study varied within and between case study sites. In Site A for example, whilst operational partnerships functioned at a relatively low level, comprising mainly signposting between agencies, there were indications of joint enterprise at strategic level, manifesting in the commitment of resources and shared objectives. Partnership working has long been associated with improved efforts to promote public health (Gillies 1998), and has been suggested as a positive influence on the sustainability of community-based injury prevention programmes (Nilsen, Timpka et al. 2005; Nordqvist, Timpka et al. 2009; Hanson and Salmoni 2011). Furthermore, internal organisational networks have been identified as an essential foundation for developing the external partnerships on which the funding of injury prevention programmes often depends (Hanson, McFarlane et al. 2012).

In several of the case study sites collaborations existed with agencies less commonly associated with injury prevention activities. This provided access to a greater range of funding sources. It may also increase the potential for schemes to become embedded within the structure and usual practice of these new stakeholder agencies, thereby enhancing prospects of institutionalisation, a factor associated with sustainability at the level of the organisation (Goodman and Steckler 1989; Johnson, Hays et al. 2004; Pluye, Potvin et al. 2004).

The development of extended partnerships may evidence a more business-oriented approach within public health. Professional participants at local, national and global levels were aware that influences operating in the wider environment, such as media support and political will, could drive health agendas. Extending collaborative links may therefore have been a response to the current political and economic context for scheme delivery in England. The cost effectiveness of prevention programmes and their potential cross-cutting benefits formed part of the argument for sustainability made by professional participants. A similar shift in focus from treatment to prevention has been highlighted recently by the government's Chief Medical Officer in England as a means of health improvement (Department of Health 2013).

Broadening injury networks may require the acceptance of programme impact and outcome indicators that are perceived to be of less immediate benefit to injury prevention. The current study has demonstrated that scheme providers are prepared to accept some alternative indicators, such as improved access to the target group and increased service uptake. Since some health outcomes may not manifest for several years (Nutbeam 1999; Chambers, Glasgow et al. 2013), this approach may be advantageous when seeking support to sustain public health programmes. Accepting broader outcomes offers a future basis for evaluating schemes through contribution analysis in which policies and practices operating within a specific context are assessed on their contribution to a desired outcome, rather than any attempt to attribute a direct causal link (Mayne 2001). The wider success of this strategy would be dependent on a shift within the injury

community from a focus on topic-based prevention to one that is more holistic. It would be necessary to ascertain, and possibly influence, those outcomes of importance to programme funders with a view to framing the aims of injury prevention programmes in such as way so as to meet these.

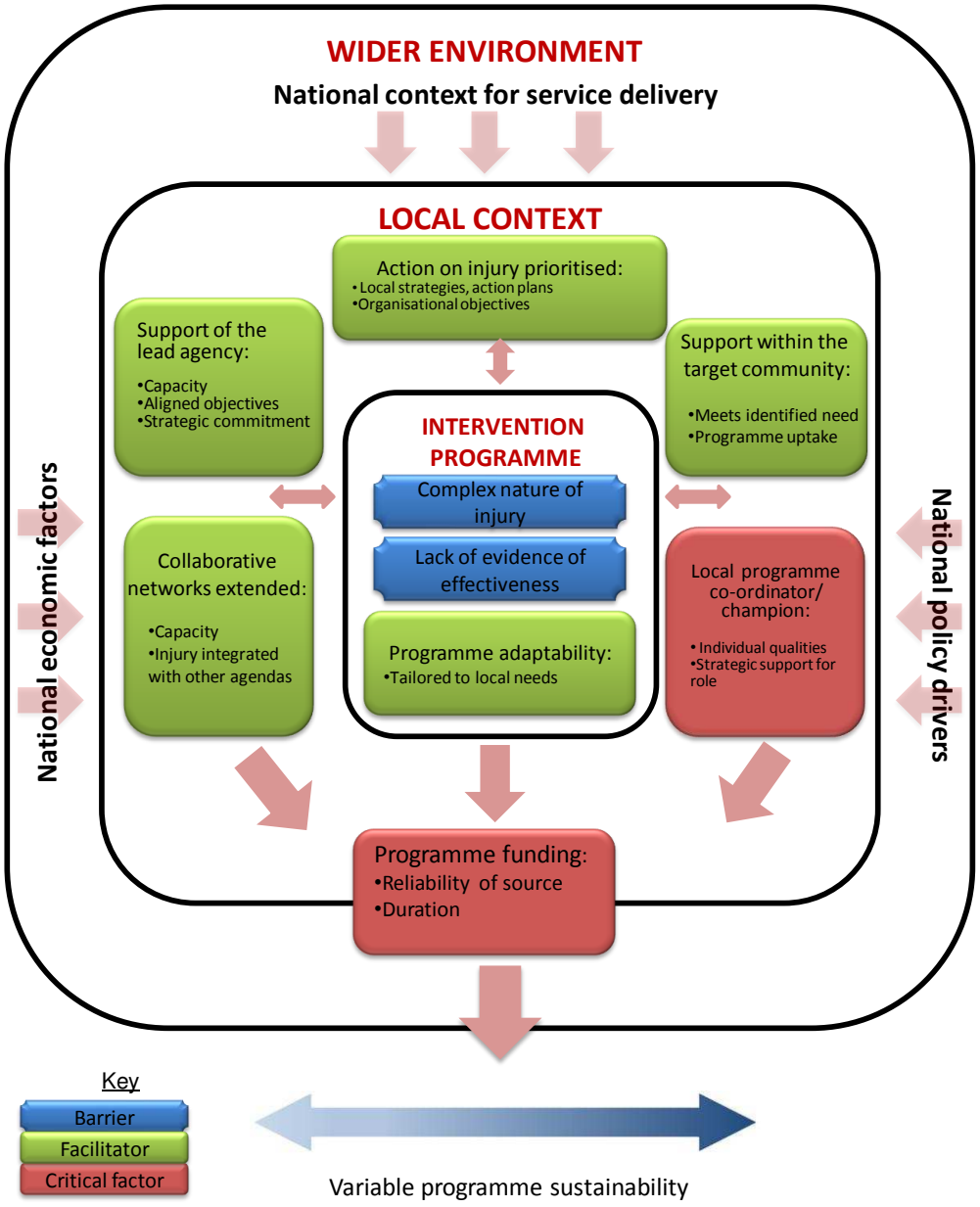
10.3.6.5 Site C – an anomaly

Within the current study the adoption of sustainability strategies was lowest in Site C. Here scheme adaptations were minimal, no local co-ordinator was in post, and the scheme operated independently of other local initiatives. Site C was the only one of the case study sites that had no pre-existing injury co-ordinator post or comprehensive safety scheme prior to registering with the national 'Safe At Home' programme. Comparison with other sites in the study suggests that the scheme in Site C was at an earlier stage in its evolutionary process. It may be, therefore, that a more proactive stance on sustainability will prove necessary in the future.

10.4 A CONCEPTUAL FRAMEWORK FOR THE SUSTAINABILITY OF CHILD INJURY PREVENTION PROGRAMMES

Based on the findings from the current study, a conceptual framework of the influences on sustainability within community-based child injury prevention programmes is presented (See Figure 8). This adopts a socio-ecological approach, categorising the factors that influence sustainability by the level at which they exert their influence: on the programme, the local context and the wider environment (Shediac-Rizkallah and Bone 1998).

Figure 8 A conceptual framework of the influences on sustainability within community-based child injury prevention programmes



The inter-relationships between factors operating at different levels are represented by directional arrows. Factors in the wider environment appear capable of acting as either barriers or facilitators for sustainability, depending upon the influence

that they exert on the local context for programme delivery. As example, a national policy environment that prioritises either injury prevention or programme sustainability is likely to create a more supportive local context, whilst a low policy priority for either of these areas would have the reverse effect.

The framework uses colour to distinguish the nature of the influences associated with sustainability at the level of the programme and within the local context. Facilitating factors are depicted as green, and as red where these have been identified as critical. The development of supportive strategies to strengthen these facilitating factors is likely to enhance the prospects of programme sustainability. Barriers to sustainability are depicted in blue. These provide an indication of where additional local effort may be required to moderate a negative influence on sustainability.

Within the framework, sustainability is represented by a continuum. This reflects the variability in the manifestations of sustainability (programme fidelity and benefits) that was observed within the current study. Using a continuum depicts a non-hierarchical approach (Wigfall, Boddy et al. 2006) in which no 'gold standard' or end point is assumed for sustainability. Instead the continuum supports movement in either direction, contingent upon how the programme responds to changes in the contextual factors over time.

Other conceptual models have similarly attempted to address variation in the way in which sustainability manifests. In their generic model for programme sustainability, Scheirer and Dearing propose six potential sustainability outcomes, referred to as 'dependent variables' (Scheirer and Dearing 2011).

Whilst programme activities and benefits feature among these, no indication of programme fidelity is included. The Dynamic Sustainability Framework includes a temporal dimension whereby sustainability is assessed at intervals to identify variation resulting from ongoing change in both the context and the programme over time (Chambers, Glasgow et al. 2013). The authors reject the concept that programme fidelity is of primary importance in favour of a culture of continuous quality improvement. This makes the assumption that programme changes are driven primarily by the desire to improve. As the current study demonstrated however, change may also arise of necessity, particularly through limited resource availability. This may encourage a 'revert-to-type' response in which 'new' programme components are sacrificed in favour of returning to an intervention that is more familiar to providers. A similar tendency to 'revert-to-type' has been reported with respect to resource constraints on other health programmes (NHS Education for Scotland 2012). The implication of this for sustainability may be that any effort to engender a culture of continuous quality improvement will be mitigated by resource availability at any given time.

The framework proposed within this study therefore identifies funding as a critical factor and locates it proximal to sustainability, emphasising its role as 'gatekeeper' within the process. Within other conceptual frameworks funding has been variously categorised as a factor operating at the programme level (Shediac-Rizkallah and Bone 1998; Savaya, Spiro et al. 2008), within the local context (Wiltsey Stirman, Kimberly et al. 2012; Schell, Luke et al. 2013) or that exists independently of the categories to which other influences are assigned (Scheirer and Dearing 2011). In the framework

proposed here, funding straddles both the local and the national contexts, reflecting the sources of funding that supported the case study sites.

The framework has identified the facilitating factors and intervention-specific barriers that were found to influence the sustainability of community-based injury prevention programmes. It is intended that this will offer guidance to local practitioners in selecting appropriate strategies to promote programme sustainability in their local setting.

10.5 STRENGTHS AND LIMITATIONS OF THE STUDY

10.5.1 Study strengths

This is the first study to comprehensively explore the sustainability of a community-based injury prevention programme in England. The study design was informed by recommendations for research into sustainability (Scheirer and Dearing 2011; Wiltsey Stirman, Kimberly et al. 2012). One of the key strengths was the use of multiple methods to consider multiple perspectives, thereby developing a more holistic understanding of the inter-related influences on sustainability (Murphy, Dingwall et al. 1998). Among the perspectives considered was that of the target group, an area that is currently under-represented in the sustainability literature.

A further strength of the study was the production of rich, in-depth data on the complex nature of sustainability, resulting from the naturalistic study design. The use of multiple case studies enabled the identification of programme factors and of influences on sustainability that operated within a range of settings. A clear research protocol was provided that

addressed study trustworthiness at each stage of the process (Shenton 2004; Carlson 2010). The adoption of an iterative methodology provided flexibility in implementing the study (Murphy, Dingwall et al. 1998). This was of particular value in enabling progressive focusing, for example, by using purposive participant recruitment in response to issues that arose from the formative findings.

Study findings were subjected to rigorous within-case and cross case analysis using a systematic framework approach that involved constant comparison of data and facilitated transparency at each stage of the process (Ward, Furber et al. 2013). The production of within-case profiles for each of the case study sites helped to manage the quantity of data produced (Stake 1995). Extracts from the site profiles together with the formative themes identified during within-case analysis were validated by the key contact in each site thereby increasing confidence in researcher interpretations (Creswell 2007). Peer review of the preliminary cross-case findings and draft thesis chapters, and expert review of the the literature and policy reviews, lent further credibility to the research process and mediated potential researcher bias (Lincoln and Guba 1985).

10.5.2 Potential limitations of the study

10.5.2.1 Bias in the selection of participants

One potential limitation of the study arises from the reliance on local professionals in selecting families to participate in the focus groups. In two of the case study sites it was not possible to recruit families from the target group using this method. In the three sites where recruitment was successful, selection bias may have resulted in a participant profile that

did not fully represent the target group. It was decided to accept this limitation since the method used also offered a successful means of accessing hard-to-engage families (Bonevski, Randell et al. 2014).

The family representatives were mainly mothers, however this was considered appropriate since these were the primary carers for pre-school children. Conducting individual follow-up interviews with selected focus group participants may have yielded more in-depth data from individual families, however this proved impractical within the time and resource constraints of the study.

10.5.2.2 Researcher bias

A second limitation concerns researcher bias arising from the situated standpoint inherent in an interpretivist approach (Creswell 2007; Benton and Craib 2011). Within the current study it was appropriate to address the potential influence of researcher assumptions (Murphy, Dingwall et al. 1998; Silverman 2010), particularly since those formed during her previous experience as a practitioner within the field of injury prevention were likely to impact on the creation and interpretation of data. This did create challenges, for example in maintaining a more objective assessment of health priorities within the policy environment. As with the other study components, interpretation of the findings were subject to supervisor and expert review to mediate researcher bias, and the comments made were taken into account in production of the final report (Lincoln and Guba 1985). Researcher reflexivity comprised a key component of data collection, analysis and commentary throughout the study (Shenton

2004) as well as forming the basis for a dedicated section presented earlier in Chapter Four (Section 4.8).

10.5.2.3 Social desirability bias

Although the researcher's insider stance was valuable in establishing credibility with professional participants, it may also have encouraged socially desirable responses (Bowling 2002). The tendency for programme staff to present their initiatives in a positive light has been noted in other public health studies (Rissel 1994). This may be relevant in the current study where, for example, an individual's employment is reliant on scheme sustainability. The data collected from a range of scheme professionals was therefore corroborated with that of family representatives and local policy documents to strengthen study credibility (Andrade 2009).

The comments of family representatives during the focus group sessions suggested a high level of honesty and openness among participants. This was evidenced by ready disclosure of less-than-ideal safety practices and admission of inability to cope under certain circumstances.

10.5.2.4 Transferability of findings

The situated nature of the case study approach can lead to criticism that the findings are of limited value in other settings (Yin 2009; Thomas 2011). Within this study "thick description" of both the phenomenon (sustainability) and the context was provided in order to enhance transferability (Arai, Roen et al. 2005; Yin 2009; Thomas 2011).

The five case study sites cannot be viewed as statistically representative of all schemes sustained in the original national

programme. However their geographical locations (the closest a travelling distance of 36 miles from the researcher's base, the furthest 219 miles away) ensured diversity among the local authority areas that were represented. In addition the purposive sampling undertaken provided a range of contextual characteristics. These were described for each site (see Chapter Five) to assist the reader in determining transferability.

Although the influences on sustainability that have been identified are supported within the wider public health literature, further research would be required to identify the extent to which these might apply in other injury prevention programmes or in similar programmes operating in other settings.

10.5.2.5 Confidentiality and anonymity

Interviews and focus groups were audio-recorded to assist in capturing the detail of discussions (Hammersley and Atkinson 1995). It is possible that this practice may have inhibited some participant contributions, despite assurances of confidentiality. Quotations used in the final report were assigned pseudonyms with gender-neutral names given to respondents who may have otherwise been identifiable within a specific participant group.

10.5.2.6 Duration of data collection period

The data collection period within individual case study sites varied, (See Chapter Five – Figure 7), with Site B being of greatest duration (thirteen months) and Site D the least (one month). Given the temporal aspect to sustainability it may

have been of value to extend the follow-up period for some of the sites to enable in-site changes to be tracked over time.

10.6 CHAPTER SUMMARY

This chapter has presented and discussed the principal study findings. The strengths and limitations associated with the study design have also been considered.

The current study adds to the existing knowledge of programme sustainability within public health by illustrating this from the perspective of a community-based injury prevention programme. The lack of consensus relating to the definition and conceptualisation of programme sustainability has been reaffirmed. Variations in the manifestations of sustainability over time, in the form of ongoing programme activities and benefits, support the recommendation that sustainability be assessed at intervals. The influencing factors on the sustainability of community-based child injury prevention programmes have been shown to be similar to those in studies of other public health interventions. A range of strategies to enhance the prospects of programme sustainability have been identified.

The study has also extended current knowledge in several ways. It has highlighted a lack of focus on sustainability within global and national public health policy that may inhibit the sustainability efforts of local programmes. It has identified differential levels of individual component sustainability that may have implications for the development of future complex community-based safety programmes. Based on the findings of the current study, a framework to assist in the planning for

sustainability of community-based child injury prevention programmes has been proposed.

CHAPTER ELEVEN

CONCLUSIONS

11.0 INTRODUCTION

This final chapter considers the implications of the findings, both from a theoretical and from a practical perspective, with respect to the sustainability of public health programmes. The potential transferability of findings is discussed. A series of recommendations supported by the findings are made.

11.1 STUDY OVERVIEW

This is the first study to comprehensively explore influences on the sustainability of a community-based injury prevention programme in England. Based on the findings, a framework for promoting sustainability within injury prevention programmes is proposed.

The intervention comprised a multi-component home safety programme for young children. It was targeted at families living in areas of England where the hospital admission rate for injuries to children under five years of age exceeded the national average.

The study employed a qualitative methodology. This supported the exploration of multiple perspectives and included those of the target group, thereby addressing areas that are currently under-represented in the public health literature on sustainability.

The multiple case study approach enabled comparison of findings both within and between a range of naturalistic settings. Data were collected from five sites between 22 and

32 months after national support for the original intervention programme ended. A review of policy documents and interviews with policy stakeholders situated the findings within the wider national and global context for public health.

The identification of multiple, inter-related factors capable of influencing sustainability has informed the development of a conceptual framework for promoting sustainability within child injury prevention programmes. The methodology used enabled the identification of factors associated with the intervention, the local setting and the national context for scheme delivery. Adequate programme funding and a supportive local environment were identified as critical conditions for sustainability. Three main strategies for supporting sustainability efforts at local level were identified: programme adaptations; local co-ordinator or champion and extending collaborative networks.

The study took place at a time of substantial change for public health in England. These changes and their impacts demonstrated the influence of wider, national level political factors on sustainability, with the interaction between local and national contexts determining how sustainability is conceptualised and manifested. The strategies adopted by local programmes illustrate some of the ways in which public health actors can learn to straddle these diverse contexts, with varying outcomes.

11.2 THEORETICAL IMPLICATIONS OF THE STUDY

11.2.1 Addressing gaps in the current evidence base

The study contributes to the overall evidence base for programme sustainability and for injury prevention, addressing in particular the lack of research conducted in the English setting. The existing literature has identified a range of influences on sustainability, however understanding of the relationship between these factors remains limited. The findings of this study establish a direct link between resource availability and fidelity to programme components.

The literature review conducted within this study revealed that consensus within the international literature on the definition, conceptualisation and assessment of sustainability has not yet been reached.

The study findings suggest that it may be useful to open a dialogue on programme sustainability within public health, initially in the English setting. This would explore the current understanding of sustainability and the extent to which it is addressed, with the ultimate aim of enhancing comparability between programmes and encouraging improved sharing of experiences between disciplines.

11.2.2 Conceptualising sustainability in the injury prevention context

Along with much of public health, injury prevention research has traditionally focused on the causal efficacy of the intervention using experimental methods such as randomised controlled trials to assess health outcomes (Scheirer and Dearing 2011). The results of these trials may be of less importance for sustainability than understanding the contextual factors that can influence programme operation within a diversity of settings. The findings of this qualitative

study have been used to develop a conceptual framework for promoting sustainability within community-based child injury prevention programmes. The application of the framework within other settings may help to build a more inclusive overall picture of sustainability that ultimately, will be of greater value to practitioners looking to support continuity of their own local safety programmes (Shenton 2004).

11.2.3 Incorporating sustainability into the public health planning process

The conceptualisation of sustainability as an ongoing process, amenable to the positive influence of supportive intervention, provides a basis for its inclusion within the programme planning cycle. Currently, however, sustainability receives a low priority within the planning of public health programmes.

The study findings support the inclusion of sustainability as an integral part of the programme planning cycle. Affording it equal priority with implementation may help to encourage the consideration of factors that are capable of influencing both of these processes. Furthermore, consideration of sustainability at an early stage of the planning process may help to create more favourable conditions for the development of supportive strategies.

11.3 PRACTICAL IMPLICATIONS OF THE STUDY

11.3.1 Adopting a conceptual framework for sustainability within child injury prevention programmes

The multiple influences on sustainability identified within this study have contributed to the development of a conceptual

framework for promoting sustainability within community-based child injury prevention programmes. Application of the framework at intervals would assist in ongoing assessment of sustainability. This could be supported by continuous monitoring of the immediate programme setting, informed by practitioners with local knowledge, for example with respect to changes in community demographics or relevant policy implications.

The study identified three supportive strategies for sustainability: programme adaptation, the presence of a local co-ordinator or champion, and extending collaborative networks. These strategies were all associated with ongoing programme benefits and enhanced funding opportunities. The relative effectiveness of each is currently unknown. Application of the framework within a broader range of settings may reveal additional influences on, and alternative strategies for sustainability. In this way a 'menu' for sustainability could be developed, enabling local providers to select from among a range of strategies in order to address the influences operating on sustainability within their specific context at a given time. The adoption of strategies for sustainability may help public health programmes to address some of the challenges that they currently face within the English setting.

11.3.2 The influence of the wider environment on local settings for programme delivery

The findings of the current study suggest that powerful influences operating in the wider environment, such as the political and economic context, may play a greater role in sustainability than is apparent from the existing literature.

Attempts within the case study sites to modify the local setting in support of sustainability were mediated by these factors.

A lack of concrete national and global policy support for programme sustainability was apparent. In addition, the absence of an overarching national policy directive for injury prevention resulted in varying levels of support for local safety schemes and a patchwork of provision nationally. Changes in the public health policy stance in England over time appeared to be driven primarily by political ideology as opposed to implementing learning from the evidence base.

The findings reflect the transitional period for public health in England during which the study took place. Recent and impending change associated with the transfer of responsibility for public health in England from health to local authorities is likely to require ongoing support to ensure successful implementation. The changing context may provide a timely opportunity to compare the impact on sustainability of health-related policies in England with those in other European countries.

The effect of the global economic recession was apparent throughout the study period. This manifested in reduced public sector spending and increased competition for resources (Vaitilingam 2009). These factors have combined to create a rapidly changing national context in England that proved challenging to local scheme sustainability. The use of supportive strategies within all of the case study sites raises questions about the value of providing "seed corn" funding for public health projects. This is particularly relevant where issues of capacity, infrastructure and time frame, all of which

are associated with longer term programme development, are not addressed.

Whilst Children's Centres currently provide a strong lead for child injury prevention activities, they have been subject to a continued, steady pattern of closures and are increasingly reliant on volunteers. This brings into question their ongoing ability to deliver pre-school safety provision. One potential mechanism that may support sustainability efforts, by increasing the capacity for scheme delivery, is the involvement of parents as peer educators.

11.3.3 Differential levels of component sustainability

The relative ease of integration with existing practice and the low delivery cost associated with parental education made this component more sustainable than the provision and installation of safety equipment. This has consequences for the resourcing of complex interventions since it suggests that more costly components may be at greater risk of early cessation, thereby potentially reducing the overall effectiveness of the intervention.

To counter this within home safety schemes it may be prudent to consider alternative mechanisms for the delivery of particular components in the longer term. For example, the educational component could be modified to offer support and training for communities that would enable them to provide their own installation and equipment maintenance services. An alternative suggestion, albeit more complex to implement, lies in the enactment of legislation that would place the onus on the landlord to install and maintain home safety equipment

in rental properties, where these are occupied by tenants with children under the age of 5 years.

11.4 TRANSFERABILITY OF THE FINDINGS

The influences on sustainability that have been identified in this study are supported by the wider public health literature. A small number of programme or context specific issues were also identified, for example in the detailed nature of programme benefits and in respect of some of the barriers associated with the intervention.

The strategies for sustainability adopted in the case study sites may be transferable to other community-based health programmes operating in low income settings. However, given that influences may vary between settings and programme types, further research is recommended to determine the extent of this.

The literature review conducted for this study identified few publications that specifically addressed the sustainability of injury prevention programmes. It is of note, however, that a growing body of evidence on sustainability is emerging from public health and from other disciplines, such as the fields of business and management. Similarity between the findings from the current study and the wider evidence base suggests that injury prevention professionals could learn much from sharing between disciplines. This would support a move away from the topic-based approach sometimes favoured by health promotion, towards appreciation of a more diverse evidence base.

11.5 RECOMMENDATIONS

The following recommendations are made based on the findings of the current study.

Future research into sustainability should:

- Make appropriate use of qualitative research methods that support multiple perspectives on sustainability.

- Undertake testing of the framework proposed for sustainability within alternative injury settings with a view to refining this, and contributing further to the strategies identified for sustainability.

Public health professionals should:

- Open a dialogue into the conceptualisation and assessment of sustainability within public health in England to determine how best to support this.

- Integrate sustainability into the existing planning process for health interventions.

- Encourage efforts to address the sustainability of public health programmes through the education of policy makers and practitioners.

Local injury prevention practitioners should:

- Adopt the framework proposed for sustainability in order to guide local decisions regarding appropriate strategies that may promote this.

11.6 CONCLUSION

Unintentional injury in childhood continues to be a significant public health concern associated with negative health, social and economic consequences (Peden, Oyegbite et al. 2008). The elevated risk of injury to children living in socially deprived circumstances persists despite increased targeting of prevention efforts (Mytton, Towner et al. 2012). Within the growing evidence base for injury prevention, the implementation of multi-component, community-based programmes have been advocated as a means of addressing health inequalities and home safety for young children (Kendrick, Coupland et al. 2009; National Institute of Health and Clinical Excellence 2010b).

This study explored influences on the sustainability of local home safety schemes that were delivered to high risk target groups in a range of naturalistic settings. The findings have informed development of a conceptual framework for promoting sustainability within community-based child injury prevention programmes. Multiple commonly-encountered challenges to sustainability were identified, in response to which a range of mediating strategies had been developed and implemented at local level. These strategies supported the ongoing delivery of programme activities and associated benefits and enhanced the prospect of obtaining further programme funding. Such strategies may be crucial in enabling the longer-term effects associated with public health interventions to manifest.

The study took place at a time of considerable change for public health provision in England. The wider political and economic context presented significant barriers to the

sustainability of local schemes. Together with the low priority afforded to injury within the national public health agenda this would suggest that the adoption of supportive strategies may prove vital if local intervention programmes are to be sustained.

The current findings are derived from a home safety programme that operated in low income settings. Their contribution may be relevant, however, in developing a set of broad-based principles for sustainability applicable to other community-based public health interventions.

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APPENDICES

Appendix 1: Safety equipment provided by the national 'Safe At Home' programme

Participating families were eligible to receive the following:

- Safety gates (up to 2)
- Window restrictors (up to 6) (allow window to open partially)
- Non-slip bath/shower mat (1)
- Fireguard (1)
- Locks for kitchen cupboards containing chemicals/medicines (2)
- Corner cushions (up to 2 packs of 4)
- Blind cord shortener

	***Safety Gate*** *(BS EN 1930)* *Screw-fixed safety gate. Wall-mounted, no trip bar, one-way limiters to prevent gate from opening over the stair drop (if fitted at the top of the stairs). Self extending to accommodate spaces of varying widths.*
	***Fireguard*** *(BS.8423:2002)* *Wall-mounted, self-extending fireguard.*
	***Window Restrictor*** *(no EU standard, this conforms to Swedish SS 3587)* *This keyless model can be opened in an emergency using extreme adult strength. Fittings appropriate to the surround (UPVC, wood etc) are provided by the installers.*
	***Cupboard Lock**** *One key can cover up to 4drawers/cupboards. Limited numbers of an alternative model were made available for use on single cupboards.*
	***Corner Cushion**** *Provides protection from sharp furniture.*

*** For smaller equipment items, no safety standards currently apply.*
(Illustrations courtesy of the RoSPA 'Safe At Home' website).

Appendix 2 Summary table of all publications included in the Literature Review

Authors	Date	Country of origin	Focus of publication	Publication type
Barnett et al	2004	Australia	Injury prevention - elderly falls	Primary study: mixed methods
Bracht et al	1994	U.S.	Healthy Hearts	Primary study: quantitative methods
Bjerre & Schelp	2000	Sweden	Injury prevention – Safe Communities	Primary study: quantitative methods
Carroll et al	2007	UK	Implementation fidelity	Literature review, conceptual framework
Centre for Disease Control	2010	U.S.	Community public health	Planning guide: sustainability
Central Sydney Health Service	1994	Australia	Health promotion	Planning guide: programme development
Christoffel & Gallagher	2006	U.S.	Injury prevention	Book chapter: sustainability
Clinical Excellence Commission	2008	Australia	Clinical practice	Advice/guidance: sustainability
Cramm et al	2013	Netherlands	Community care	Primary study: quantitative methods
Davies & Macdowall	2010	UK	Health promotion	Book chapter: sustainability
Evashwick & Ory	2003	U.S.	Health programmes – older people	Primary study: qualitative methods
Fieldstein & Glasgow	2008	U.S.	Health interventions	Literature review, conceptual model (PRISM)
Glasgow et al	2006	U.S.	Health promotion	Evaluative framework (includes programme maintenance)
Goodman & Steckler	1989a	U.S.	Health promotion	Primary study: qualitative methods. Conceptual model: institutionalization
Goodman & Steckler	1989b	U.S.	Health promotion	Primary study: case studies. Framework for institutionalization

Authors	Date	Country of origin	Focus of publication	Publication type
Goodman et al	1993a	U.S.	Health promotion	Primary study: quantitative methods. Sustainability tool: Level of Institutionalization scales
Goodman et al	1993b	U.S.	Community-led health promotion	Primary study: case studies
Goodman et al	2002	U.S.	Health promotion	Book chapter: model for organisational change
Greenhalgh et al	2004	UK	Health service delivery	Systematic review: includes programme sustainability
Gruen et al	2008	Australia	Health programmes	Systematic review, conceptual framework
Hanson et al	2009	Canada	Injury prevention – elderly falls	Primary study: qualitative case studies
Hanson & Salmoni	2011	Canada	Injury prevention – elderly falls	Primary study: qualitative case studies
Hanson et al	2012	Australia	Injury prevention – Safe Communities	Primary study: quantitative methods
Harris & Sandor	2013	Australia	Health promotion	Primary study: quantitative methods
Hawe et al	1997	Australia	Health promotion, capacity building	Conceptual discussion
Hawe et al	1998	Australia	Health promotion	Primary study: qualitative methods
Heward et al	2007	Australia	Health promotion, capacity building	Primary study: case studies, conceptual discussion
Johnson et al	2004	U.S.	Substance abuse	Systematic review, professional think-tank, conceptual model.
Lapelle et al	2006	U.S.	Smoking cessation	Primary study: qualitative case studies

Authors	Date	Country of origin	Focus of publication	Publication type
Lefebvre	1992	U.S.	Health promotion	Journal editorial: programme sustainability
Leurs et al	2008	Netherlands	School-based health promotion	Primary study: piloting of tool to assess sustainable collaboration (DISC)
Lindqvist et al	1996	Sweden	Injury prevention – Safe Communities	Primary study: qualitative action research
Lovarini et al	2013	Australia	Injury prevention – elderly falls	Systematic review
Luke et al	2014	U.S.	Public health	Primary study: development of sustainability tool (PSAT)
Mackay & Vincenten	2010	Netherlands	Injury prevention - children	Primary study: comparative assessment of progress indicators in Europe
Mancini & Marek	2004	U.S.	Community-based family programmes	Conceptual model and sustainability index
McMillan	2013	Canada	Nursing and management	Literature review and concept analysis
NHS Institute for Innovation and Improvement	2003	UK	Innovative health care	Guide to programme sustainability, scale for assessing sustainability
Nilsen	2004	Sweden	Injury prevention – community based	Systematic review: evidence of effectiveness within programme evaluations
Nilsen et al	2005	Sweden	Injury prevention – Safe Communities	Primary study: qualitative case studies
Nordqvist et al	2009	Sweden	Injury prevention – Safe Communities	Primary study: qualitative methods
Nutbeam	2010	Australia	Health promotion	Book chapter: sustainability as component of capacity building

Authors	Date	Country of origin	Focus of publication	Publication type
Olsen	1998	Norway	Health care, developing countries	Conceptual: analysis framework for sustainability
Paine-Andrews et al	2000	U.S.	Health programmes (pregnancy and substance misuse)	Primary study: mixed method case studies
Pluye et al	2004	Canada	Public health	Conceptual discussion
Pluye et al	2005	Canada	Heart health	Primary study: qualitative case studies
Rissel et al	1995	U.S.	Healthy hearts	Primary study: mixed methods
St Leger	2005	Australia	Health promotion	Journal editorial questioning sustainability
Sarriot et al	2004	U.S.	Child health programmes, developing countries	Conceptual discussion, method for assessing sustainability
Saunders et al	2011	U.S.	School based physical activity	Primary study: qualitative methods
Savaya et al	2008	Israel	Social programmes	Literature review + primary study: qualitative case studies
Savaya et al	2009	Australia	Social programmes	Primary study: quantitative methods
Savaya & Spiro	2012	Israel	Social programmes	Primary study: quantitative methods. Testing of model for predictors of sustainability.
Scheirer	1993	Canada	Health promotion	Commentary on Goodman et al, 1993
Scheirer	2005	Canada	Health programmes	Systematic review and commentary
Scheirer & Dearing	2011	U.S.	Public health	Conceptual framework and agenda for sustainability research

Authors	Date	Country of origin	Focus of publication	Publication type
Scheirer	2013	U.S.	Health programmes	Conceptual framework for sustainability based on programme type
Shediac-Rizkallah & Bone	1998	U.S.	Health programmes	Literature review and conceptual model
Schell et al	2013	U.S.	Public health	Literature review and conceptual framework
Swerissen & Crisp	2004	Australia	Health promotion	Conceptual discussion
Wharf Higgins et al	2007	Canada	Healthy eating	Primary study: qualitative case studies
Whelan et al	2014	Australia	Community-based obesity prevention	'Scoping review'
Whitelaw et al	2012	UK	Health promoting settings (health service)	Primary study: mixed method case studies
Wiltsey Stirman et al	2012	U.S.	Healthcare programmes	Systematic review and research recommendations
Yin	1981	U.S.	Innovations in municipal agencies	Primary study: qualitative case studies

APPENDIX 3 Data extraction form used in Policy Review

SOURCE: INTERNATIONAL/NATIONAL/LOCAL POLICY

Reference:

Date of publication:

No. of pages:

1. Content

Aims:

Goals/targets clearly identified?

Time period

Nature of home safety programme(s) recommended:
(nb relative emphasis re: behavioural/environmental change)

Target group clearly identified?

Whole population/sub-groups (why prioritised?):

Use of evidence-base

2. Implementation processes

Identification of lead and partner agencies (actors), responsibilities

Recommended action/delivery processes
(plan described?)

Allocation of resources, funding
(specified?)

Discussion of capacity/infrastructure e.g. training

Opportunity for practitioner influence in implementation

Timeframe for implementation?

Linkage with other policies/programmes

Legal status – binding/not, adopted by Gov't or not?

Planning for sustainability – mentioned?

Monitoring/evaluation of policy implementation?
(outcome/impact/process measures)

4. Context

Contributors, sectors represented, omissions?
Stance/tone?

Target audience – who?
(accessibility/availability, dissemination)

Dependence on external factors
(e.g. policy, wider economics)

Wider timeframe and perceived impact
(historical, consistency of approach/change in direction/originating in key documents e.g...)

Supporting factors/initiatives

Competing priorities – other international/national initiatives

Other comments

Reviewer's standpoint – reflexivity

APPENDIX 4 Public health documents included in the Policy Review

Documents of international or European origin

Council of the European Union (2007). "Council recommendation of 31 May 2007 on the prevention of injury and promotion of safety." Official Journal of the European Union 200(C164): 1-2.

European Child Safety Alliance (2004). Priorities for Child Safety in the European Union:Agenda for Action. Amsterdam, European Child Safety Alliance.

European Child Safety Alliance (2012). Child Safety Report Card: Europe Summary for 31 Countries. Birmingham, European Child Safety Alliance.

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Peden, M., K. Oyegbite, et al., Eds. (2008). World Report on Child Injury Prevention. Geneva Switzerland, World Health Organization.

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Documents of English origin

Acheson, D. (1998). Independent inquiry into inequalities in health (The Acheson Report). London, Department of Health.

Audit Commission and Healthcare Commission (2007). Better safe than sorry: preventing unintentional injury to children. London, Audit Commission and Healthcare Commission.

British Medical Association (2001). Injury Prevention. London, British Medical Association Board of Science and Education.

BMA Board of Science (2013). Growing up in the UK - Ensuring a healthy future for our children. London, BMA.

Buck, D. and S. Gregory (2013). Improving the public's health: a resource for local authorities. London, The King's Fund.

Department for Children Schools and Families (2007). The Children's Plan: Building Brighter Futures. London, The Stationery Office.

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Appendix 5: Data sources consulted prior to site selection

Source	Information provided
National Evaluation Report for 'Safe At Home' (Errington, 2011).	Case study reports (20 schemes). Overall findings of evaluation.
'Safe At Home' national evaluation database (University of Nottingham, 2011).	National survey of scheme co-ordinators (2010) (scheme history, process of implementation, future plans).
Database of 'Safe At Home' sites (RoSPA, 2009-2011).	Date of registration, local lead agency.
Database of stock installations for schemes (RoSPA, 2011).	Size of equipment allocation to local schemes.
Monthly monitoring reports for national programme (RoSPA 2009-2011).	Performance indicators on local scheme delivery.
Project database (RoSPA, 2012).	Schemes continuing to receive safety equipment from central supplier at end of period of national support.

Appendix 6: Sample background information for study participants (National 'Safe At Home' stakeholders)

Division of Nursing, Midwifery and Physiotherapy
B Floor
Queen's Medical Centre
Nottingham
NG7 2UH

University Logo

Dear

FACTORS INFUENCING SUSTAINABILITY OF HOME SAFETY SCHEMES IN ENGLAND

Name of Researchers: **GAIL ERRINGTON**
MICHAEL WATSON

We are writing to invite you to take part in an important research study. Before you decide we would like you to understand why the research is being done and what it would involve for you. These three sheets provide information on the study. Talk to others about the study if you wish. Ask us if there is anything that is not clear – our contact details are on the last page.

What is the purpose of the study?
The study relates to Safe At Home, the national home safety equipment scheme. We are working with professionals involved in delivery of the local schemes, and with parents, in order to gain an understanding of the factors that have contributed to scheme sustainability. This will be used to produce recommendations on planning for sustainability for those involved in the development and delivery of home safety equipment schemes. In addition to obtaining a local perspective, we would also like to speak to individuals like yourself who had an overview of the national scheme. The study forms part of a PhD undertaken with the University of Nottingham. The research student is Gail Errington.

What does taking part involve?
The study will involve a one-to-one telephone interview conducted by Gail Errington, researcher at the University of Nottingham. If you decide to take part, a convenient time will be arranged for this in order to discuss your experience of the scheme. The telephone call will take around 30 minutes. Formal consent would be taken at the start of the interview, and with your agreement the discussion would be audio-recorded. You may be asked to take part in a further interview of similar duration to follow-up on some of the issues raised. You will be given the opportunity to provide feedback on the findings.

Why have I been invited to take part?
We are inviting you to take part because you were involved in the co-ordination of the national Safe At Home programme.

Do I have to take part?
No, it is up to you. If you do decide to take part you can withdraw at any time and without giving a reason.

Expenses and payments
Participants will not be paid to participate in the study.

Are there any risks if I take part in the research?
Not really, we just need a little of your time to answer our questions about home safety schemes.

What are the possible benefits of taking part?
The study aims to help identify ways of planning for the sustainability of home safety equipment schemes. By taking part, you will help to inform the development of recommendations for those involved in scheme development and delivery at both national and local level.

What if there is a problem?
If you are worried about any part of this study, you can speak to the researchers who will try to answer your questions. Their telephone numbers are on the last page. If you are still unhappy and wish to complain formally you can do this through the Ethics Committee Secretary, Mrs Louise Sabir, Division of Therapeutics and Molecular Medicine, D Floor, South Block, Queen's Medical Centre, Nottingham, NG7 2UH. Telephone 0115 8231063. E-mail louise.sabir@nottingham.ac.uk.

Will my taking part in this study be kept confidential?
All the information you give us will be kept strictly confidential. Information will be kept on a password protected database. Any information about you which leaves the research unit will have your name and address removed so that you cannot be recognised from it. We will protect your right to privacy and informed consent within the Data Protection Act, 1998.

Your personal data (address, telephone number) will be kept for up to 12 months after the end of the study so that we are able to contact you about the findings of the study and possible follow-up studies (unless you tell us that you do not wish to be contacted). All of our research data will be kept securely for 7 years, after this time it will be disposed of securely.

What you say in the interview is confidential but if you tell us anything that we feel puts you or anyone else at risk, we may need to report this to the appropriate persons.

What will happen if I don't want to carry on with the study?
Your participation is voluntary and you are free to withdraw at any time, without giving any reason. If you withdraw then the information collected up that point cannot be erased and, with your consent, may still be used in the project analysis.

What will happen to the results of the research study?
The research will be completed in September 2014. Study outputs will take the form of a written thesis, published papers and conference presentations. Recommendations on planning for sustainability will be produced for those involved in the development and delivery of home safety equipment schemes. A summary of study findings will be made available to participants.

Who is organising and funding the research?
This research is being organised by the University of Nottingham and is being funded by a scholarship awarded by the Royal Society for the Prevention of Accidents (RoSPA).

Who has reviewed the study?
This study has been reviewed by the University of Nottingham Faculty of Medicine and Health Sciences Research Ethics Committee.

What do I do now?
You don't need to do anything. Gail will contact you in a few days time to ask whether you'd like to take part and to arrange a convenient time for the interview.

In the meantime, if you'd like further information on the study, please contact Gail either by e-mail (ntxge1@nottingham.ac.uk) or by telephone (dedicated study mobile number).

Thank you for taking the time to read this information.

Contact details for the research team:

Gail Errington, Researcher, School of Nursing, Faculty of Medicine and Health Sciences, Medical School, Queen's Medical Centre, Nottingham, NG7 2UH.
E-mail: ntxge1@nottingham.ac.uk
Telephone: dedicated study mobile no.

Dr Michael Watson, Associate Professor of Public Health, School of Nursing, Faculty of Medicine and Health Sciences, Medical School, Queen's Medical Centre, Nottingham, NG7 2UH.
E-mail: michael.watson@nottingham.ac.uk
Telephone: 0115 (82) 30760

Appendix 7: Sample consent form for study participants (professionals)

University Logo

Title of Project: **A STUDY OF HOME SAFETY SCHEMES IN ENGLAND**

Name of Investigator: **GAIL ERRINGTON** Participant reference ---/---/---

PROFESSIONAL CONSENT FORM

Please read this form and sign it once Gail has fully explained the aims and procedures of this study to you.

- I voluntarily agree to take part in this study.
- I confirm that I have read and understood the information sheet given to me earlier.
- Gail has explained the aims and procedures of the study to me today. I have been given the opportunity to ask questions and discuss all aspects of the study with Gail and I have understood the advice and information given as a result.
- I agree to the researchers using the information I provide in the study but not to use of my name.
- I agree to the interview being recorded.
- I understand that information I give during the study will be kept in a secure database. If data is transferred to others it will be made anonymous. Data will be kept for 7 years after the results of this study have been published.
- I understand that I can ask for further instructions or explanations at any time.
- I understand that I am free to withdraw from the study at any time, without having to give a reason why.

Name:

……

(Please print)

Signature:……**Date:** ……

The above signed has previously received a copy of the information sheet. I confirm that today I have fully explained the purpose of the study and what is involved and have given the above signed a copy of this form.

Investigators Name:……Gail Errington……

Investigator's signature:……**Date**:……

Appendix 8: Sample topic guide (Parent focus group)

Resources required –flip chart + stand/blu-tac, audio recorder

INTRODUCTION
Personal introduction to researcher, explain purpose of meeting
Looking at the ways in which home safety equipment schemes work – interested in a range of views, those of parents/carers are really important. Spend around (60?) minutes talking about your experiences – what you think, no right/wrong answers.

Formalities:
Using consent form as a basis, check understanding of study information, voluntary participation, right to withdraw, confidentiality and confirm consent for audio-recording and participation.
Sign consent form, researcher to counter-sign – copy to be returned to participants.

The way we will work
Feel free to speak – your opinions will not have a negative effect on the services or the care that you're receiving.
Ask that we respect each other's views – taking turns to speak, listening when someone else is talking, try not to speak over each other.

Switch on audio recorder.

Quick introductions – name, how many children you have and their ages.

A. GENERAL PRIORITIES re: CHILD SAFETY

1. I'd like to start by thinking about your own home - what is your main concern about keeping your children safe when they're at home?

Prompts: *-are there any particular dangers?*
- what can you do about them? ***B/F***
- whose responsibility is this?
- can you make changes yourself/dependent on others?

Researcher records responses on flip-chart. Encourages group participation re: barriers/facilitators.

B. EXPERIENCE OF HOME SAFETY EQUIPMENT SCHEME

2. I'd like to think now about the home safety equipment scheme and how you got involved. Can you remember how you first heard about it?

Prompts: i) from health visitor, friend, did you see it advertised somewhere?
ii) what made you decide to take part?
(expectations – did it deliver?)

3. I'd be interested in your view of the different parts of the scheme. Let's start with the home visit – did everyone have a home visit?

(If not, why was this? was alternative offered e.g. groups sessions?)

What did you think of it?

Prompts: - who did the visit?
- what did they do? (level of family engagement, checklist)
- did you find this helpful? Anything you didn't like?
- did you get safety advice/information at the same time? – format, content,opinion?

Did you make any changes based on the advice you received?
e.g. move things around at home, change the way you do things (examples).
Has this been maintained? ***– B/F***
Family's response to visit?

4. The other main part of the scheme is providing safety equipment. What did you think of this?

Prompts: - equipment choice, suitability ***B/F***
- fitting – how was the process? Any problems? How addressed? ***B/F***
- have you continued to use the equipment? Has it been ok? ***B/F***
- if stopped using – why?

5. Were you given the chance to provide feedback (tell anyone what you think about the scheme)?

Prompts: - fill in a survey, follow-up 'phone call, home visit after equipment fitted..(any follow-up on that?)
- what would be the best way to get your views on the scheme?
- has anyone been involved with the scheme in other ways e.g. recommending it to other families, helping with home visits,...
- the scheme here is run by (...name...), do you know anything about any other services/activities that they provide? Do you take part in any of these?
- can you remember seeing any information about the scheme, or how it's been doing since you took part? e.g. posters, something on the news/in the paper, newsletter..

- has anyone been back in touch with the scheme for any other reason since the equipment was fitted? (e.g. extra equipment items)

6. Overall, what do you think of the equipment scheme as a way of addressing child safety?

Prompts: *- suitable? Improvements? Alternative ideas?*
- does the scheme reach the people who need it – does anyone miss out?
- has the scheme changed the way you think about home safety? – in what way?
- has the scheme changed your view on child safety outside the home e.g. in the car, in the playground...?
- is home safety something you pay much attention to? Other priorities?

7. Is there anything else anybody wants to say?

Prompts: *- anything you want to add or go back to?*
- anything you want to ask me or anybody else?

Turn off audio recorder.

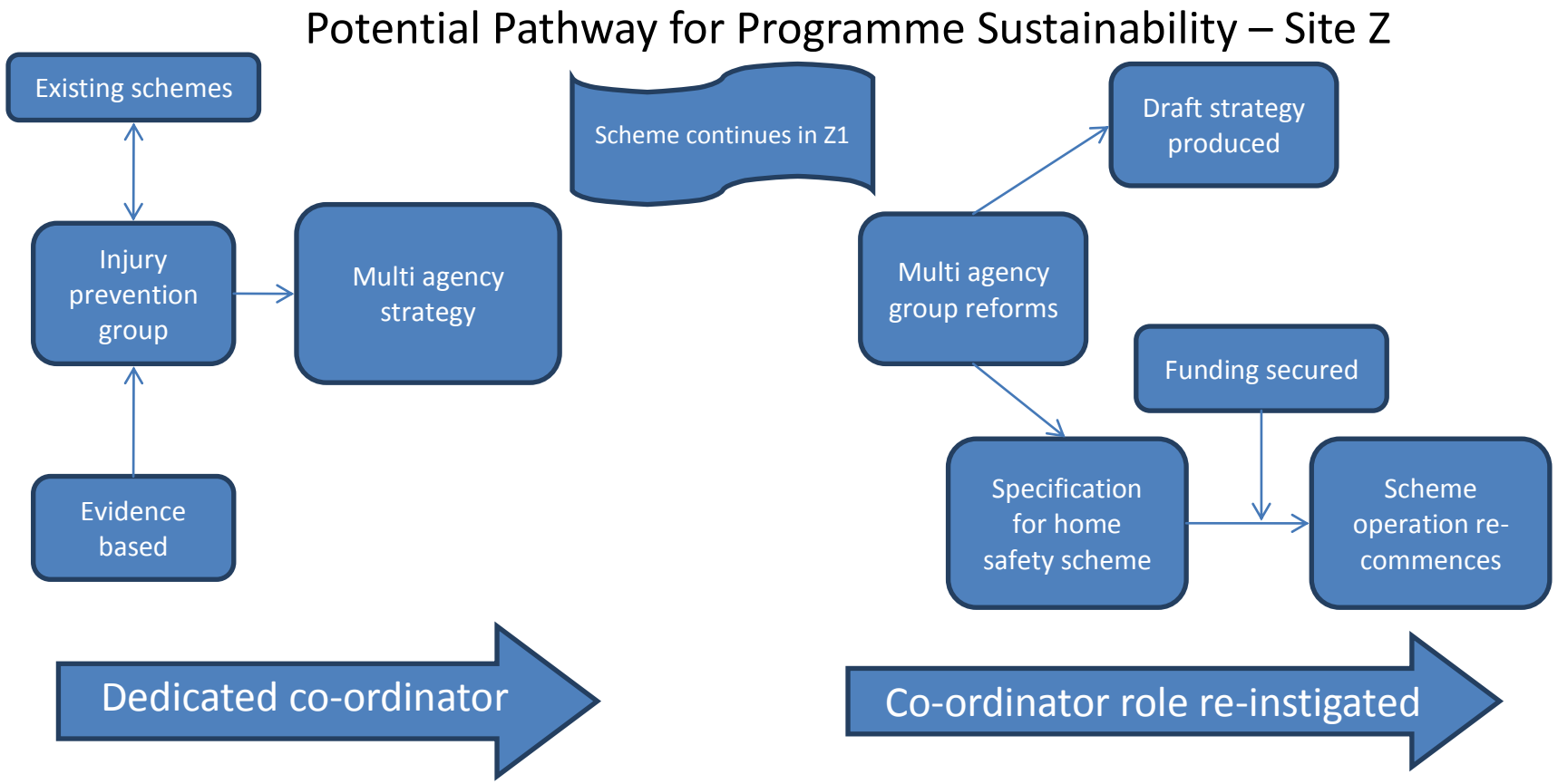
Thank you for taking the time to come along today, I really appreciate your contribution.

Once I've got all of the information together I might need to come back and check that it's accurate. If anyone is able to help with that I'd be really grateful.

Anonymity – may use individual quotes in reports but won't identify you in these – opportunity to select a pseudonym?
You have my contact details, just get in touch if there's anything additional that occurs to you or if you have any questions, and once again, thank you for your help.

RESEARCHER – COMPLETE PERSONAL REFLECTION SHEET

Appendix 9: Example of sustainability flowchart, Site Z



Appendix 10: Letter of approval, University of Nottingham Medical School Ethics Committee (20/11/2012)

Direct line/e-mail
+44 (0) 115 8231063
Louise.Sabir@nottingham.ac.uk

Faculty of Medicine and Health Sciences
Medical School Research Ethics Committee
Division of Therapeutics &
Molecular Medicine D Floor, South Block
Queen's Medical Centre
Nottingham
NG7 2UH
Tel: +44 (0) 115 8231063
Fax: +44 (0) 115 8231059

20th November 2012

Mrs Gail Errington
Research Student
C/o Dr M C Watson & Dr C Evans
School of Nursing Midwifery & Physiotherapy
Medical School
QMC Campus
Nottingham University Hospitals
NG7 2UH

Dear Mrs Errington

Ethics Reference No: B15112012 SNMP 12104
Study Title: An investigation of factors contributing to the sustainability of home safety equipment schemes in communities at higher risk of injury: a case study approach on a national programme in England.
Lead Investigator: Gail Errington, PhD Student, School of Nursing Midwifery & Physiotherapy.
Chief Investigators/supervisors: Michael C Watson, Associate Professor of Public Health, Catrin Evans, Lecturer in International Health, School of Nursing, Midwifery and Physiotherapy.
Duration of Study: 11/12-09/14 2 yrs **No of Subjects:** 60
Thank you for submitting the above application which was considered at the Medical School Research Ethics Committee at its meeting on 15th November 2012. The following documents were reviewed:

- UoN Medical School Ethics Committee Application form 11/9/2012
- Factors influencing sustainability of home safety schemes in England Protocol Final version 1.0
15/10/12.
- Sponsorship Statement from UoN Research and Graduate Services dated 24th October 2012.
- Henderson Corporate: Evidence of Insurance- The University of Nottingham &/or Subsidiary Companies - dated 25 July 2012.
- Factors influencing sustainability of home safety schemes in England Family Information Sheet
19/10/12 Final version 1.0

· Factors influencing sustainability of home safety schemes in England Professional Information Sheet
19/10/12 Final version 1.0
· Factors influencing sustainability of home safety schemes in England Family Consent Form 19/10/12
· Factors influencing sustainability of home safety schemes in England Professional Consent Form
19/10/12
· Letter of agreement from Sharon Leonard, Centre Manager Bushbury Triangle Children's Centre
Wolvehampton dated 23rd October 2012.
· Letter of agreement from Mr Paul Hill, Board Manager, Bradford Safeguarding Children Board dated
23rd October 2012.
· Factors influencing sustainability of home safety schemes in England Professional Primary Contact
Interview 1A Final version 1.0: 30/09/12
· Factors influencing sustainability of home safety schemes in England Professional Interview Stakeholder 1B Final version 1.0: 30/09/12
· Factors influencing sustainability of home safety schemes in England Family Focus Group Final
Version 1.0:30/09/12

This study was approved.

Approval is given on the understanding that the Conditions of Approval set out below are followed.

Conditions of Approval
You must follow the protocol agreed and any changes to the protocol will require prior Ethics' Committee approval.
This study is approved for the period of active recruitment requested. The Committee also provides a further 5 year approval for any necessary work to be performed on the study which may arise in the process of publication and peer review.

You promptly inform the Chairman of the Research Ethics Committee of

(i) Deviations from or changes to the protocol which are made to eliminate immediate hazards to the research subjects.

(ii) Any changes that increase the risk to subjects and/or affect significantly the conduct of the research.

(iii) All adverse drug reactions that are both serious and unexpected.

(iv) New information that may affect adversely the safety of the subjects or the conduct of the study.

(v) The attached End of Project Progress Report is completed and returned when the study has finished.

Yours sincerely

Dr Clodagh Dugdale
Chair, Nottingham University Medical School Research Ethics Committee