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## **THE INTERACTION BETWEEN POLICY AND EDUCATION USING STROKE AS AN EXAMPLE**

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## Introduction

This paper discusses the interaction between government policy making and healthcare education. A brief background to European and national healthcare policy is presented with reference to United Kingdom (UK) policy initiatives produced by the Department of Health (DoH) over the last ten years and the Scottish Executive Health Department (SEHD) since Devolution in 1998. The relationship between the UK National Health Service (NHS) and Higher Education Institutes (HEIs) is considered. In examining the relationship between health policy and education for healthcare professionals (HCPs), stroke is used as an exemplar. The importance of linking policy with funding for the implementation of initiatives and for evaluation is highlighted. And finally an argument is made that there is potential to create a more sustainable culture of health education that produces opportunities for HCPs to achieve recognised and transferable skills within the European community.

## European Health and Education Policy

### European Health Policy

Healthcare policy is a priority for countries of the European Union (EU) given the percentage of Gross Domestic Product (GDP) that health delivery absorbs. Increasingly EU governments and the public acknowledge the relationship between a nation's health and its capacity to generate wealth (Martins 2005). The range of healthcare systems developed over time, in response to specific local and national care priorities, precludes a pan European approach to healthcare. EU States want European Union directives not to interfere with the management of national health schemes and policy (Duncan 2002). As Lethbridge (2002) notes, health care has been most strongly influenced by the concept of subsidiarity wherein national governments retain direct control of national health care systems.

Despite this, national health policy setting is and continues to be affected by indirect European policy making. As an example The European Working Time Directive (EWTD) [No 93/104/EC of 23 November 1993] was passed by the European Commission's social action programme to protect workers from long hours without breaks that would harm health and risk accidents through fatigue. The EWTD was enacted in the UK as the Working Time Regulations 1998 to ensure minimum safety and health requirements for the organisation of working time related to daily and weekly rest and annual leave; to breaks and maximum weekly working time; and to certain aspects of night work, shift work and patterns of work. But the EWTD had an unforeseen impact on health professionals in that junior doctors' hours

were reduced from approximately 156/week pre August 2004 to 58 hours in August 2004 with a further reduction to 48 hours/week by 2009.

The rollout of the EWTD legislation has created opportunities for some HCPs through either substitution or delegation of junior doctor roles (e.g. hospital at night) but it has also decreased 'on-the-job' junior doctor training. As pointed out by the National Audit Office (National Audit Office 2005) few UK hospitals had sufficient experienced Consultants to provide cover within the EWTD criteria. This was particularly true for stroke where less than a fifth of the number of consultant sessions a week that the British Association for Stroke Physicians (BASP) recommends, were instigated (National Audit Office 2005).

Therefore, alternative initiatives (Department of Health 2004a) such as nurse consultant posts, had to be considered in order to obtain a 24 hour stroke service, all of which required training and education (Royal College Of Physicians 2005). New roles allowed nurses to take on a more immediate and interventionist patient care treatment role and promoted the acquisition of specific new skills (Hoban 2005) but usually without embedding these positions financially within the overall strategic direction of the organisation.

#### Issues in Health European Education Policy

According to Ministers of Education (2001), European education policies must plan for rapid change, increasing globalisation and socio-cultural and economic changes. Nevertheless historically, in the face of public budget constraints, the focus in Europe has been on improving the economic dimension of education and training with the social element of learning often ignored (The European Training Federation 2006). The European Commission (EC) and European Parliament (September 2006) recognised this and recommended jointly that training and education policies incorporate efficiency and equity in order to achieve both economic and social outcomes (Commission Of The European Communities 2006). The Ministers of Education (2001) suggested further that future planning should incorporate incentives for lifelong learning over a longer life-span. Despite this the EC (2006) reported that gaps in lifelong education continued to exist with only 10.8% of European adults involved in lifelong learning.

It has been suggested that with the money being invested in European education, that Europe is well-placed to become the world leader in terms of quality education and training by 2010 (Europa 2006). However European education policies and frameworks are generally not specific to healthcare although educational objectives and principles can be related. Thus

while European partnership may be a driving force for education as seen in The Bologna Declaration 1999, each nation individualises their response according to national priorities and ways of working.

Ideally, medical treatment is driven by scientific evidence. However the impact of a health gain, cost-effectiveness and integration of the outcome into a clinical setting are also considered (Matchar 2003). Furthermore the evidence base for many diseases is not defined absolutely and therefore a multitude of unanswered questions remain in conditions like stroke such as feeding policies, timeframes for mobilization post-stroke and treatment of pyrexia. Clinical guidelines and/or policy directives require HCPs to demonstrate evidence-based practice and to do so consistently and systematically. Clinical guidelines may involve changes in practice. Some change will be a matter of service redesign; e.g. that all strokes be scanned within 48 hours was not a call for the purchase of a massive number of new NHS CT scanners but a call that existing scanners be used more efficiently with diagnostic priority given to stroke patients (Scottish Intercollegiate Guidelines Network 1997). Other changes demand improved knowledge; e.g. the constituents of good stroke care in order to effect improved clinical practice (Langhorne & Pollock 2002; Scottish Intercollegiate Guidelines Network 1998).

It becomes clear that a gap exists between policy and the securing of knowledge to implement change. There is an argument to be made that whether it be mandatory specialist training or in-service health training, that healthcare education should be explicit and recognized formally to maximize its potential. However, much stroke education is delivered as in-house training. While this can be successful, managerial support can be inconsistent. If improved stroke care is to be achieved, purposefully designed, competency-based programmes are required that are evaluated, have transferable skills, have formal recognition, lead to promotion and are rewarded financially (Smith & Craig 2006). Too often new roles are an addendum to current practice, introduced on an ad-hoc basis, with little formal recognition, with little or no training and with unsecured strategic support.

Evaluation is essential to implementing and monitoring education programmes. Evaluation may be two-tier, focusing both on the individual's performance and response to training, as well as the overall impact that training staff to service (REF). The UK Government is keen to see NHS policy executed in order to deliver the healthcare agenda. To this end specific guidelines for employee personal development have been developed with NHS employers required to review and map out jobs and responsibilities in line with the Knowledge and Skills Framework (Department Of Health 2004). Arguably this should promote the

implementation of a sustainable training regime. However it should be noted that no specific and additional NHS funding for this initiative has been allocated.

Producing an evidence-base for, and demonstrating the effectiveness of healthcare education is challenging (Glen 2004b; Royal College Of Nursing 1997) and is difficult to evaluate. However studies by Aiken et al (2001; 2002) demonstrate that hospital mortality is reduced when the nursing workforce is better educated (Aiken, Clarke et al. 2001; Aiken, Clarke et al. 2002). Aligning education with policy allows the choice of a valid outcome and importantly identifies a relationship between education and outcome.

### A Global Epidemic: Stroke

#### The Rising Profile of a Global Epidemic

Historically stroke was viewed as an untreatable condition with care often undertaken by a generalist with little to be done to prevent and/or lessen its disabling effects (National Audit Office 2005). In today's industrialised societies, stroke is the third most common cause of death (Mackay 2006) with projected figures revealing a staggering 98% (2002–2032) increase in stroke-related deaths for the USA (Elkins & Johnston 2003). In Europe stroke imposes a significant burden on healthcare budgets accounting for 3-4% of their total healthcare costs (Warlow 2004); is the third largest cause of death (The Internet Stroke Center 2004); and is the most significant cause of long-term disability (Kings College London 2006). In China stroke is the second leading cause of death with 1.5 million stroke patients newly diagnosed each year of whom 75% will be disabled (Fang, Chen et al. 2003) while according to The Lancet (2005), 56 million people died in 2005, of whom 5.6 million died from a stroke. South Africa has just declared stroke to be a national catastrophe (World Joint Stroke Congress 2006). Therefore stroke is a growing global epidemic warranting government and policy makers' attention at national and international level.

#### European Stroke Policy

However, translating the health and economic burden of disease into policy can be problematic. Cost of Illness (CoI) studies have been used to demonstrate the cost/burden of disease in such a way as to provoke health policy (Byford, Togerson et al. 2006). However CoI studies are criticised for failing to provide information on prevention costs or outcome gain (Byford, Togerson et al. 2006; Shiell, Gerard et al. 1987). Consequently low cost, well-evaluated treatments, preventative strategies and individual health gain may be of more

benefit in demonstrating the economic burden of certain diseases (Byford, Togerson et al. 2006).

Bearing in mind that health in Europe is a national responsibility, the European Parliament held a strategic workshop (June 2003) to stress the urgency of tackling the stroke epidemic. The aim was to raise political awareness of the relationship between hypertension and stroke and to encourage the effective treatment of high blood pressure in order to reduce the risk of stroke. In response 20 patient stroke forums across Europe established The Stroke Alliance for Europe (SAFE) in 2003 to lobby policy decision-makers and health care providers on the need to prioritise stroke.

Undoubtedly the identification of stroke as a European health priority created a research impetus. The UK Clinical Research Network (UKCRN: [www.ukcrn.org.uk/index.htm](http://www.ukcrn.org.uk/index.htm)) was established in 2006 to support clinical research, particularly randomised, prospective trials, and to promote a world-class infrastructure that would facilitate clinical research. Over the next five years, the UK Departments of Health will inject £20 million in several key areas including stroke, cancer and mental health. This investment is to ensure that the UK's research health priorities are directed strategically within a managed system but also that the UK responds to the competitiveness imperative of the European Research Area (ERA) established under the Lisbon Agreement 2000.

It is important to recognise that the 'UKCRNs' are government policy in action, within specific fields, to ensure that the evidence base is in place to reduce the burden of disease to society. Yet it has already been noted in this paper that government policy is not necessarily linked explicitly to the funded implementation of the healthcare education required to deliver on policy directives. Indeed recognition of clinical need may only be acknowledged when increasing healthcare costs that drain budgets (e.g. increasing morbidity and mortality) are identified and strategies designed to deal with the emerging crisis.

### UK Stroke Training

Until recently stroke policy was concealed in UK government health publications. However as noted earlier the increasing impact of stroke on health care budgets raised its profile leading to the publication of specific stroke strategies such as the 'NHS R&D Strategic Review: Coronary Heart Disease and Stroke' (Department of Health 1999) and 'The Coronary Heart Disease and Stroke Strategy For Scotland' (Scottish Executive Health Department 2002).

However of interest is the workforce planning section of The Coronary Heart Disease and Stroke Strategy For Scotland (2002) that states improved training opportunities 'would support basic stroke skills as well as specialist skills' (Scottish Executive Health Department 2002). Thus while it was recognized that opportunities in postgraduate training in stroke care were limited and that there was a need for training to meet both basic and specialists stroke skills, nevertheless explicit funding for training in both acute and rehabilitation care was not specified.

Stroke interventions need to be managed by the right clinicians with the right skills given the potential risk of certain interventions like thrombolysis (Corea, Gunther et al. 2006). This is also true for stroke nursing and yet the educational preparation of UK nurses in stroke rehabilitation has been reported as minimal and largely ineffective (Booth, Hillier et al. 2005). In relation to stroke medicine, it was only in 2004 that the UK Joint Committee on Higher Medical Training accredited stroke as a sub-specialty with a formal training structure for a career in stroke medicine (National Audit Office 2005). This was despite previous demands for such specialist training (Warlow 2004, Warlow, Sandercock 1999) and the reported, limited UK training opportunities for doctors in the field (Intercollegiate Stroke Working Party 2004).

We are now witnessing the emerging stroke specialist role across Europe. The current Modernising Medical Careers' (Scottish Executive 2005b) framework (UK) offers the potential to integrate specialist training and fixed training posts in specialities like stroke. Groups such as the European Stroke Initiative (EUSI) (2006), a joint venture of the European Stroke Council (ESC), European Federation of Neurological Societies (EFNS) and European Neurological Society (ENS) and the European Association of Young Neurologists and Trainees Stroke Subspecialty Group are working to improve stroke management in Europe through educational programmes for medical professionals and the public and to establish the requirements of a stroke specialist in the European Community (Corea, Gunther et al. 2006).

But with the growth of a specialism comes a necessity that European standards be considered, particularly in light of EU worker and patient mobility schemes. If a structured approach to inter-European learning could be developed this would allow the further identification and transfer of best practice. For stroke professionals this would provide the opportunity to build a portable set of competencies with comparable qualifications, perhaps under the European Credit Transfer and Accumulation System (ECTS).



European, including UK stroke guidelines, reiterate the importance of appropriately trained staff working in stroke multidisciplinary teams (Aiken, Clarke et al. 2001; Hacke, Kaste et al. 2000; Scottish Intercollegiate Guidelines Network 2002). However the challenge of building a structured approach to stroke education also involves targeting HCPs who work with stroke patients in non-specialist areas such as primary care or general medical wards. These HCPs may know less about post-stroke rehabilitation, may have fewer stroke education opportunities and may not view stroke care as their clinical priority but nevertheless deliver the majority of stroke care and so require clinical updating (Demaerschalk 2004; Smith and Craig 2006).

### New Technologies and Innovation in Healthcare Education

Improving the patient's journey and outcomes relies on public and healthcare professional knowledge (Lindley 2002). As Alberts et al (1992) demonstrated, an education intervention directed at both healthcare workers and the public can be highly effective as 86% of stroke patients in their study were diagnosed and transferred within 24 hours compared to 37% pre-intervention.

In stroke like myocardial infarction, there is a need for rapid diagnosis and appropriate referral to ensure acute interventions (e.g. thrombolysis) are administered where appropriate. Testing of a mobile rtPA system to administer pre-hospital is currently being explored in stroke (LaMonte, Xiao et al. 2004) while pre-hospital thrombolysis is already being delivered by ambulance staff in cardiac services (Scottish Executive 2005a). Therefore, investing in stroke thrombolytic (rtPA) education and diagnosis for HCPs is critical as it remains the most promising, available medical intervention for acute ischaemic stroke despite its limitations (Sandercock, Berge et al. 2002).

Healthcare technologies such as telemedicine have already revolutionised healthcare through the reduction of patient waiting times, taking specialised care to remote areas and providing opportunities for HCPs to develop new roles (LaMonte, Bahouth et al. 2003; Levine & Gorman 1999). In stroke, telemedicine and teleconferencing are used as educational resources among international stroke communities. Telemedicine has the capacity to erase geographical differences in healthcare and to distribute and provide a more equitable and accessible 24 hour service. It can bring the off-site specialist to the bedside. Applied in this way, telemedicine supports and facilitates the transfer of skills and knowledge to the less experienced, reduces the need for 'off-ward' training and improves rapid, multi-disciplinary decision-making. In Scotland for example it has been suggested that telemedicine could

allow General Practitioners to consult specialists remotely thereby avoiding unnecessary referrals and preventing avoidable emergency admissions (Scottish Executive 2005a).

Thought has already been given to a future of specialist care being delivered in peoples' homes via Internet broadband (Telemedicine Seminar 2006). In the UK a more universal approach to telemedicine in stroke services is becoming increasingly evident and may soon become a current commodity (Telemedicine Seminar 2006). Indeed, a paramedic or nurse-led thrombolytic service which is consultant supported via telemedicine may not be too far away. Therefore, future training needs should be identified, possibly using the experience of specialists and educational models in areas of more advanced telemedicine use such as epilepsy (Telemedicine Seminar 2006). In the case of telemedicine the tool kit is here but we need to educate HCPs and service users that it is both a way of implementing quality care as well as a coherent learning device.

### Delivering Health-focused Education

The relationship between HEIs and the UK National Health Service is complex. HEIs and the NHS need to work in partnership and yet often have conflicting agendas. The NHS often requires training that is reactive to health initiatives and directives and operating within narrow time constraints. Funding may come from existing budgets rather than being supported by new money and may be competitive in terms of organizational demands and health priorities at local and national levels. Contractual arrangements are a double-edge sword providing security and cost at prescribed levels but can be constraining if their impact is to reduce choice and keep cost at either inflated or depressed prices.

Education providers strive to respond by offering appropriate topics, varied modes of educational delivery in different settings that meet quality assurance standards and attempt to meet the healthcare clinician's and the health organization's expectations. HEIs operate in competitive environments and are expected to income generate. Like other areas, stroke education requires current knowledge, familiarity with clinical guidelines, service delivery, technological advances and an understanding of their impact at practice level. Additionally, there is a need to ensure that the skills and knowledge contained within a specific educational package are transferable within a policy context to the current labour market, workforce modelling and staff governance (e.g. advanced practitioner).

Collaborative, partnership arrangements between HEIs and the NHS to produce courses that are self-sustaining, meet national guidelines, are evidence-based and quality assured, are cost effective and income generating, are generally the gold standard aspiration of all involved.

Consequently education needs to be planned strategically and implemented in conjunction with new treatments and service initiatives to provide HCPs with modern learning resources within a clinical career framework. Given the inevitability of changes in healthcare, it would therefore seem reasonable that health services continue to invest in education, training and human resource strategies (Glen 2004a) but also that funding be made available to support the required educational input as demanded by policy.

### Learning in the Workplace

Work-based learning, which integrates training into the workplace, usually in partnership with an educational institute, is one way of delivering education to healthcare workers. Undoubtedly work-based learning allows academic achievement to be combined with work and promotes shared and multidisciplinary learning and working. In a recent survey of 530 HCPs working in stroke care, almost 70% stated a preference for a work-based approach to stroke education (Smith & Craig 2006).

Developing and accrediting stroke learning in this way relies on collaboration between practice and education (Scottish Executive 2004). There are obvious financial implications in establishing work-based education partnerships. The development and accreditation of courses can be a long process complied with the costs of the cyclic process of quality assurance. While Governments have attempted to address financial issues, they tend to focus on the costs of seeking external accreditation, services of the external body, costs of producing evidence for review, convening and hosting accreditation panel reviews, recording information and administration costs (NHS Education for Scotland 2003).

The delivery of healthcare education in conditions such as stroke raises a number of questions; for example

- What to teach where gaps in the evidence-based exist?
- What are the transferable skills in [e.g. stroke] and recognizing these within a policy context?
- How do academic departments work with professional bodies and [stroke] specialist groups?
- Who provides the ongoing support of those undertaking an approved course?
- How and when to involve service-users in developing specialist [stroke] education?
- How to teach HCPs new skills and knowledge?
- How to effectively evaluate outcomes and sustainability of skill level?

A united front between the health service and learning institutes is key to accessing educational funds. Partnership in education would underline a prevailing intent to succeed; to consolidate on local resources to ensure sustainability and rollout of stroke training to different areas and staff groups working in and around stroke.

### Funding

Healthcare policies which implicitly require staff training should have integral financial allocations dedicated to education. However in general health policy is issued with funding for implementation and in particular education, ignored. The English National Service Frameworks, Agenda for Change ((Department of Health 2004b), the NHS Knowledge and Skills Framework (2004) are examples of policy where funding for implementation and education did not follow the directive. While the identification of stroke as a health priority in Scotland led to ring-fenced funding through the Stroke Managed Clinical Networks (MCNs), this did not happen in England or Wales. Scotland's MCNs have been used as gateways to access funding on a competitive basis to enable the redesign of services, to raise standards and to improve clinical outcomes. Within their remit some opportunities have been created for training and the groundwork laid for educational initiatives to be lead in partnership between HEIs and the NHS. Interestingly there are growing indications that the NHS is employing more staff to deliver in-house education (e.g. practice education facilitators in Scotland).

Yet within organisations the identification of priority areas for stroke educational investment is often difficult considering the diversity of training needs for staff working in stroke and the competing demands of other parts of the Service (Smith & Craig 2006). Being a priority does not guarantee funding and inevitably those clinical areas not designated priorities can feel neglected.

Explicit recommendations to facilitate access to healthcare education funding in such circumstances may be required at a national government level. Indeed, proposals for clinical education funding should be fit for purpose and should aim to meet the following:

- Adopt a multi-agency approach
- Be reinforced and informed by recent staff training needs analysis
- Demonstrate a collaborative approach to local workforce development confederations
- Be flexible to working patterns and provide innovative approaches to learning

- Provide the means to recognize, reward and record training using policy frameworks such as the Knowledge and Skills Framework (Department Of Health 2004) and Agenda for Change (Department of Health 2004b)
- Integrated systems of evaluation and long-term support for those that have undergone training

### **Conclusion**

In this paper we have argued that

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Table 1 - 'Time is brain' with education

<b>Stroke Event Pathway</b>	<b>Area for education</b>
<b>Recognise signs and symptoms</b>	Educate the public to recognise symptoms of stroke and urgency of medical attention Accurate diagnosis by professional groups especially paramedics, general practitioners (GPs) Educate gateway staff such as GP receptionists, helpline telephonists and A&E emergency staff to triage patients
<b>Initiate emergency services</b>	Improve awareness to treat stroke as a medical emergency GP staff recognise the urgency and referral pathways in their locality
<b>Rapid confirmed diagnosis in hospital</b>	Further assessment and skilled interpretation of scans to determine diagnosis and subtype
<b>Accurate treatment at the hospital</b>  <b>Administration of acute intervention</b>	Appropriate evidence based treatments such as thrombolysis can be delivered Requires skilled physician in for example the administration of thrombolysis