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Commentary: “Adopting evidence-based guidelines for acute stroke care: barriers and enablers for health professionals”

An evidence summary based on the following systematic review: Baatiema, L., Otim, M.E., Mnatzaganian, G., de-Graft Aikins, A., Coombes, J. & Somerset, S. (2017) ‘Health professionals’ views on the barriers and enablers to evidence-based practice for acute stroke care: a systematic review’. *Implementation Science*, 12(1):74

Introduction

Evidence-based practice is the keystone of clinical practice, policy and management (Lehane et al. 2019). Despite this, a knowledge to practice gap still exists and it is estimated to take 17 years for evidence to be translated to clinical practice (Morris et al. 2011). The reasons for slow translation in acute stroke care are not completely understood. Some studies have highlighted the barriers that result in under-utilisation of best practice (Baker et al. 2010; Grimshaw et al. 2012). However, no previous review has attempted to systematically analyse barriers and enablers within the highly recommended acute stroke therapies (Baatiema et al. 2017). A systematic review by Baatiema et al. (2017) addressed this issue by exploring the adoption of evidence-based guidelines for acute stroke, through the views of health professionals. The aim of this review was to identify and systematically review studies of health professionals’ views on the barriers and enablers to evidence-based interventions for acute stroke care.

Aims of the commentary

This commentary aims to critically appraise the methods used within this review and expand upon the findings in context to clinical practice.

The review

The review authors searched for peer-reviewed studies of any kind that identified barriers or enablers to the uptake of four highly recommended acute stroke therapies or services: specialist stroke unit care, thrombolytic therapy, the use of aspirin and de-compressive surgery. Relevant healthcare databases were searched for eligible studies published from 1990-2016. Included studies were based on the views and experiences of health professionals (stroke

KEY POINTS

- Organisational context or structural level factors were the most frequent barriers to uptake of evidence-based care for acute stroke.
- Poor understanding of barriers or enablers to uptake of guidelines means that effective therapies are underutilised.
- Future interventions/health policy should utilise these findings to encourage uptake of best practice.

specialists, medical doctors, nurses, allied health professionals and health managers, health planners, health policy-makers or any health executives) and were limited to studies that were peer-reviewed and published in English. The barriers and facilitators for evidence-based interventions had to relate to decompressive surgery, thrombolytic therapy, aspirin, decompressive surgery and care in a stroke unit.

Quality assessment was carried out by two independent reviewers using the Joanna Briggs Institute tool for assessing qualitative studies and the Centre for Evidence-Based Management appraisal tool for quantitative studies.

Analysis of studies was conducted using both descriptive statistics (quantitative studies) and thematic analysis (qualitative studies). A pre-existing framework of seven domains (Flottorp et al. 2013) was used to categorise the themes of barriers and enablers. The key findings were identified by one author, categorised using the framework and validated by a second author.

Quality of the review

Using the Joanna Briggs Institute Critical Appraisal tool for systematic reviews 9 out of the 11 criteria

were satisfactory (The Joanna Briggs Institute. 2017). It was deemed that assessment of publication bias was not applicable in this review and the methods to minimise error in data extraction were not adequate. As both screening and data extraction were carried out by a single reviewer. With the screening process being verified by a second reviewer. Despite this these methods are susceptible to miss relevant studies (Waffenschmidt et al. 2019) and introduce error in data extraction (Buscemi et al. 2006).

Based on this quality assessment of this review it was deemed that the systematic review may provide an accurate summary of the results of the available studies that were included in the review.

Quality of included studies

Methodological limitations were found in the quantitative studies such as a lack of detail on sampling techniques. This lack of detail of the sampling technique of the included studies makes it difficult to evaluate the generalisability of the included quantitative studies (Elfil and Negida 2017) and introduces selection bias (Hegedus and Moody 2010). The overall quality of the quantitative studies was classified as moderate using the Centre for Evidence-Based Management appraisal tool.

The quality of qualitative studies was uncertain. Authors reported how data collection was adequately described, however, none of the studies reported on theoretical or philosophical sources for methodological relevance, analysis and interpretation.

Main review findings

Overall 10 studies met the inclusion criteria (three qualitative and seven quantitative). Studies were published between 2004 and 2015 and conducted in Australia, USA, Sweden, Norway, Denmark and the Netherlands. The total number of participants was 1692 and included nurses, doctors, neurologists, emergency department physicians, allied health staff and health managers.

Table.1 shows the frequency (%) of each theme based on the number of times relevant barriers and enablers were reported in the eligible studies. Social, political and legal factors were not reported.

Table.1 Barriers or enablers to adopting evidence-based acute stroke care

Theme	Barrier or Enabler
Capacity for organisational change (37%)	<ul style="list-style-type: none"> ▪ Lack of institutional support, e.g. lack of guidelines, funding for professional development. ▪ Limited health staff capacity, e.g. shortage of stroke nurses. ▪ Workload demands and a lack of protocols.
Individual health professionals' factors (25%)	<ul style="list-style-type: none"> ▪ Lack of awareness/knowledge of an intervention. ▪ Lack of skills to apply the intervention. ▪ Low motivation to implement.
Resources and incentives (11%)	<ul style="list-style-type: none"> ▪ Limited physical space to establish stroke units. ▪ Lack of CT scans and financial resources. ▪ Limited time, stroke beds and staff capacity.
Guideline factors (10%)	<ul style="list-style-type: none"> ▪ The nature of evidence related to stroke guidelines could influence uptake amongst health professionals, e.g. perceptions of the effectiveness of thrombolysis.
Patient factors (10%)	<ul style="list-style-type: none"> ▪ Lack of awareness of early stroke symptoms. ▪ Patients arriving late in emergency departments to receive care/thrombolysis. ▪ Patient's decision for other interventions (due to perceived side-effects of thrombolysis).
Professional Interactions (7%)	<ul style="list-style-type: none"> ▪ Inadequate communication between clinical staff. ▪ Lack of clinical leadership/ support from senior clinicians.

The main limitations of the review

The review process may have missed relevant articles due to the inclusion criteria (English language/ peer-reviewed articles). Only ten studies were identified to be included in this review. However, the authors report that there seemed to be a saturation of potential determinants due to the commonality of the barriers and enablers given within the included studies. The authors also acknowledge that using a pre-defined framework to organise the findings may inadvertently exclude some barriers/enablers.

The authors and the journal

This was an international review with authors from Ghana, Australia and UAE. The primary author was from the University of Ghana. The review was published in Implementation Science which has an impact factor of 4.525 (within the top 12% of journals).

Implications for practice and research

The most cited barriers from the review are organisational context or structural level factors. Given the significance of these findings (and reference in other reviews), health managers and policy makers should consider addressing these barriers. Based on the barriers identified in this review specific focus should be given to current institutional support such as developing guidelines and funding opportunities for staff development.

At the level of the individual healthcare professional there is a perception of lack of adequate health resources, medical facilities and lack of skills to apply the intervention. Therefore, to overcome these barriers it is essential to ensure that the environment, resources and the staff's domain knowledge are adequate to ensure the optimal uptake of evidence-based practice. The review identifies that health professionals have their own unique challenges to adopting evidence that future research should explore further.

The findings also highlighted delays in patients arriving at hospital due to non-recognition of stroke symptoms. The authors therefore recommend the need for increased public health campaigns and further research for seeking care during early onset of stroke symptoms.

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