Planning and Public Health professionals' experiences of using the planning system to regulate hot food takeaway outlets in England: A qualitative study

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ABSTRACT

Takeaway food outlets offer limited seating and sell hot food to be consumed away from their premises. They typically serve energy-dense, nutrient-poor food. National planning guidelines in England offer the potential for local planning policies to promote healthier food environments through regulation of takeaway food outlets. Around half of English local government areas use this approach, but little is known about the process of adoption. We aimed to explore experiences and perceived success of planning policy adoption. In 2018 we recruited Planning and Public Health professionals from 16 local government areas in England and completed 26 telephone interviews. We analysed data with a thematic analysis approach. Participants felt that planning policy adoption was appropriate and can successfully regulate takeaway food outlets with the intention to improve health. They identified several facilitators and barriers towards adoption. Facilitators included internal co-operation between Planning and Public Health departments, and precedent for planning policy adoption set elsewhere. Barriers included "nanny-state" criticism, and difficulty demonstrating planning policy effectiveness. These could be considered in future guidelines to support widespread planning policy adoption.

1. Introduction

Takeaway food outlets are an increasingly ubiquitous food retail format in England and elsewhere (Carmichael et al., 2019). Takeaway food outlets typically sell hot food for consumption off the premises, with limited seating available (Lake et al., 2012; Mackenbach et al., 2019), and foods commonly sold include burgers, fried chicken, fish and chips, and pizza (Jaworowska et al., 2012). Using this definition, in 2017 there were around 58,000, mostly independent, takeaway food outlets in England, an increase of 10% since 2014 (Burgoine et al., 2017; Food environment assessment tool (Feat), 2020).

Increasing takeaway food outlet concentration is a concern for area vitality and economic viability due to closed daytime shop-fronts (with takeaway food outlet opening hours often evening-only), increased litter, and anti-social behaviour (Townshend, 2017). Takeaway food outlets are also a growing public health concern. Food served tends to be energy dense and nutrient poor, and could result in excess energy intake (Drewnowski, 2005; Jaworowska et al., 2014). With evidence suggesting that greater exposure to takeaway food outlets is associated with greater odds of being overweight or obese (Burgoine et al., 2014), there have been calls for regulation of these outlets (National Institute for Health and Care Excellence, 2012; Turbutt et al., 2019).

Alongside attempts to diversify food sold by takeaway food outlets (Bagwell, 2014; Goffe et al., 2016; Hillier-Brown et al., 2017), approaches to reduce physical access are also being explored. Urban or spatial planning, known as 'zoning' and 'regional planning' in some contexts, or 'planning' in England, controls development in defined local areas (e.g. high-streets, or around schools) (Chriqui et al., 2016).

Definitions of key planning terminology used in England and throughout this article are provided in Table 1.

There have been attempts to regulate new takeaway food outlets through planning. In 2008, for example, Los Angeles' 'zoning' regulations (ordinance no: 180103) aimed to restrict fast-food outlet development in particular areas (Chriqui et al., 2016; Los Angeles City Planning, 2008; Nixon et al., 2015; Sturm and Hattori, 2015). The National Planning Policy Framework in England sets out standards that local government planning policies must comply with, and suggests that planning can help promote healthy food environments (Ministry of Housing Communities and Local Government, 2018).

Takeaway food outlet regulation in England may be facilitated by their segregation from other food outlets in the Use Class Order which describes different types of commercial premises for planning purposes. The Use Class Order defines Class A5 as "Hot Food Takeaways - for the sale of hot food for consumption off the premises" (Town and Country Planning, 2005). Use of the planning system to regulate takeaway food outlets for health was cited in UK government guidance documents as early as 2008 (HM Government, 2008), and documented in planning practice from around 2009 (London Borough of Waltham Forest, 2009). It is possible that these documents served to catalyse more widespread planning policy adoption. However, health-focused planning policy adoption to regulate takeaway food outlets is not mandatory, and it has been reported that in practice, local government professionals do not always believe it is appropriate to use planning to address health (Lake et al., 2017).

We previously reported that of 325 local government areas in England with planning powers, 164 (50.5%) adopted planning policies to regulate takeaway food outlets from non-health and health perspectives (Keeble et al., 2019b). Approaches to regulation varied, from non-health focused planning policies that often concentrated on takeaway food outlet shop front design or litter management, to health-focused approaches that aimed to stop new takeaway food outlets opening near schools. This work also identified around 70 local government areas who had published draft planning policy documents, which were yet to be adopted. In addition to these, takeaway food outlet regulation through exclusion zones around schools is being considered for the new London Plan, which is in draft as of January 2020 (The London Plan, 2017). If adopted, this will guide the development of core planning documents and policies for all 33 London Boroughs. Together, this information could suggest further similar planning policy adoption in the future.

In previous work, we also identified objective characteristics of local government areas that were correlated with planning policy adoption, which included the number of existing takeaway food outlets, proportions of children with excess weight, existence of similar planning policies in similar and nearby areas, and political control (Keeble et al., 2019a). Mechanisms that link these local characteristics to planning policy adoption are currently unclear, and it is yet to be determined if particular approaches are perceived to be more successful than others. There may be other important factors that facilitate or impede the use of planning to regulate takeaway food outlets that are not easily captured by objectively measured local characteristics. In this study we explored experiences and perspectives of local government professionals from local government areas where a planning policy for takeaway food outlet regulation had been adopted.

2. Methods

We conducted a qualitative study of local Planning and Public Health professionals using semi-structured telephone interviews. Fieldwork was undertaken between October and December 2018.

2.1. Methodological approach

To understand experiences of Planning and Public Health professionals in practice we used qualitative description as our methodological approach. This approach is less interpretative than other qualitative methods, but allows poorly understood research areas (e.g. perspectives of professionals) to be investigated (Colorafi and Evans, 2016). Researchers remain close to the data, which allows participant experiences in 'everyday terms' to be described, and an understanding of 'real-life' contexts to be developed (Bradshaw et al., 2017; Colorafi and Evans, 2016; Kim et al., 2017; Morgan, 2014; Sandelowski, 2010).

2.2. Participants and recruitment

Our previous work identified local government areas in England with planning policies adopted specifically for takeaway food outlet regulation (Keeble et al., 2019b). In that work, 'Planning' and 'Planning Policy' sections of websites were reviewed. Documents that contained planning policies related to takeaway food outlet regulation were

Table 1
Terminology related to the planning system in England.

Term	Definition
Class A5	Within the Use Class Order, Class A5 refers to "Hot Food Takeaways".
Local government area	Administrative body responsible for multiple local functions within their defined area.
Local Government Association	Provide support to local government areas to promote improved services.
Local Plan	Statutory document outlining the future development of an area through adoption of planning policies.
Local politicians	Councillors that have been democratically appointed to a role within a local government area.
Material considerations	A matter taken into consideration when deciding planning application acceptability.
National Planning Inspectorate	Executive agency responsible for providing recommendations, advice and decisions on a range of planning-related issues, including appeal decisions.
National Planning Policy Framework	National document that outlines how planning policies in England are expected to be applied.
Planning	Controls development of an area by assessing acceptability of proposed development. Also known as urban planning or spatial planning.
Planning policy appeal	Following planning application refusal, applicants may submit an appeal, where a final decision will be made. This could result in judicial review in some instances.
Planning Practice Guidance	Additional support and advice for planning professionals, designed to supplement the National Planning Policy Framework.
Public consultation period	Opportunity for members of the public, organisations and businesses to review draft planning policies and submit comments and objections.
Public Health England	Executive agency that aims to protect and improve population health through multiple levers, including evidence review and publication.
Supplementary Planning Documents	Documents that add further detail to planning policies outlined in Local Plans. These documents can be material considerations in their own right.
Takeaway food outlet	A food outlet that typically offers limited seating. Food sold is normally intended to be consumed away from the premises.
Town and Country Planning Association	Charity that campaigns for the planning system to be responsive to population needs.
Trailblazer programme	Opportunity for local government areas to innovate and develop local solutions to problems, for example, childhood obesity.
Use Class Order	Legal classification framework that categorises land and buildings based on their intended primary use.

identified. Planning policies were split into those with and without a health focus and categorised in terms of strategy ('Exclusion Zones'; 'Limit Density'; Minimise Impact & Protect Vicinity'; and 'Other Strategies') and location ('All Areas Within a Local Government Area Boundary'; 'Immediate Vicinity of Existing Hot Food Takeaway Site'; 'Places for Children & Families'; 'Retail Areas'; and 'Residential Areas').

In the current study, a two-stage, purposive sampling strategy was used to identify and recruit participants (Palinkas et al., 2015). In the first stage, in line with findings from Keeble et al. (2019b) the total sampling frame was all local government areas with an adopted planning policy related to takeaway food outlet regulation (n=164). We wanted to recruit local government areas with planning policies that covered each of the strategy and location combinations outlined above, where planning policies had been adopted from either a health or non-health perspective. Therefore, we purposively selected 15 from a total of 164 local government areas.

In the second stage of recruitment, one researcher (MK) contacted Planning Departments of selected local government areas, first by telephone and then email where necessary. Appropriate professionals were identified and were asked if they could assist with our research. They were provided with information about the study, including the study aims and the researchers involved. With permission, contact details were recorded and an electronic participant information sheet and formal invitation to participate were provided. If there was no response to the formal invitation after five business days individuals were contacted for a second time. After another five business days, local government areas, or individual employees, were considered 'non-responders'. In this case, Public Health Departments in the same local government area were contacted to attempt recruitment using the same approach. If this was unsuccessful, non-responders, and those who declined to participate, were replaced with local government areas with a similar planning policy and contacted in the same manner.

We wanted to recruit one Planning and one Public Health professional from the same local government area, and used a snowball sampling approach to achieve this (Robinson, 2014). During interviews with Planning professionals, MK asked to be introduced to a member of the Public Health Department, and vice versa when a Public Health professional was initially recruited. Participants were recruited based on their knowledge of the adopted planning policy and department of employment, rather than professional role.

2.3. Data collection

We determined that a maximum of 30 interviews would allow recruitment of one Planning and Public Health professional from local government areas with a planning policy across each combination of the strategy and location categories previously described. We planned to stop conducting interviews before reaching this number if no new information was provided by participants, indicative of data saturation (Braun and Clarke, 2019c; Marshall et al., 2013).

One researcher (MK), who was involved in our previous work in this area (Keeble et al., 2019a, 2019b), conducted one-to-one, semi-structured, telephone interviews with participants from October–December 2018. Telephone interviews were held at a time convenient for participants (Doody and Noonan, 2013). Each telephone interview was digitally audio-recorded and participants provided verbal consent before questions began (Jacob and Furgerson, 2012). Field notes were made to assist with data analysis (Marshall et al., 2013).

A single interview guide was developed based on previous findings and experience of researchers involved (Keeble et al., 2019b). During telephone interviews participants were asked questions related to: why was a planning policy approach chosen? What factors acted as facilitators and barriers during the planning policy adoption process? And once adopted, how successful was the planning policy perceived to be? Each telephone interview ended with a summary of important points, and participants were asked to confirm this was accurate. Participants had

the opportunity to make additional comments and ask questions throughout.

After each telephone interview, MK reflected on topics that had been discussed with participants and considered additional questions for subsequent data collection. Where appropriate, questions were added to the interview guide to allow topics not initially included, but which were considered relevant, to be further explored in the future (see appendix 1 for final interview guide).

2.4. Data analysis

Telephone interview audio recordings were transcribed verbatim, checked for accuracy, and anonymised. They were not reviewed by participants.

MK, JA and TB reviewed 10% of transcripts and agreed on an initial coding framework based on the final interview guide and a codebook approach to thematic analysis (Braun and Clarke, 2006, 2019a, b). A 10% sample was seen as manageable and pragmatic (Barbour, 2001). As analysis progressed, and after discussion between MK, JA and TB, the initial coding framework was refined to include new codes, and to form a final coding framework. The final coding framework was applied to all telephone interview transcripts, and themes were generated. Themes aimed to describe and summarise collected data. Final themes were agreed by MK, JA and TB. NVivo version 12 was used to support data analysis (QSR International Pty Ltd, 2018). Anonymised quotations in Results provide examples of topics discussed for each theme.

The University of Cambridge School of the Humanities and Social Sciences Research Ethics Committee provided ethical approval (Reference: 18/172).

3. Results

We completed 26 telephone interviews with professionals from 16 different local government areas in England: 15 Planning professionals and 11 Public Health professionals. Interviews typically lasted between 30 and 55 minutes. By the final telephone interview no new information was offered by participants. Table 2 describes the characteristics of included local government areas and individuals recruited from them. In addition to those recruited, there were six non-responders and five declined participation invitations, across six local government areas. These were successfully replaced. Insufficient resources and time, and a lack of knowledge about the adopted planning policy were reasons given for non-participation.

Our analysis identified eight themes, which we describe in detail below. These were: 'Planning policy adoption rationale', 'Ability to act', 'Guidance and evidence', 'Importance of precedent', 'Internal stakeholder co-operation', 'Challenge to planning policy', 'Indicators of success', and 'Unintended consequences of success'.

3.1. Planning policy adoption rationale

Our previous work identified planning policies adopted to regulate takeaway food outlets by local government areas with planning power in England (Keeble et al., 2019b). Planning policies of local government areas were not always categorised as health-focused in our previous work, however, there was widespread agreement in the current study that they were predominantly adopted to improve health-related outcomes, with a primary focus on diet and obesity. Secondary school children (aged 11–17 years) were often the target demographic because of a perceived sense of vulnerability among this group to takeaway food outlet exposure.

> "… it's [the planning policy] *really relative to child obesity rates really, I think that's the key driver, the focus is very much to try and limit the influence on schoolchildren*" LA03 (Planning)

Table 2
Characteristics of local government areas (n=16), and professional roles of participants (n=26), interviewed from October–December 2018.

Study ID	English region	Rural/Urban Classification	Participant professional role
LA01	East of England	Predominantly Rural	1. Health Inequalities Commissioner (Public Health)
LA02	North West	Urban with Significant Rural	1. Planning Officer
LA03	North West	Predominantly Urban	1. Planning Officer
			2. Public Health Team
LA04	East of England	Predominantly Urban	1. Planning Policy Officer
LA05	West Midlands	Predominantly Urban	1. Senior Health Improvement Practitioner
			2. Senior Health Planner
LA07	North East	Predominantly Urban	1. Planning Officer
			2. Director of Public Health
			3. Public Health Team
LA09	North East	Urban with Significant Rural	1. Principal Planning Strategy Officer
			2. Public Health Consultant
LA10	North West	Predominantly Urban	1. Principal Planning Policy Officer
			2. Technical Director and Chief Executive (Public Health)
LA12	North East	Predominantly Urban	1. Planning Policy Officer
			2. Public Health Team
LA14	West Midlands	Predominantly Urban	1. Senior Planning Policy Development Officer
LA15	London	Predominantly Urban	1. Head of Planning Policy and Strategy
LA16	East Midlands	Predominantly Urban	1. Interim Planning Policy Manager
LA18	South East	Predominantly Urban	1. Transport Planning Officer
			2. Public Health Consultant
LA19	Yorkshire and The Humber	Predominantly Urban	1. Planning Liaison Coordinator
			2. Public Health Consultant
LA20	South East	Predominantly Urban	1. Planning Policy Officer
LA21	South East	Predominantly Urban	1. Strategic Health Lead
			2. Public Health Consultant

Beyond health, planning policies may have been adopted to improve area vitality and viability. There was a strong belief that dominance of takeaway food outlets can adversely affect economic development of an area. Restricting new outlet development was seen as a method to make areas more appealing to individuals looking to establish other types of business and in turn to provide local economic benefit.

"… *I'd also look at the vitality* […] *issue as well* […] *not just the health side of things but also the economic impacts of takeaways in town centres*" LA09 (Planning)

3.2. Ability to act

Takeaway food outlet regulation was considered "*easy*" and takeaway food outlets seen as "*low-hanging fruit*" because of their segregation from other food outlets in the Use Class Order. Referring to children, and diet or obesity was strategic and deliberate. Policies with these foci were considered less likely to be challenged before adoption or when implemented (post-adoption) because of a need to protect children and increasing public awareness of concerns surrounding diet and obesity in children.

"… [planning policy adoption] *could be controversial, but it's less controversial if we're thinking about people that don't have such an active choice, like children. So if we start with that approach, I think we might get further than if we wanted to just prevent A5* [hot food takeaway outlets] *premises from, any new A5 premises* [opening] *across the entire city*" LA18 (Public Health)

Despite the perceived value of classifications and definitions within the Use Class Order for enabling takeaway food outlet regulation, they also caused concern. Restaurants and bakeries provide takeaway services and often similar types of food, but to date have not been included within takeaway food outlet focused planning policies.

"… *at the moment* [in] *the planning system, very much cafes and restaurants are separated out from hot food takeaways and there's a lot of uses within that sort of food, café and restaurant category that from Public Health's* [department] *point of view may not be ideal but at the moment obviously there's nothing that we could do because in planning terms they're okay*" LA19 (Planning)

Planning professionals felt empowered to regulate takeaway food outlets because of "*tools*" in place. The planning system was considered unique because of the ability to target takeaway food outlets, and expand, rather than limit, choice. There was a perceived obligation to act because planning power had been provided to local government areas and should therefore be used.

"… *planning is one of the few opportunities where it's potentially possible to bring in controls on the growth of hot food takeaways*" LA16 (Planning)

Planning powers could however be misconstrued by those with limited knowledge of the planning system. Planning professionals felt that they were seen to have powers beyond those in place.

"… *well, planning can regulate new hot food takeaways, we can't control what's there already and that's one issue. I think there's an idea in the outside world that planners can do everything, we can stop all this, we can stop that, we can only regulate what we can within the regulations*" LA21 (Planning)

Takeaway food outlet regulation was not always considered a priority. Resource shortages, competing economic priorities, political pressure, and the need for housing provision prevented prioritisation.

"… *unfortunately from my point of view this* [takeaway food outlet regulation] *is a small part of a very big plan with masses of housing sites, employment sites and lots of other policies*" LA16 (Planning)

Planning policy adoption could be a combination of fortuitous timing and strategy. Local Plan documents outlining planning policies for a local government area are reviewed around 10 years after adoption. Whether or not a takeaway food outlet focused planning policy was included in a document may have reflected the timing of scheduled reviews in relation to increasing awareness of using planning in this way. New planning policy adoption in Local Plan documents was not considered immediately feasible if a review was not due for several years.

Supplementary Planning Documents (SPDs) may provide an opportunity for takeaway food outlet regulation when a Local Plan document is not approaching review. Supplementary Planning Documents provide more details about and evidence for, adopted planning policies in Local Plans. They are 'material considerations' when determining planning application acceptability but carry less weight than planning policies adopted in Local Plans. However, national scrutiny prior to adoption of SPDs is not required, which could make them more appealing.

[referring to Supplementary Planning Document adoption] *"… I think it was tactical and pragmatic because it's quicker* [than adoption within a Local Plan] *to do it this way"* LA21 (Planning)

3.3. Guidance and evidence

Participants in this study recognised the role of guidance from national government and other organisations during the planning policy adoption process. The National Planning Policy Framework and guidance from professional organisations such as the Town and Country Planning Association, Local Government Association and Public Health England, were all referred to in a positive light.

"… it's all the national documents and stuff that have come out from PHE [Public Health England] *and the LGA* [Local Government Association] *and also others* [local government areas] *that have done it have been very supportive"* LA05 (Public Health)

Local evidence in the form of data and statistics were also discussed. Evidence needed to be relevant to a local government area and robust to help justify planning policy adoption.

"… local evidence and the statistics, not just what's happening generally, I think it has to be relevant to your own area" LA19 (Planning)

Peer-reviewed, scientific evidence was considered to support planning policy adoption. However, when discussing health focused approaches, the ability of this evidence to demonstrate takeaway food outlet impact was questioned.

"… in many ways they [takeaway food outlets] *have been associated with obesity and obesogenic environments, I am very aware, however, that the evidence to link these directly to obesity and obesogenic environments is actually fairly limited"* LA04 (Planning)

Whilst the importance of peer-reviewed scientific evidence was understood there was a difference in opinion on how it could be used. Some Planning professionals questioned whether causal relationships could be drawn from correlational evidence. Public Health professionals seemed more open to results of this nature.

"… so you do end up with them [Planning professionals] *saying, well if somebody takes me to Court and says there is no direct evidence that directly says that hot food takeaways are what's causing obesity and you're saying that I can't have my hot food takeaway here because it's a risk to increase the obesity of children, it's that sort of risk language that's not precise enough to give them that"* LA05 (Public Health)

3.4. Importance of precedent

Widespread local level planning policy adoption made regulation of takeaway food outlets through planning seem attainable and feasible.

"… I think sometimes what happens in planning is one [local government area] *tries something and then it works,* […] *and then it sort of sets a bit of a precedent in the planning system. And then other authorities* [local government areas] *follow suit. That's the kind of thing that happens"* LA14 (Planning)

Professionals in practice and local politicians were aware of planning policies adopted in other local government areas.

"… when I was doing my research into our policy I was obviously looking at other authorities [local government areas] *across the country and I think the other place was, I think it was* [place] *who had a policy and obviously our members were aware of that"* LA19 (Planning)

Local government areas with adopted planning policies felt that a precedent had been set, with continued local level adoption predicted.

"… there should be more Local Plans coming and really if you're drafting a Local Plan now without a hot food takeaway [outlet] *policy in it I'd be quite surprised"* LA12 (Planning)

3.5. Internal stakeholder co-operation

Planning and Public Health professionals recognised that cross-department collaboration facilitated adoption. Professionals in each department had unique roles. Public Health professionals ensured a health focus was embedded within planning policies and provided supporting local data and evidence. Planning professionals drafted policies that complied with the National Planning Policy Framework. Devolution of responsibility for public health to local government in 2013 was recognised as an important milestone in building this relationship.

"… I suppose it's with public health having come into the [local government area name]*, then I think there's the better links now with other departments and people are looking more closely at what they can do to support each other"* LA05 (Public Health)

The need for shared understanding of professions, priorities and goals to help develop applicable and realistic policies was recognised. New roles could link often siloed departments.

"… I have gotten this new role which is a Senior Health Planner role, and that's funded by public health, and that's working with public health and planning" LA05 (Planning)

Planning policy adoption was further supported by local politicians. They act as leaders, raise concerns, promote regulatory need, and endorse planning policy adoption.

"… the fact that our [elected] *members were concerned about the issue as* [local politicians] *and also pushed for this policy to come forward was helpful in terms of us putting it forward and at the end of the day they adopt the plan, they are the ones that sign the plan off for submission, so they had to be fully behind and in support of this policy"* LA16 (Planning)

3.6. Challenge to planning policy

Objections to planning policy adoption by national and international fast-food chain representatives could undermine efforts and lead to amended planning policies. This was a recognised concern.

[referring to public consultation before planning policy adoption] *"… we did have some comments through from* [national pizza delivery chain] *for example, and well, consultants working for them, I think* [international burger chain] *as well and* [international fried chicken chain]*, so they were the big ones really who went through it in detail and they questioned some of the research"* LA10 (Planning)

Local government areas initially determine the acceptability of planning applications. Where permission is refused, applicants may appeal, and a final decision is made by the National Planning Inspectorate. One participant described how a decision to refuse planning permission for a new takeaway food outlet was overturned. This caused

confusion, frustration, and a feeling that national guidance had been contradicted.

"… *a takeaway was opened up they turned down as a* [local government area] *but on appeal* […] *it was overturned, so they actually challenged this you know, we're trying to set policy and implement it locally but then there's opposition challenge to that and the role of national government being able to overturn*" LA19 (Public Health)

There could also be internal challenges. Local politicians sometimes considered planning policy adoption to be a "nanny-state" approach. This perspective, without an appropriate response from professionals in practice, could create a barrier towards adoption.

"… *we've got our, our opposition* [local politician] *here saying that plans to regulate takeaways and other food outlets were tantamount to the nanny-state, and that we shouldn't be tampering in peoples' active choices to make, to choose the food that they want to eat*" LA18 (Public Health)

3.7. Indicators of success

A range of indicators of success were described. For some, success was represented by a reduced number of pre-planning enquiries and submitted applications, indicating that those who might have opened new takeaway food outlets were no longer attempting to do so. For others, winning appeal decisions after initial planning permission refusal indicated success.

"… *you know, because we've had no planning applications for hot food takeaways granted, as you would expect, since the policy was introduced, and actually we've had a significant reduction in the number of even applications, because people just don't bother*" LA07 (Public Health)

The difficulty of objectively measuring success was acknowledged. Although a reduction in pre-application queries could be indicative of success, data for evaluation and monitoring was not routinely collected.

"… *I think this* [the planning policy] *has been very successful and it is hard to measure because they don't, we don't keep a track of all the queries that don't go anywhere, but from speaking to the planners it does seem like there's a lot put off even putting an application in*" LA10 (Planning)

There was agreement that planning policies prevented new takeaway food outlets from opening, which was ultimately a marker of success.

"… *well I think we've managed to deny applications on at least three occasions so far, in fact I don't think we've lost one yet, so it sounds like we're probably 100% successful, so far*" LA12 (Public Health)

Participants had experience of planning policies that were adopted with diet and obesity in mind. It was recognised that attributing positive changes in diet and obesity outcomes to one planning policy was difficult.

"… *yeah, I think it's quite difficult because like I said I feel, I feel that one of the problems with this is that it isn't going to be one of those things where we can say we changed this, and as a result we've reduced obesity by whatever*" LA21 (Public Health)

3.8. Unintended consequences of success

There may be unintended consequences associated with planning policy success. Local government area boundaries are important for administrative functions but were recognised as irrelevant to prospective takeaway food outlet owners. Concerns were raised about "*moving the problem*". Planning permission refusal in one local government area could displace applications to nearby localities. If opened, outlets could

still be accessed by residents of areas with a policy, either in person, or through home delivery services, potentially undermining planning policy adoption.

"… [local government area] *boundaries don't really matter a right lot really to a business owner, it's like oh well that's* [place], *oh that's* [place], *if you then found out that it had an objection* [planning policy] *and you couldn't go for change of use* [to a takeaway food outlet] *then you obviously would look for somewhere else*" LA10 (Public Health)

4. Discussion

4.1. Summary of findings

This is the first study to engage with local government professionals to understand their experiences and perspectives of adopting planning policies to regulate takeaway food outlets. We found that planning policies were often adopted with the aim of improving diet and obesity, especially in children. To some extent, necessary regulatory tools were perceived to be in place, which facilitated planning policy adoption, alongside local evidence of planning policy need and internal stakeholder co-operation. National guidance and approaches adopted elsewhere also facilitated planning policy adoption. External challenges to proposed planning policies, perceived weaknesses in peer-reviewed scientific evidence, and conflicting political and economic priorities were barriers to planning policy adoption. Indicators of success varied by local government area, with measurement recognised as a challenge. Although planning policies were considered fit for purpose, there was concern they could yield unintended consequences.

4.2. Comparison to previous research

Planning and Public Health professionals in this study felt that planning policies could help address proliferation of new takeaway food outlets to improve health. In contrast, previous research reported that addressing health through the planning system was not always considered appropriate, or part of a planning professionals role (Lake et al., 2017). This previous data was collected in 2013-14. The National Planning Policy Framework, which outlines the use of planning powers specifically for health improvement, was formally introduced in 2012 (Ministry of Housing Communities and Local Government, 2018). In previous work there may not have been time for guidelines to become embedded in practice, and for new health-focused norms within the Planning profession to be established. Our findings indicated that this is no longer the case.

In the current study, local politicians were seen to have an important role in planning policy adoption. They raised concern about takeaway food outlets and provided impetus for Planning professionals to explore regulation. The role of political leadership has been recognised in other contexts. In Australia for example, during interviews with Planning professionals and policymakers, politics was seen as important to help provide impetus and support for policy adoption when aiming to use planning to create healthier food environments (Murphy et al., 2018). Like in the current study, the role of competing priorities was acknowledged. From a non-health perspective, takeaway food outlets provide economic benefit to local areas, including employment opportunities and business rate income. This likely explains the need for balancing health-protection against non-health related benefits, and the difficulty in prioritising takeaway food outlet regulation over other competing needs.

4.3. Interpretation and implications

Planning and Public Health professionals in this study referred to the National Planning Policy Framework (Ministry of Housing Communities

and Local Government, 2018), and additional guidance intended for use by Planning professionals (Local Government Association, 2016; London Healthy Urban Development Unit, 2013). These examples of national support facilitated planning policy adoption due to explicit reference to healthy food environments and takeaway food outlet regulation. Furthermore, several documents for Public Health professionals have been published that encourage takeaway food outlet regulation through use of the planning system (Greater London Authority, 2012; Local Government Association, 2016; London Healthy Urban Development Unit, 2013, 2017; Ministry of Housing Communities and Local Government, 2017; Public Health England, 2020). For this to be achieved Planning and Public Health departments must work in collaboration. Whilst, Planning and Public Health departments within England have been traditionally siloed, national publications and the decentralisation of Public Health responsibility from national to local government in 2013 may have provided the opportunity for collaborative working.

A further reason why food outlet regulation via planning may now be seen as mainstream in England, is that tools required are perceived to be in place. For example, the Use Class Order segregates takeaway food outlets from other food outlets. However, classification of food outlets in the Use Class Order also caused concern (Town and Country Planning, 2005). Cafes and bakeries, for example, were recognised as selling unhealthy food but could not be regulated in the same way as takeaway food outlets, because they do not occupy a standalone Use Class. Furthermore, chain fast-food outlets are often classified as restaurants rather than takeaway food outlets, because they tend to provide substantial seating. The apparent inconsistency in the classification of independent takeaways vs chain fast-food outlets was considered frustrating. Aspects of the Use Class Order were amended in 2019 (Town and Country Planning, 2019). Further amendments may be required to allow more flexible approaches to regulation of a wider range of food outlets.

Despite takeaway food outlet focused planning policies not applying to most chain fast-food outlets, the interference of national and international fast-food corporations in the planning process was recognised as challenging for local government areas. Local areas may need more support from national government to respond to well-funded legal challenges by these companies.

Elsewhere, there were local challenges, particularly the view amongst local politicians that takeaway food outlet regulation was an example of the "nanny-state". It may benefit local government areas considering adoption of this approach to be aware of possible "nanny-state" criticisms, and to have developed robust rebuttals to overcome this potential challenge. The frequent framing of planning policy in terms of obesity and the protection of children was considered strategic by participants in the current study. In this way, planning policies could be framed as protecting vulnerable children from the influence of the local food environment and enhancing their opportunities to live healthy lives, rather than constraining fundamental freedoms of the local population (Carter et al., 2015). The need for careful political framing to overcome policy opposition has been recognised elsewhere (Willmott et al., 2015). Childhood obesity 'trailblazer programmes' in England, some of which include a focus on takeaway food outlets, are an example of a national programme that could support local action and help shift perspectives of local politicians (Local Government Association, 2019). More programmes of this nature may help to further establish planning policy precedent, promote normalisation of takeaway food outlet regulation and help shift opposing perspectives.

The importance of precedent was recognised by Planning and Public Health professionals. National organisations have made efforts to publicise local case studies of planning policies adopted for takeaway food outlet regulation (Local Government Association, 2016; London Healthy Urban Development Unit, 2013, 2017). These tend to focus on a small number of well-known case studies, although we found more than 150 local government areas with relevant planning policies (Keeble et al., 2019b). Greater dissemination of a wider range of case studies may help

support further planning policy adoption in more diverse local government areas.

Measurement of intervention success was viewed as difficult and formal evaluation was rarely, if ever, reported. Despite this, there was often a feeling that adopted planning policies were successful. In many cases, adoption was seen as a success in itself. In other cases, participants reported fewer takeaway food outlets opening or planning enquiries being made. This focus on markers of a successful process, rather than successful impacts on diet and obesity outcomes may reflect participant's recognition that such policies were unlikely to have a substantial effect on local health indicators alone (Finegood et al., 2010; Rutter, 2012). However, anecdotal evidence of a successful process has previously been reported as persuasive in local government contexts (van der Graaf et al., 2017), especially in combination with other forms of local data (de Vocht and Oliver, 2015). Further attempts could be made to formally document the success of the process of planning policy adoption and implementation and to disseminate these more widely.

Whilst there have been attempts to quantify the impact of adopted planning policies on obesity in the United States (Sturm and Cohen, 2009), we are not aware of formal evaluations elsewhere, including in England. This could be a focus of future research. Providing evidence of the health impacts of planning policies may help address the finding that much existing peer-reviewed evidence on the association between takeaway food outlet exposure and health outcomes is correlational and considered weak within the planning context. Planning professionals are likely to have to respond to formal appeals when they are raised by applicants who have been denied planning permission. In some instances, this could result in judicial review, which would require local government area representation in-person, to defend the use of evidence. This is less likely to be the responsibility or concern of Public Health professionals, which may explain differences in perspectives and caution regarding the strength of current evidence. With that said, relying on the best available peer-reviewed evidence in combination with local data appears to be a successful strategy. Our previous work (Keeble et al., 2019a), offers potential indicators of planning policy need, including local childhood obesity prevalence, for example. Moreover, collaboration between academics and professionals throughout the research process could help development of knowledge to be used in practice (Metz et al., 2019).

Whilst planning policies were considered successful, there was an acute awareness that they could have unintended consequences of displacing takeaway food outlets to other locations. Given the rise of online takeaway food ordering and delivery platforms (The NPD Group, 2018), local government area boundaries may become increasingly irrelevant for takeaway food purchasing and consumption. Promotion of joined-up policy action across, and collaborative working with, nearby local government areas could help mitigate these risks. Alternatively, entirely new approaches may be required to regulate these spaces.

4.4. Methodological considerations

All planning policies in England must comply with the National Planning Policy Framework. Overarching facilitators and barriers identified here could be transferable to other local government areas not included, particularly those that have adopted a planning policy for takeaway food outlet regulation (Smith, 2018). However, as we only included those with an adopted planning policy for takeaway food outlet regulation, it is unclear if findings are transferable to other local government areas that have not used this approach. This could be investigated in future work.

5. Conclusions

Planning and Public Health professionals from local government areas in England felt that planning policies can successfully regulate takeaway food outlets with the intention of improving health. Local

government areas have the tools necessary for regulation, national guidance supports this approach and increasing adoption in other areas helps set precedent. However, overcoming limitations in current national regulations could allow greater flexibility. Despite a widespread perception of the success of these policies, this was poorly defined and rarely, if ever, objectively measured. Potential unintended consequences were recognised. Barriers and facilitators identified here should be considered in guidelines published for professionals in practice. This may promote greater adoption of planning policies to regulate takeaway food outlets throughout England, in line with the National Planning Policy Framework.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.healthplace.2020.102305.

Appendix 1. Final interview guide

Tell me about your current position – what do you do?
Do you think hot food takeaways are a problem? If so, what do you think the problems with them are?
Why do you think using planning powers to influence and regulate hot food takeaways has received so much attention recently?
Why is there more of a focus on regulating hot food takeaways now than in the past?
What can Planning Departments, or policies, achieve that others can't?
Tell me about how the planning policy came about - what was the process that led to adoption?
Why was this approach adopted?
What were the main considerations when the planning policy was being developed?
What is the main aim of the policy?
What problems were encountered when the planning policy was being adopted or implemented?
What strategies were used to overcome them?
What kind of things particularly helped when the planning policy was being adopted or implemented?
What advice would you give to others thinking about adopting a planning policy to regulate hot food takeaways?
If you had to start again, what would you do the same, and/or differently?
How successful do you think your planning policy has been for regulating hot food takeaways?
What does success look like?
How is success being measured?
How could planning policies for hot food takeaway regulation be more successful in the future?
Interview summary and colleague recruitment

References

Bagwell, S., 2014. Healthier catering initiatives in London, UK: an effective tool for encouraging healthier consumption behaviour? Crit. Publ. Health 24, 35–46.

Barbour, R.S., 2001. Checklists for improving rigour in qualitative research: a case of the tail wagging the dog? BMJ 322, 1115–1117.

Bradshaw, C., Atkinson, S., Doody, O., 2017. Employing a qualitative description approach in health care research. Global Qual. Nurs. Res. 4, 1–8.

Braun, V., Clarke, V., 2006. Using thematic analysis in psychology. Qual. Res. Psychol. 3, 77–101.

Braun, V., Clarke, V., 2019a. Answers to frequently asked questions about thematic analysis [online]. Accessed on: 21.01.2020. Available at: https://cdn.auckland.ac.nz/assets/psych/about/our-research/documents/Answers%20to%20frequently%20asked%20questions%20about%20thematic%20analysis%20April%202019.pdf.

Braun, V., Clarke, V., 2019b. Reflecting on reflexive thematic analysis. Qual. Res. Sport Exerc. Health 11, 589–597.

Braun, V., Clarke, V., 2019c. To saturate or not to saturate? Questioning data saturation as a useful concept for thematic analysis and sample-size rationales. Qual. Res. Sport Exerc. Health 1–16. Epub ahead of print.

Burgoine, T., Forouhi, N.G., Griffin, S.J., Wareham, N.J., Monsivais, P., 2014. Associations between exposure to takeaway food outlets, takeaway food consumption, and body weight in Cambridgeshire, UK: population based, cross sectional study. BMJ 348, 1–10.

Burgoine, T., Mackenbach, D.J., Lakerveld, J., Forouhi, G.N., Griffin, J.S., Brage, S., Wareham, J.N., Monsivais, P., 2017. Interplay of socioeconomic status and supermarket distance is associated with excess obesity risk: a UK cross-sectional study. Int. J. Environ. Res. Publ. Health 14, 1–13.

Carmichael, L., Townshend, T.G., Fischer, T.B., Lock, K., Petrokofsky, C., Sheppard, A., Sweeting, D., Ogilvie, F., 2019. Urban planning as an enabler of urban health: challenges and good practice in England following the 2012 planning and public health reforms. Land Use Pol. 84, 154–162.

Carter, S.M., Entwistle, V.A., Little, M., 2015. Relational conceptions of paternalism: a way to rebut nanny-state accusations and evaluate public health interventions. Publ. Health 129, 1021–1029.

Chriqui, J.F., Leider, J., Thrun, E., Nicholson, L.M., Slater, S., 2016. Communities on the move: pedestrian-oriented zoning as a facilitator of adult active travel to work in the United States. Front. Publ. Health 4, 1–12.

Colorafi, K.J., Evans, B., 2016. Qualitative descriptive methods in health science research. HERD: Health Environ. Res. Des. J. 9, 16–25.

de Vocht, F., Oliver, K.A., 2015. Defining 'evidence' in public health: a survey of policymakers' uses and preferences. Eur. J. Publ. Health 27, 112–117.

Doody, O., Noonan, M., 2013. Preparing and conducting interviews to collect data. Nurse Res. 20, 1–10.

Drewnowski, A., 2005. Concept of a nutritious food: toward a nutrient density score. Am. J. Clin. Nutr. 82, 721–732.

Finegood, D.T., Merth, T.D.N., Rutter, H., 2010. Implications of the foresight obesity system map for solutions to childhood obesity. Obesity 18, S13–S16.

Food environment assessment tool (Feat), 2020. Food environment assessment tool [online]. Accessed on: 22.01.2020. Available at: http://www.feat-tool.org.uk/.

Goffe, L., Wrieden, W., Penn, L., Hillier-Brown, F., Lake, A.A., Araujo-Soares, V., Summerbell, C., White, M., Adamson, A.J., Adams, J., 2016. Reducing the salt added to takeaway food: within-subjects comparison of salt delivered by five and 17 holed salt shakers in controlled conditions. PloS One 11, 1–9.

Greater London Authority, 2012. Takeaways toolkit [online]. Accessed on: 03.04.2019. Available at: https://www.london.gov.uk/sites/default/files/takeawaystoolkit.pdf.

Hillier-Brown, F.C., Summerbell, C.D., Moore, H.J., Wrieden, W.L., Adams, J., Abraham, C., Adamson, A., Araújo-Soares, V., White, M., Lake, A.A., 2017. A description of interventions promoting healthier ready-to-eat meals (to eat in, to take away, or to be delivered) sold by specific food outlets in England: a systematic mapping and evidence synthesis. BMC Publ. Health 17, 93–110.

HM Government, 2008. Healthy weight, healthy lives: a cross-government strategy for England [online]. Accessed on: 03.10.2019. Available at: https://extranet.who.int/nutrition/gina/sites/default/files/GBR%202008%20Healthy%20Weight%2C%20Healthy%20Lives-%20A%20Cross-Government%20Strategy%20for%20England.pdf.

Jacob, S.A., Furgerson, S.P., 2012. Writing interview protocols and conducting interviews: tips for students new to the field of qualitative research. Qual. Rep. 17, 1–10.

Jaworowska, A., Blackham, T., Stevenson, L., Davies, I.G., 2012. Determination of salt content in hot takeaway meals in the United Kingdom. Appetite 59, 517–522.

Jaworowska, A., Toni, M.B., Rachel, L., Catherine, T., Matthew, A., Leonard, S., Ian, G.D., 2014. Nutritional composition of takeaway food in the UK. Nutr. Food Sci. 44, 414–430.

Keeble, M., Adams, J., White, M., Summerbell, C., Cummins, S., Burgoine, T., 2019a. Correlates of English local government use of the planning system to regulate hot food takeaway outlets: a cross-sectional analysis. Int. J. Behav. Nutr. Phys. Activ. 16, 1–12.

Keeble, M., Burgoine, T., White, M., Summerbell, C., Cummins, S., Adams, J., 2019b. How does local government use the planning system to regulate hot food takeaway outlets? A census of current practice in England using document review. Health Place 57, 171–178.

Kim, H., Sefcik, J.S., Bradway, C., 2017. Characteristics of qualitative descriptive studies: a systematic review. Res. Nurs. Health 40, 23–42.

Lake, A.A., Burgoine, T., Stamp, E., Grieve, R., 2012. The foodscape: classification and field validation of secondary data sources across urban/rural and socio-economic classifications in England. Int. J. Behav. Nutr. Phys. Activ. 9, 1–12.

Lake, A.A., Henderson, E.J., Townshend, T.G., 2017. Exploring planners' and public health practitioners' views on addressing obesity: lessons from local government in England. Cities Health 1, 185–193.

Local Government Association, 2016. Tipping the scales: case studies on the use of planning powers to limit hot food takeaways [online]. Accessed on: 01.06.2018. Available at: https://www.local.gov.uk/sites/default/files/documents/tipping-scales-case-studi-bff.pdf.

Local Government Association, 2019. Childhood obesity trailblazer programme [online]. Accessed on: 27.06.2019. Available at: https://www.local.gov.uk/childhood-obesity-trailblazer-programme.

London Borough of Waltham Forest, 2009. Hot food takeaway: supplementary planning document [online]. Accessed on: 05.09.2018. Available at: http://static.walthamforest.gov.uk/sp/Documents/spd-hot-food-takeaway-mar10.pdf.

London Healthy Urban Development Unit, 2013. Using the planning system to control hot food takeaways: a good practice guide [online]. Accessed on: 05.09.2018. Available at: https://www.healthyurbandevelopment.nhs.uk/wp-content/uploads/2013/12/HUDU-Control-of-Hot-Food-Takeaways-Feb-2013-Final.pdf.

London Healthy Urban Development Unit, 2017. Healthy urban planning checklist [online]. Accessed on: 17.09.2018. Available at: https://www.healthyurbandevelopment.nhs.uk/wp-content/uploads/2017/05/Healthy-Urban-Planning-Checklist-3rd-edition-April-2017.pdf.

Los Angeles City Planning, 2008. Ordinance no. 180103 [online]. Accessed on: 21.02.2018. Available at: http://cityplanning.lacity.org/Code_Studies/Misc/FastFoodInterim.pdf.

Mackenbach, D.J., Beenackers, A.M., Noordzij, M.J., Oude Groeniger, J., Lakerveld, J., van Lenthe, J.F., 2019. The moderating role of self-control and financial strain in the relation between exposure to the food environment and obesity: the GLOBE study. Int. J. Environ. Res. Publ. Health 16, 1–12.

Marshall, B., Cardon, P., Poddar, A., Fontenot, R., 2013. Does sample size matter in qualitative research?: a review of qualitative interviews in IS research. J. Comput. Inf. Syst. 54, 11–22.

Metz, A., Boaz, A., Robert, G., 2019. Co-creative approaches to knowledge production: what next for bridging the research to practice gap? Evid. Policy A J. Res. Debate Pract. 15, 331–337.

Ministry of Housing Communities, Local Government, 2017. The role of health and wellbeing in planning [online]. Accessed on: 05.12.2018. Available at: https://www.gov.uk/guidance/health-and-wellbeing.

Ministry of Housing Communities, Local Government, 2018. National planning policy framework [online]. Accessed on: 02.08.2018. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/728643/Revised_NPPF_2018.pdf.

Morgan, D.L., 2014. Pragmatism as a paradigm for social research. Qual. Inq. 20, 1045–1053.

Murphy, M., Jordan, H., Badland, H., Giles-Corti, B., 2018. Local food environments: Australian stakeholder perspectives on urban planning and governance to advance health and equity within cities. Cities Health 2, 46–59.

National Institute for Health and Care Excellence, 2012. Obesity: working with local communities [online]. Accessed on: 01.02.2019. Available at: https://www.nice.org.uk/guidance/ph42.

Nixon, L., Mejia, P., Dorfman, L., Cheyne, A., Young, S., Friedman, L.C., Gottlieb, M.A., Wooten, H., 2015. Fast-food fights: news coverage of local efforts to improve food environments through land-use regulations, 2001-2013. Am. J. Publ. Health 105, 490–496.

Palinkas, L.A., Horwitz, S.M., Green, C.A., Wisdom, J.P., Duan, N., Hoagwood, K., 2015. Purposeful sampling for qualitative data collection and analysis in mixed method implementation research. Adm. Pol. Ment. Health 42, 533–544.

Public Health England, 2020. Using the planning system to promote healthy weight environments Guidance and supplementary planning document template for local authority public health and planning teams [online] Accessed on: 20.02.2020. Available from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/863821/PHE_Planning_healthy_weight_environments_guidance_1_.pdf.

QSR International Pty Ltd, 2018. NVivo Qualiative Data Analysis Software Version 12.

Robinson, O.C., 2014. Sampling in interview-based qualitative research: a theoretical and practical guide. Qual. Res. Psychol. 11, 25–41.

Rutter, H., 2012. The single most important intervention to tackle obesity. Int. J. Publ. Health 57, 657–658.

Sandelowski, M., 2010. What's in a name? Qualitative description revisited. Res. Nurs. Health 33, 77–84.

Smith, B., 2018. Generalizability in qualitative research: misunderstandings, opportunities and recommendations for the sport and exercise sciences. Qual. Res. Sport Exerc. Health 10, 137–149.

Sturm, R., Cohen, D.A., 2009. Zoning for health? the year-old ban on new fast-food restaurants in south LA. Health Aff. 28, w1088–w1097.

Sturm, R., Hattori, A., 2015. Diet and obesity in Los Angeles county 2007–2012: is there a measurable effect of the 2008 "fast-food ban"? Soc. Sci. Med. 133, 205–211.

The London Plan, 2017. The spatial development strategy for greater London draft for public consultation [online]. Accessed on: 01.10.2019. Available at: https://www.london.gov.uk/sites/default/files/new_london_plan_december_2017.pdf.

The NPD Group, 2018. The unstoppable rise of the takeaway delivery phenomenon means the market is now worth £4.2 billion, up 73% in a decade [online]. Accessed on: 26.04.2019. Available at: https://www.npdgroup.co.uk/wps/portal/npd/uk/news/press-releases/the-unstoppable-rise-of-the-takeaway-delivery-phenomenon-means-the-market-is-now-worth-4-2-billion-up-73-in-a-decade/.

Town, Country Planning, 2005. Town and country planning (use classes) (amendment) (England) order [online]. Accessed on: 02.11.2018. Available at: https://www.legislation.gov.uk/uksi/2005/84/pdfs/uksi_20050084_en.pdf.

Town, Country Planning, 2019. The town and country planning (permitted development, advertisement and compensation amendments) (England) regulations 2019 [online]. Accessed on: 28.06.2019. Available at: http://www.legislation.gov.uk/uksi/2019/907/pdfs/uksi_20190907_en.pdf.

Townshend, T.G., 2017. Toxic high streets. J. Urban Des. 22, 167–186.

Turbutt, C., Richardson, J., Pettinger, C., 2019. The impact of hot food takeaways near schools in the UK on childhood obesity: a systematic review of the evidence. J. Public Health 41, 231–239.

van der Graaf, P., Forrest, L.F., Adams, J., Shucksmith, J., White, M., 2017. How do public health professionals view and engage with research? A qualitative interview study and stakeholder workshop engaging public health professionals and researchers. BMC Publ. Health 17, 1–10.

Willmott, M., Womack, J., Hollingworth, W., Campbell, R., 2015. Making the case for investment in public health: experiences of Directors of Public Health in English local government. J. Publ. Health 38, 237–242.