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Clinical Guideline Adherence by Physiotherapists Working in Acute Stroke Care

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Abstract

The publication of the Irish Clinical uidelines for Stroke in 2009 provided healthcare professionals with an essential tool for improving stroke services. The aim of this study was to identify the degree to which Senior Physiotherapists in acute stroke care adhered to the Irish Clinical Guidelines for Stroke. This was a cross-sectional study, a postal or online survey was distributed to 31 Senior Physiotherapists working in acute stroke care, 23 responded, achieving a 74% response rate. There was excellent compliance with guidelines for the completion and documentation of full assessment within 5 working days of admission 19 respondents (82.6%), and the involvement of the patient in goal setting 19 (82.6%). Poor compliance was reported in relation to the provision of early assessment 10 (43.5%) and adequate rehabilitation intensity 9 (39%). The main barriers to compliance in these areas were organisational in nature.

Introduction

Stroke is the third leading cause of death and the most common cause of severe adult disability in Ireland[1]. Approximately 10,800 new strokes or transient ischaemic attacks occur each year at a rate of one per hour[1]. This has resulted in a total prevalence of between 28,000 and 47,000 stroke survivors at an estimated annual cost of between 400 and 800 million euro[2]. However, despite the considerable burden posed by stroke in Ireland the Irish Heart Foundation National Audit of Stroke Care (INASC) revealed significant deficiencies in services throughout the healthcare system[3,4]. The need for organised stroke services was emphasised in the National Cardiovascular Health Policy[5] and has resulted in the establishment of the Health Service Executive (HSE) National Clinical Programme for Stroke which aimed to deliver best-quality services by 2015[1]. Improvements in services have been reported since INASC was published[1] but no further audit has been carried out apart from a survey in 2010, which focused on hospital emergency stroke services[6]. There has been some qualitative evaluation of the perceived barriers and facilitators in implementing clinical guidelines in stroke in the Irish setting.[7,8]

A crucial component of the healthcare system quality improvements was the publication of the National Clinical Guidelines and Recommendations for the Care of People with Stroke and Transient Ischaemic Attack[9] which provided healthcare professionals with an essential tool for providing best-quality care. The prioritisation of guideline adherence by physiotherapy professional bodies[10] and by national stroke organisations[1] in combination with the burden posed by stroke and deficiencies in services has emphasised the need for Irish physiotherapists to develop this area of practice. The guidelines also provide a standard against which physiotherapy services can be measured and around which future services can be modelled. The information regarding guideline adherence by stroke physiotherapists at an international level is minimal and mainly comprises small sections of larger multidisciplinary studies[11,12] with the exception of a recent study of Dutch physiotherapists working in acute stroke units[13]. A profession specific audit of guideline adherence by stroke physiotherapists was conducted in the United Kingdom (UK) in 2006 which provided more detailed information in this area[14] and a recent Irish qualitative study[7]. The aim of this study was to identify the degree to which Senior Physiotherapists working in acute stroke care in Ireland adhered to the clinical guidelines and to explore the barriers to adherence experienced by these physiotherapists.

Methods

This was an observational cross-sectional country-wide study utilising a self-completed original survey. The Senior Physiotherapist responsible for the acute stroke service in each of the acute hospitals in Ireland was invited to complete the survey. The inclusion criteria required participants to be at a minimum of Senior Grade, to be responsible for the acute stroke physiotherapy service and directly involved in the treatment of acute stroke patients from time of onset. The exclusion criteria included those below Senior Grade and those who were not directly involved in the treatment of acute stroke patients. A list of the 33 acute hospitals involved in the HSE National Clinical Programme for Stroke was obtained. Between November 2011 and January 2012 the researcher telephoned each hospital to make contact with the appropriate Senior Physiotherapist and to ensure that they met with the inclusion criteria. This resulted in 2 of the 33 physiotherapists being excluded from the study due to the absence of an acute stroke physiotherapy service in these hospitals. The purpose of the research was outlined to the remaining 31

physiotherapists and they were invited to participate by completing the survey.

A pilot study was conducted in November 2011 to ascertain the amount of time it took to complete the survey and any further considerations regarding it use. All of the physiotherapists who were contacted agreed to complete the survey and were given a choice of completing the survey either as a hard copy or online. The survey was then completed voluntarily and returned anonymously in the stamped address envelope or online. A reminder letter was sent two weeks later in order to optimise the response rate.

As the surveys were returned anonymously for reasons of confidentiality, reminders were sent to all participants. Due to the small population size, which comprised 31 physiotherapists, sampling was not indicated and all members of the population were invited to participate. A response rate of 60% was targeted to ensure that the findings would be representative of the majority of physiotherapists responsible for acute stroke physiotherapy services in Ireland. Ethical approval was granted by the Royal College of Surgeons in Ireland. The survey was designed using the online SurveyMonkey® tool. An original survey was required as there were no existing research tools already available which would address the aims of this study. Surveys are usually subject to psychometric review but this was beyond the scope of this study. The survey was divided into 22 sections and included 73 questions. All surveys were assigned identification numbers and codes to each question in the survey which then became cells in an Excel data file. Results were analysed in Statistical Package for the Social Sciences (Version 18).

Results

Response Rate

The survey was sent to 31 physiotherapists, of which 23 responded representing a 74% response rate and analysis was conducted on all returned surveys. Of the 15 surveys sent by post, 10 (67%) were returned and 13 (81%) of the 16 surveys which were sent by email were returned online.

Characteristics and Work Settings of Respondents

The majority (87%) of respondents were either Senior or Acting Senior Physiotherapists and had qualified between five and ten years previously (56.5%). None of the respondents had been qualified less than five years and only one respondent reported having less than one year of experience with stroke patients. Only 26% of respondents had completed a Postgraduate Diploma or Master's programme (Table 1).

Table 1 Characteristics of Respondents (N=23)

Characteristics	N	%
Physiotherapy Grade:		
Senior Grade	18	78.3
Acting Senior	2	8.7
Staff Grade	3	13
Years since qualified		
5 to 10	13	56.5
11 to 15	5	21.7
More than 15	5	21.7
Years of experience with Stroke Patients		
Less than 1	1	4.3
1 to 4	10	43.5
5 to 10	10	43.5
11 to 20	2	8.7
Highest Qualification		
Undergraduate Qualification (Degree/Bachelor)	17	73.9
Postgraduate Diploma	1	4.4
Masters Degree	5	21.7

* due to rounding percentages may not equal

Guideline Adherence

Use of the Stroke Guidelines by physiotherapists was high with 22 (96%) of the 23 respondents reporting using these guidelines. Respondents reported moderate to excellent compliance levels with some guidelines relating to patient

care and assessment and with all guidelines relating to rehabilitation (Table 2). However respondents reported only 43.5% compliance with the completion of initial assessment within 48 hours of admission, with the most commonly cited barriers to adherence in this case being weekend admissions and delayed physiotherapy referrals. We did not ask respondents if they had a dedicated stroke MDT. Only 39% of respondents reported that all patients received a minimum of 45 minutes of physiotherapy each day and commented that staffing and time constraints were the most commonly reported barriers.

Table 2 Guideline Adherence Levels (N=23)

Guideline Section:	Guidelines	Compliance Levels		
		Compliant n (%)	Non-compliant n (%)	Sometimes compliant n (%)
PATIENT CARE AND ASSESSMENT	Initial assessment should be carried out within 24 to 48 hours of admission	10 (43.5)	13(56.5)	N/A
	Full assessment including goal setting should be completed and documented within 5 working days	19 (82.6)	4(17.4)	N/A
	Patients should be mobilised as soon as possible within the first 3 days after stroke	22(95.7)	0	1(4.3)
	Patients should receive a minimum of 45 minutes of physiotherapy daily	9(39)	3(13)	11(48)
REHABILITATION	Clinicians should use standardised, valid assessment tools to evaluate stroke-related impairments and functional status	19(82.6)	1(4.4)	3(13)
	Stroke rehabilitation staff should have specialist expertise in both stroke and rehabilitation	18(78.3)	5(21.7)	N/A
	Patient communication should take place frequently regarding impairments, goals and reasons for stopping treatment	23(100)	0	0
	Family communication should take place frequently regarding impairments, goals and reasons for stopping treatment	15 (65.2)	1(4.4)	7(30.4)
	Goals with specified, time-bound measureable outcomes should be set	16(69.6)	0	7(30.4)
	Goal setting should be discussed with the patient and patients should be encouraged to participate in goal setting	19(82.6)	0	4(17.4)

N/A: Not Applicable – this is stated for any section where this response was not provided as an option in the survey

Discussion

Physiotherapists working in acute stroke care in Ireland reported excellent (>80%) compliance with guidelines relating to the completion of their assessment within five working days, the early mobilisation of patients, the use of standardised assessment tools, regular communication with patients regarding their physiotherapy and the involvement of the patient in goal setting. Poor compliance with guidelines relating to the provision of early assessment and adequate intensity of rehabilitation were reported to be related to organisational barriers but this requires further evaluation in order to determine the specific causes of lower reported adherence levels in these areas. Compliance with the recommendation that patients receive their initial physiotherapy assessment within 48 hours of admission was almost identical to that reported in INASC[3] at 43.5% and 43% respectively. However, INASC investigated whether initial assessment took place within 72 hours of admission. Therefore, the absence of a physiotherapy service during the weekend would not have been a factor in a delay as patients admitted directly before or during the weekend could still have been assessed within 72 hours of admission. However, the respondents in this study reported that weekend admissions were the most common reason for the delay as the 48 hour timeframe means that it would not have been possible to assess those admitted directly before the weekend within the recommended time. Respondents also reported that delayed physiotherapy referral was a factor in patients failing to receive their initial assessment within 48 hours.

This may be a reflection of a lack of coordinated stroke services which have already been highlighted[3]. Compliance levels in INASC were based on chart audit whereas this study was based on the use of a survey. Chart audit may result in an underestimation of actual clinical practice, whereas surveys may result in an overestimation of what actually occurs in practice.[15,16] Although the timeframes investigated were different, meaning that the compliance levels in this study may represent an improvement in compliance since INASC, the different methodologies used mean that it is not possible to make a direct comparison. The percentage of Irish physiotherapists reported to be carrying out their initial assessment within the recommended timeframe continues to fall significantly short of the compliance levels reported in the UK[11] and Australia[12] which is likely to be a reflection of the lack of development of Irish stroke services in comparison to those of other countries. Only 39% of respondents reported that all patients received at least 45 minutes of physiotherapy each day. Poor compliance with this guideline was accounted for by respondents as being due to poor staffing levels and time constraints. These organisational limitations are a reflection of the underdeveloped Irish stroke services[3] within which physiotherapists must attempt to deliver high quality care.

One of the limitations was the use of a survey to measure guideline adherence. Surveys rely on the reported or perceived behaviours of respondents which may be different to what is actually occurring in practice and may result in an overestimation of reality.[15,16] Another limitation of this study was the lack of a qualitative component to the

methodology. Although the survey allowed respondents to add free text comments, there was no opportunity to discuss their responses. Therefore, it was not possible to ascertain the reasons for poor compliance where applicable and Stevens and Beurskens[17] found that interviews and discussions generated much more detailed information than written enquiries. Recently, Donnellan et al[7,8] used qualitative focus groups to identify barriers and facilitators to implementing Irish stroke guidelines. Although there was a high response rate at 74%, it is possible that the results of the study were biased due to the fact that physiotherapists who were most compliant may have been more likely to respond. Therefore, the results may not be representative of all physiotherapists working in acute stroke care in Ireland.

The findings of this study revealed that physiotherapists working in acute stroke care demonstrated high levels of adherence to most clinical guidelines for stroke but that the provision of early assessment and adequate rehabilitation intensity were reported to be below the recommended standards. We did not explore staffing levels in detail for the units. The majority of the barriers to guideline adherence were organisational in nature, thereby demonstrating that physiotherapists working in acute stroke care in Ireland strived to deliver best quality care within the limitations of inadequate services and resources. The level of postgraduate qualifications was also low. Future research should be targeted at ascertaining the underlying reasons for lower compliance with a view to developing a strategy to optimise guideline adherence, which will ultimately result in better quality care and improved outcomes for Irish stroke patients.

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