Evidence Brief: Stroke Workforce

Contents

Produced by the HEE Knowledge Management team Evidence Briefs offer a quick overview of the published reports, research and evidence on a workforce-related topic. A starter for 10 on the evidence if you will.

HEE Knowledge Management Team, August 2019

Key publications – the big picture

Interim NHS People Plan NHS, June 2019
Our Interim NHS People Plan, developed collaboratively with national leaders and partners, sets a vision for how people working in the NHS will be supported to deliver that care and identifies the actions we will take to help them.
See p. 38 **"Medical credentialing"** which has an impact on the pathway for stroke patients and was laid out in the Long Term Plan (see below).

NHS Long Term Plan NHS, January 2019
The NHS Long Term Plan was developed in partnership with those who know the NHS best – frontline health and care staff, patients and their families and other experts.
See Chapter 3 "Further progress on care quality and outcomes – better care for major health conditions" which includes detail on **"stroke care"** (p. 64), particularly "The NHS will work with Health Education England to modernise the stroke workforce with a focus on cross-specialty and in some cases cross-profession accreditation of particular 'competencies."

Facing the Facts, Shaping the Future HEE, December 2017
The NHS needs radical action to improve working conditions, boost training and retention and become a 'model employer' for staff, a report on the future of the health and care workforce has concluded.

Meeting the future consultant workforce challenges: Stroke Medicine (Stroke Medicine Consultant Workforce Requirements 2019-2022) British Association of Stroke Physicians, July 2019
This report provides the most up-to-date guidance on stroke workforce requirements to help remedy the serious current shortfall in stroke consultants in the NHS – and ensure the highest quality care is available to all patients in the UK.

Case Studies

New emotional support service, Liverpool NHS Long Term Plan, January 2019
Joint working between the Stroke Association, Liverpool Clinical Commissioning Group and stroke clinicians, is improving the emotional support given to patients before, during and after clinical care.

Joint care from the Community Stroke Team and Stroke Association's Reablement Services promotes the health and wellbeing of stroke survivors NHS Long Term Plan, January 2019
Partnership working between the NHS and the Stroke Association's Reablement Service is ensuring that people receive timely community based holistic care and support after a stroke, boosting both their health and wellbeing.

Community Stroke Microsystem – Sheffield Teaching Hospitals NHS Fab Academy, May 2017
Background: Sheffield Teaching Hospital's Community Stroke Service team is comprised of Administrators, Nurses, Occupational Therapists, Pharmacists, Psychologists, Physiotherapists, Rehabilitation Assistants and Speech & Language Therapists who provide therapy and support to approximately 700 patients per year. Representatives from across the professional groups formed a microsystem team that began meeting in December 2014.

The role of the radiography workforce in stroke management The Society & College of Radiographers, n.d.
Patients with acute brain attack require rapid access to high quality and appropriate imaging in order to diagnose the type of stroke. Radiographers are a vital part of the specialist stroke care team and within the UK there are many clinical imaging departments operating systems which allow for rapid access scanning of patients - 24 hours a day, seven days per week.

Delivering stroke specific education and training eWIN, November 2014
One of the aims of the National Stroke Strategy (2007) was to ensure that high quality stroke care is provided by people working anywhere along the stroke pathway, (NICE 2013); from prevention through to long-term care. The Stroke-Specific Education Framework (SSEF), is a professional development web-based tool, which was developed as the first step in ensuring the realisation of this aim and is the first pathway-specific education framework of its kind in the UK.

New models of care in practice: EMRAD (East Midlands Radiology Consortium) NHS Providers, n.d.
The East Midlands Radiology Consortium (EMRAD) aims to deliver timely and expert radiology services to patients across the East Midlands, regardless of where they are being treated. Radiology services include imaging tests like x-rays and scans. The EMRAD network and its new way of working can save money as well as improve the clinical care offered within urgent services such as major trauma and stroke and in regional acute surgical centres. It also improves the support available to smaller hospitals and outpatient facilities around the region. See also Acute Care Collaboration Vanguards

HEE Star

Lots of tools and resources are available in the HEE Star - type in a word or phrase to search: https://www.hee.nhs.uk/our-work/hee-star

Statistics

You can find relevant statistics on the Health and Care Statistics Landscape if you type **Stroke** in the search bar: https://gss.civilservice.gov.uk/hc-statistics-landscape/

HEE National Data Programme

HEE staff can look at the National Data Warehouse (NDL) SharePoint site to find out more about datasets and Tableau products.

Published Peer Reviewed Research

New, expanded or specialist roles

The impact of Stroke Nurse Navigation on Patient Compliance Postdischarge Rehabilitation Nursing, October 2016

PURPOSE The purpose of this study was to describe the impact a stroke nurse navigation program has on concurrent chart reviews and patient compliance postdischarge. DESIGN Phase I: Concurrent chart review of The Joint Commission Primary Stroke Center core measures for ischemic stroke patients. Phase II: Longitudinal study of 100 ischemic stroke patients discharged to home. METHODS Telephone surveys were conducted at prescribed intervals posthospital discharge (Phase II). Surveys focused on medication compliance, follow-up medical appointment compliance, and neurovascular emergency department (ED) visits/readmissions. FINDINGS Phase I trends included increased stroke performance measures compliance. Phase II favorable trends included increased medication compliance (>98%), increased follow-up appointments (100%), decreased rate of neurovascular ED visits/rehospitalizations (3%), and improvement in activities of daily living and quality of life measures through 12 months postdischarge. CONCLUSIONS Stroke nurse navigation increased conformity of stroke performance measures and stroke patient discharge compliance through 12 months postdischarge.

Benefits of arrythmia care coordinators Nursing Times, 2013

Athens log in required

Arrhythmias (abnormal heartbeats) are common but can be life threatening. Symptoms can be severe and include palpitations, dizziness, blackouts, breathlessness and even chest pain. These can be highly distressing for patients, causing them severe anxiety and depression if they are not well supported. Early diagnosis is essential to reduce mortality and improve quality of life--the most common arrhythmia--atrial fibrillation--can cause a stroke if left untreated or inadequately treated. While sudden cardiac death is less common in a young person, it is usually due to an inherited cardiac condition that has resulted in a critical arrhythmia. Screening family members at risk can provide timely assessment, psychological support through counselling and treatment with the implantation of a cardioverter defibrillator if necessary. In 2005, a chapter setting out best practice for arrhythmia care was added to the National Service Framework for Coronary Heart Disease. This highlights the need for early diagnosis and expert patient support. In response, the British Heart Foundation launched a pilot programme to fund specialist nurses as arrhythmia care coordinators. Its aim was to develop and improve care pathways, and provide continuity and support for patients diagnosed with an arrhythmia to improve clinical care and emotional wellbeing. An independent evaluation by the University of York showed that these posts significantly improved patients' experiences of arrhythmia services, prevented thousands of readmissions and cut costs for the NHS. This article explains how the new role was successfully implemented.

Nurse practitioners and physician assistants in the intensive care unit: an evidence-based review Critical Care Medicine, October 2008

BACKGROUND Advanced practitioners including nurse practitioners and physician assistants are contributing to care for critically ill patients in the intensive care unit through their participation on the multidisciplinary team and in collaborative physician practice roles. However, the impact of nurse practitioners and physician assistants in the intensive care unit setting is not well known. OBJECTIVES To identify published literature on the role of nurse practitioners and physician assistants in acute and critical care settings; to review the literature using nonquantitative methods and provide a summary of the results to date incorporating studies assessing the impact and outcomes of nurse practitioner and physician assistant providers in the intensive care unit; and to identify implications for critical care practice. METHODS We conducted a systematic search of the English-language literature of publications on nurse practitioners and physician assistants utilizing Ovid MEDLINE, PubMed, and the Cumulative Index of Nursing and Allied Health Literature databases from 1996 through August 2007.INTERVENTIONSNone.RESULTSOver 145 articles were reviewed on the role of the nurse practitioner and physician assistant in acute and critical care settings. A total of 31 research studies focused on the role and impact of these practitioners in the care of acute and critically ill patients. Of those, 20 were focused on nurse practitioner care, six focused on both nurse practitioner and physician assistant care, and five were focused on physician assistant care in acute and critical care settings. Fourteen focused on intensive care unit care, and 17 focused on acute care including emergency room, trauma, and management of patients with specific acute care conditions such as stroke, pneumonia, and congestive heart failure. Most studies used retrospective or prospective study designs and nonprobability sampling techniques. Only two randomized control trials were identified. The majority examined the impact of care on patient care management (n = 17), six focused on comparisons of care with physician care, five examined the impact of models of care including multidisciplinary and outcomes management models, and three assessed involvement and impact on reinforcement of practice guidelines, education, research, and quality improvement. CONCLUSIONS Although existing research supports the use of nurse practitioners and physician assistants in acute and critical care settings, a low level of evidence was found with only two randomized control trials assessing the impact of nurse practitioner care. Further research that explores the impact of nurse practitioners and physician assistants in the intensive care unit setting on patient outcomes, including financial aspects of care is needed. In addition, information on successful multidisciplinary models of care is needed to promote optimal use of nurse practitioners and physician assistants in acute and critical care settings.

A sustainable stroke nursing workforce requires a clear pathway for career progression British Journal of Neuroscience Nursing, December 2017

The author conveys her thoughts on an emerging evidence about the central role of stroke nurses in lowering mortality rates and ensuring quality outcomes and mentions related topics such as the Nursing and Midwifery Council, the National Health Service, and transient ischaemic attack.

Nursing roles within a stroke telemedicine network Journal of Central Nervous System Disease, February 2010

Time sensitive acute stroke treatments and the growing shortage of vascular neurologists compound to create a gap in the delivery of care to meet the American Stroke Association guidelines in underserviced regions. Audio/video consultation (telemedicine),

which has been evolving since the late 1990's, is a putative solution. While telemedicine can serve as a valuable facilitative tool, the telestroke consultation is only one piece of a complex collaboration between hub and spoke environments and clinical personnel. The growing use of telemedicine in stroke offers more opportunities for all nurses to participate in the continuum of cerebrovascular disease care. A review of this collaboration will include but will not be limited to: algorithms of the acute stroke evaluation, hub and spoke staff meetings, stroke education for spoke staff, and patient follow–up post-acute treatment. Our team's telemedicine experience, utilizing research, education, and clinical practice, will be described.

Emerging subspecialties in neurology: paediatric stroke and cerebrovascular disorders Neurology, November 2016

This article discuses about the pediatric stroke and cerebrovascular disorders. Stroke, ischemic and hemorrhagic, is estimated to occur in at least 2–3 per 100,000 children annually, and 1 in 4,000 neonates. This makes pediatric strokes relatively common among serious pediatric neurologic conditions. Pediatric stroke neurology is now a career option, one that offers significant rewards. The excitement of being on the cutting edge of a new field of discovery provides opportunities for challenging and stimulating intellectual and research pursuits. The future of the field of pediatric stroke is bright, with increasing workforce demand for pediatric stroke clinicians and many opportunities for further research. Clinical trials in stroke treatment are urgently needed and increasingly feasible given the increasing capacity of pediatric centers to deliver acute stroke care.

Multidisciplinary teams

Interdisciplinary team working in physical and rehabilitation medicine Journal of Rehabilitation, January 2010

Effective team working plays a crucial role in Physical and Rehabilitation Medicine (PRM). As part of its role of optimizing and harmonizing clinical practice across Europe, the Professional Practice Committee of Union of European Medical Specialists (UEMS) Physical and Rehabilitation Medicine (PRM) Section reviewed patterns of team working and debated recommendations for good practice at a meeting of national UEMS delegates held in Riga, Latvia, in September 2008. This consensus statement is derived from that discussion and from a review of the literature concerning team working. Effective team working produces better patient outcomes (including better survival rates) in a range of disorders, notably following stroke. There is limited published evidence concerning what constitute the key components of successful teams in PRM programmes. However, the theoretical basis for good team working has been well-described in other settings and includes agreed aims, agreement and understanding on how best to achieve these, a multi-professional team with an appropriate range of knowledge and skills, mutual trust and respect, willingness to share knowledge and expertise and to speak openly. UEMS PRM Section strongly recommends this pattern of working. PRM specialists have an essential role to play in interdisciplinary teams; their training and specific expertise enable them to diagnose and assess severity of health problems, a prerequisite for safe intervention. Training spans 4-5 years in Europe, and includes knowledge and critical analysis of evidence-based rehabilitation strategies. PRM physicians are therefore well-placed to coordinate PRM programmes and to develop and evaluate new management strategies. Their broad training also means that they are able to take a holistic view of an individual patient's care.

Professional groups driving change toward patient-centred care: interprofessional working in stroke rehabilitation in Denmark BMC Health Services Research, September 2017

Background: Patient-centred care based on needs has been gaining momentum in health policy and the workforce. This creates new demand for interprofessional teams and redefining roles and tasks of professionals, yet little is known on how to implement new health policies more effectively. Our aim was to analyse the role and capacity of health professions in driving organisational change in interprofessional working and patient-centred care.Methods: A case study of the introduction of interprofessional, early discharge teams in stroke rehabilitation in Denmark was conducted with focus on day-to-day coordination of care tasks and the professional groups' interests and strategies. The study included 5 stroke teams and 17 interviews with different health professionals conducted in 2015.Results: Professional groups expressed highly positive professional interest in reorganised stroke rehabilitation concerning patients, professional practice and intersectoral relations; individual professional and collective interprofessional interests strongly coincided. The corresponding strategies were driven by a shared goal of providing needs-based care for patients. Individual professionals worked independently and on behalf of the team. There was also a degree of skills transfer as individual team members screened patients on behalf of other professional groups.Conclusions: The study identified supportive factors and contexts of patient-centred care. This highlights capacity to improve health workforce governance through professional participation, which should be explored more systematically in a wider range of healthcare services.

Supply

Demand-led supply of neurointerventionalists for endovascular ischemic stroke therapy Neurology, July 2013

Drs. Fiorella and Cloft and authors Zaidat et al. discuss the impending oversupply of neurointerventionalists and echo debates ongoing in many medical subspecialties, namely, how to construct barriers to decrease the number of people entering a field. Between 2005 and 2007, the United Council of Neurologic Subspecialties created 7 new board examinations, complete with rigid application requirements. It is hard not to view these barriers as potentially self-serving. Many of the people initiating additional fellowships and new board examinations have managed well in their fields without those hurdles. While it is difficult to argue against more education, these requirements have a time and financial cost for trainees (and their departments) and could contribute to fragmentation within the field.

Impact of stroke call on the stroke neurology workforce in the United States: possible challenges and opportunities Journal of Stroke of Cerebrovascular Diseases, July 2018

BACKGROUND The Stroke & Vascular Neurology Section of the American Academy of Neurology was charged to identify challenges to the recruitment and retention of stroke neurologists and to make recommendations to address any identified problems. The Section initiated this effort by determining the impact of stroke on-call requirements as a barrier to the recruitment and retention of vascular neurologists. METHODS This is a cross-sectional survey of a sample of US Neurologists providing acute stroke care. RESULTS Of the 900 neurologists who were sent surveys, 313 (35%) responded. Of respondents from institutions providing stroke coverage, 71% indicated that general neurologists and 45% indicated that vascular neurologists provided that service. Of those

taking stroke call, 36% agreed with the statement, "I spent too much time on stroke call," a perception that was less common among those who took less than 12-hour shifts (P < .0001); 21% who participated in stroke call were dissatisfied with their current job. Forty-six percent indicated that their stroke call duties contributed to their personal feeling of "burnout." CONCLUSIONS Although the reasons are likely multifactorial, our survey of neurologists providing stroke care suggests that over-burdensome on-call responsibilities may be contributing to the vascular neurology workforce burnout and could be affecting recruitment and retention of vascular neurologists. Strategies to reduce the lifestyle impact of stroke call may help address this problem.

Demographics

Stroke doctors: Who are we? A World Stroke Organisation survey International Journal of Stroke, October 2017

Background Specialist training provides skilled workforce for service delivery. Stroke medicine has evolved rapidly in the past years. No prior information exists on background or training of stroke doctors globally. Aims To describe the specialties that represent stroke doctors, their training requirements, and the scientific organizations ensuring continuous medical education. Methods The World Stroke Organization conducted an expert survey between June and November 2014 using e-mailed questionnaires. All Organization for Economic Co-operation and Development countries with >1 million population and other countries with >50 million population were included (n = 49, total 5.6 billion inhabitants, 85% of global strokes). Two stroke experts from each selected country were surveyed, discrepancies resolved, and further information on identified stroke-specific curricula sought. Results We received responses from 48 (98%) countries. Of ischemic stroke patients, 64% were reportedly treated by neurologists, ranging from 5% in Ireland to 95% in the Netherlands. Per thousand annual strokes there were average six neurologists, ranging from 0.3 in Ethiopia to 33 in Israel. Of intracerebral hemorrhage patients, 29% were reportedly treated by neurosurgeons, ranging from 5% in Sweden to 79% in Japan, with three neurosurgeons per thousand strokes, ranging from 0.1 in Ethiopia to 24 in South Korea. Most countries had a stroke society (86%) while only 10 (21%) had a degree or subspecialty for stroke medicine. Conclusions Stroke doctor numbers, background specialties, and opportunities to specialize in stroke vary across the globe. Most countries have a scientific society to pursue advancement of stroke medicine, but few have stroke curricula.

New ways of working

Optimising long-term participation in physical activities after stroke: exploring new ways of working for physiotherapists Physiotherapy, September 2009

There is now good empirical evidence of physical and functional benefits for individuals with stroke from long-term engagement in a range of physical activities. However, long-term participation of stroke survivors in physical activity after rehabilitation is low, and maximum benefits are not being achieved. This article reviews relevant literature and evidence, and suggests that physiotherapists are ideally placed to support patients in long-term participation in activity as they prepare patients for the end of physical rehabilitation. However, this requires the development, testing and application of stroke-specific evidence-based behavioural and motivational interventions that are feasible in clinical practice, take account of the role of carers, and seek to address the barriers to activity faced by stroke survivors at the end of rehabilitation. It also requires physiotherapists to take a leading role in developing appropriate policies and strategies with other exercise professionals

and services to address the transition from rehabilitation to an active lifestyle following stroke.

Research

Exploring recruitment issues in stroke research: a qualitative study of nurse researchers' experiences Nurse Researcher, May 2016

AIM To explore the practice of experienced stroke nurse researchers to understand the issues they face in recruiting participants. BACKGROUND Participant recruitment is one of the greatest challenges in conducting clinical research, with many trials failing due to recruitment problems. Stroke research is a particularly difficult area in which to recruit; however various strategies can improve participation. DISCUSSION Analysis revealed three main types of problems for recruiting participants to stroke research: those related to patients, those related to the nurse researcher, and those related to the study itself. Impairments affecting capacity to consent, the acute recruitment time frame of most stroke trials, paternalism by nurse researchers, and low public awareness were especially pertinent. CONCLUSION The disabling nature of a stroke, which often includes functional and cognitive impairments, and the acute stage of illness at which patients are appropriate for many trials, make recruiting patients particularly complex and challenging. IMPLICATIONS FOR PRACTICE An awareness of the issues surrounding the recruitment of stroke patients may help researchers in designing and conducting trials. Future work is needed to address the complexities of obtaining informed consent when patient capacity is compromised.

Stroke care organisation and staffing

Regional variation in acute stroke care organisation Journal of Neurological Sciences, 2016

BACKGROUND: Few studies have assessed regional variation in the organisation of stroke services, particularly health care resourcing, presence of protocols and discharge planning. Our aim was to compare stroke care organisation within middle- (MIC) and high-income country (HIC) hospitals participating in the Head Position in Stroke Trial (HeadPoST). METHODS: HeadPoST is an on-going international multicenter crossover cluster-randomized trial of 'sitting-up' versus 'lying-flat' head positioning in acute stroke. As part of the start-up phase, one stroke care organisation questionnaire was completed at each hospital. The World Bank gross national income per capita criteria were used for classification. RESULTS: 94 hospitals from 9 countries completed the questionnaire, 51 corresponding to MIC and 43 to HIC. Most participating hospitals had a dedicated stroke care unit/ward, with access to diagnostic services and expert stroke physicians, and offering intravenous thrombolysis. There was no difference for the presence of a dedicated multidisciplinary stroke team, although greater access to a broad spectrum of rehabilitation therapists in HIC compared to MIC hospitals was observed. Significantly more patients arrived within a 4-h window of symptoms onset in HIC hospitals (41 vs. 13%; P<0.001), and a significantly higher proportion of acute ischemic stroke patients received intravenous thrombolysis (10 vs. 5%; P=0.002) compared to MIC hospitals. CONCLUSIONS: Although all hospitals provided advanced care for people with stroke, differences were found in stroke care organisation and treatment. Future multilevel analyses aims to determine the influence of specific organisational factors on patient outcomes.

A comparison between reported therapy staffing levels and the department of health therapy staffing guidelines for stroke rehabilitation: a national survey BMC Health Services Research, May 2014

BACKGROUND This study compared reported staffing levels for stroke care within UK in-patient stroke units to stroke strategy staffing guidelines published by the UK Department of Health and the Royal College of Physicians. The purpose was to explore the extent to which stroke teams are meeting recommended staffing levels. METHOD The data analyzed in this report consisted of the detailed therapist staffing levels reported in the demographic section of our national survey to determine upper limb treatment in stroke units (the ATRAS survey). A contact list of stroke practitioners was therefore compiled primarily in collaboration with the 28 National Stroke Improvement Networks. Geographic representation of the network areas was obtained by applying the straight-forward systematic sampling method and the N(th) name selection technique to each Network list. In total 192 surveys were emailed to stroke care providers around England. This included multiple contacts within stroke teams (e.g. a stroke consultant and a stroke co-coordinator) to increase awareness of the survey. RESULTS A total of 53 surveys were returned from stroke teams and represented 20 of the 28 network areas providing 71% national coverage. To compare reported staffing levels to suggested DoH guidelines, analysis was conducted on 19 of the 37 inpatient hospital care units that had no missing data for staff numbers, unit bed numbers, number of stroke patients treated per annum, average unit length-of-stay, and average unit occupancy rates. Only 42% of units analyzed reached the DoH guideline for physiotherapy and fewer than 16% of the units reached the guideline for speech & language therapy. By contrast, 84% of units surveyed reached the staffing guideline for occupational therapy. However, a post-hoc analysis highlights this as an irregularity in the DoH guidelines, revealing that all therapies are challenged to provide the recommended therapy time. CONCLUSIONS Most in-patient stroke units are operating below the DoH guidelines and are therefore challenged in providing the recommended amount of therapy and patient time to facilitate optimal functional recovery for stroke patients.

Pathways

Stroke Pathway NHS RightCare, 2016

The Stroke Pathway defines the core components of an optimal service for people who have had a stroke or are at risk of a stroke. The Stroke Pathway has been developed in collaboration with the National Clinical Director for Stroke Services, Tony Rudd, Public members of the Intercollegiate Stroke Working Party (ICSWP), the Stroke Association and a range of other stakeholders from across the health and care system. The pathway defines the key interlocking components for an optimal system for prevention and management and the priority higher value interventions that systems should focus on to address variation, improve outcomes, reduce cost and contribute toward a sustainable NHS.

Competency Frameworks

Stroke Competency Toolkit Framework (SCoT): Making care for stroke patients safer Chest and Heart Stroke Scotland, n.d.

The Stroke Competency Toolkit (SCoT) has been developed as a framework to help staff evidence how their learning translates into their care of patients. It is a stroke-specific continuing professional development (CPD) resource, and is aligned to the NHS Knowledge and Skills Framework (KSF).

Developing an education framework for stroke Nursing Times, 2012

Athens log in required

The National Stroke Strategy identified that staff caring for people with stroke needed knowledge and skills, and nationally recognised learning programmes were required. This article describes the development of an education framework for stroke.

Help accessing articles or papers

Where a report/ journal article or resource is freely available the link has been provided. If an NHS OpenAthens account is required this has been indicated. It has also been highlighted if only the abstract is available. If you do not have an OpenAthens account you can self-register here.

If you need help accessing an article, or have any other questions, contact the Knowledge Management team for support KnowledgeManagement@hee.nhs.uk