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GETTING THE MEASURE OF THERAPY ON STROKE UNITS: AN ETHNOGRAPHIC STUDY

Abstract

Objectives: Occupational Therapy (OT), physiotherapy (PT) and Speech and Language Therapy (SLT) are central to rehabilitation after a stroke. UK national stroke guidelines state that 45 minutes of each therapy should be provided to patients deemed appropriate. This is now being used as an audited performance target. This study sought to investigate the delivery of SU therapy, and the influence of the 45 minute guideline and audit on therapists delivering it.

Design: Ethnographic study, including participant observation and interviews. The theoretical framework drew on Lipsky and Power, framing therapists as 'street level bureaucrats' in 'audit society'.

Setting: Three urban hospitals in England.

Participants: Forty-three participants were interviewed, including patients, therapists and other team members.

Results: There was wide variation in the way therapy time was recorded, and in decision-making regarding which patients were 'appropriate for therapy', or auditable. Therapists interpreted and enacted their roles differently in each SU. Therapists doubted the validity of audit results; did not believe their results reflected the quality of services they provided; and expressed concerns that results would inform commissioning decisions. Senior therapy leaders were key influencers of priorities and values underpinning each therapy team.

Conclusions and implications: SU therapy is enacted differently in different hospitals. Teams vary in their interpretation of how therapists' time should be used. Measuring therapy time is problematic due to varied interpretations of 'what counts', and wide variation in reporting practices. Therapists' interpretations of policy and guidelines were strongly influenced by their clinical leaders. We conclude that although stroke policy, guidelines and audit are potential tools of improvement, their benefits are not automatic. Their actual effects depend largely on the attitudes, values and integrity of local

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influential 'street level leaders'. Further research into the potential of therapy leaders would enable a better understanding of their role within service improvement.

Strengths and Limitations

- This is the first study to use an ethnographic and theory-based approach to investigate therapy practice in the context of a newly implemented guideline and audit

- Large scale ethnographic study with over 300 hours of observational data and 43 participants interviewed. This provided rich data and allowed the researcher to compare what researchers said with what they did, and question them about any differences between the two.

- Theoretical framework utilised for data analysis highlights that therapists are now on the threshold of the audit culture that is increasing in proliferation in healthcare. The insights offered have wide application across the field of healthcare, as national audits are increasingly being used for evaluation of services.

- Data could be interpreted differently by different researchers using different theory to analyse findings. We offer one interpretation.

INTRODUCTION

A stroke is a sudden and potentially catastrophic brain event that can lead to any combination of difficulties in movement, cognition, perception and behaviour[1,2,3]. Since 1995 the Stroke Programme at the Royal College of Physicians (RCP) has been driving

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service improvements across multiple areas of stroke care in the United Kingdom (UK)[4]. Therapy is considered to be effective in increasing independence and reducing disability after a stroke, and it is widely agreed that more is better[5,6,7,] although the specifics regarding how therapy should be provided and the required intensity remain unclear[6,7]. Increasing the intensity of therapy provided to stroke patients has become a target for improvement. The therapy intensity guideline, which aimed to increase the amount of therapy offered to stroke patients, was set out in the National Clinical Guidelines for Stroke[8] and incorporated into the NICE guidelines for Stroke Rehabilitation[7], and applies to occupational therapists (OTs), physiotherapists (PTs) and speech and language therapists (SLTs). The guideline states:

"Patients with stroke should be offered a minimum of 45 minutes of each appropriate therapy that is required, for a minimum of 5 days per week, at a level that enables the patient to meet their rehabilitation goals for as long as they are continuing to benefit from the therapy and are able to tolerate it" [8].

The Sentinel Stroke National Audit Programme (SSNAP) began auditing stroke services against the therapy intensity guideline in 2013. SSNAP results showed national variation in the amount of therapy stroke patients were receiving, and in the proportion of patients each team recorded as appropriate for therapy. Although there have been steady improvements since its inception, many services are still measured as not meeting the 45 minute guideline, and there continues to be wide variation in proportion of patients considered appropriate for therapy.

Despite the proliferation of data generated through the audit, it is not capable of answering questions about how the national policy is being interpreted or implemented locally in practice. It is recognised that despite an assumption that guidelines will lead

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to improved care, implementation of guidelines can be problematic, with poor compliance and under-utilisation in practice[9]. Given this context of a new stroke therapy intensity guideline being measured and monitored in a national audit, we sought to investigate the influence of the guideline and audit on therapy practice. This included how the guideline was being adopted, its influence on care, and the role of the audit in these processes. There is a need for qualitative research examining how therapists negotiate the different and sometimes conflicting factors shaping delivery of therapy[10]. Using ethnographic research with a theoretical framework to shape data analysis is regarded as a valuable approach to investigate healthcare[11,12]. There have been no such studies conducted to investigate the work of therapists on SUs, or the potential influence of policy and audit on the delivery of their services. Despite large quantities of numerical data regarding therapy intensity, there is little understanding of how therapists interpret and enact their roles on stroke units, or of how they interpret and enact the relevant guideline and audit. This study therefore sought to investigate the delivery of therapy on stroke units (SUs) in the policy context of the 45 minute guideline and auditing of therapy time.

METHODS

An ethnographic approach was used to study therapy practice in three different SUs. Ethnographic research utilises a combination of participant observation and interviews to elicit descriptive information about a given group or setting, and was considered an appropriate method for examining how therapy decisions are made and acted on in everyday settings. Its use in healthcare research has been found to be valuable, particularly for understanding differences in health care delivery[11]. This approach allows comparisons to be made between what participants say in interviews and what they do in practice[12]. The ontological position for this study is that the application of

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any specific therapy intervention involves factors that are not objectively 'out there' in the world. The epistemological position is that attempts to quantify 'therapy' (which could involve any variety of interventions) in general terms will involve misleading over-simplification. Quantifying the amount of time spent in therapy can reveal little about what is being offered, what is being received or why it is or is not beneficial. Instead, in keeping with constructivist and constructionist paradigms, the most appropriate means of furthering understanding in this area is to seek and interpret participants' views and observe their behaviour, whilst being mindful of how the researcher's own background and perspective might shape this interpretation[13,14,15,16].

Research team and reflexivity

The primary researcher (ET) conducted the study as part of a PhD in Health Services Research. ET had previously conducted and published qualitative research in the area of stroke rehabilitation. CM and FJ supervised the research. Both have extensive experiencing of leading on and publishing findings of qualitative research in healthcare settings, and specifically regarding stroke rehabilitation. ET had a background as an occupational therapist working in stroke rehabilitation. CM had been a member of the Intercollegiate Stroke Working Party responsible for developing national guidelines for stroke, and had links with key influencers in the Stroke Programme and Sentinel Stroke National Audit Programme. It was important to acknowledge and consider the potential influence of these factors on participants, as well as on the analysis and interpretation of findings. Relationships were established with participants either prior to or at the start of fieldwork at each site. They had full knowledge of the backgrounds of the research team. Reflexive fieldnotes were made by ET on a daily basis during fieldwork and

these were shared with the research team along with interview transcripts. ET and FJ are female researchers, and CM is male.

Participants and recruitment

Purposive and pragmatic sampling was used to select SUs with different characteristics[17]. For example, we sought to include sites within and outside London, with different levels of performance reported in the therapy domains of the SSNAP audit. The decision to use three sites for fieldwork was based on the need to balance rich, detailed data from each site with diversity from a range of sites, within the timescales afforded by the study.

All OTs, PTs and SLTs working in each site during the fieldwork were observed and invited to participate in a formal interview.

The core sample sought in each site included:

- staff from each of the three therapy professions (OT, PT and SLT), and therapy assistants (TAs).
- staff with diversity in years of experience and seniority.[1]

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[1] NHS therapy posts in the UK are banded according to levels of knowledge, skills and responsibility required. Band 5 is the entry level for a qualified therapist. Band 6 is a senior clinical post. Band 7s are expected to have a higher level of knowledge, skills and responsibility, and these posts often involve team leadership. The inclusion and structuring of Band 8 posts varies across services. Band 8s are likely to be clinical specialists or therapy managers.

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- patients with contrasting characteristics such as level of impairment / dependence; social situation; discharge destination; ethnicity; age.

Participants meeting these criteria were approached face to face, and selected based on their availability and willingness to participate. In each site we sought the same core range of interview participants, with an openness to interviewing others who were found to play a key role relevant to the enquiry, such as a consultant, nurse, manager, administrator or relative. Prior to inviting patients to be interviewed we confirmed with their therapists that they did not have any concerns about their suitability based on factors such as cognition or medical status.

Data collection and analysis

Data collection included participant observations of therapy work and interviews with therapists, therapy assistants, managers, patients and carers in three SUs. Observational data was gathered using detailed fieldnotes. A topic guide was used for interviews, and these were audio-recorded and transcribed for analysis. Nvivo software was used to manage the data.

A constructionist approach to thematic analysis was used to identify, analyse and report latent themes[18]. Fieldnotes and interview transcripts were analysed inductively alongside deductive use of theory to support and shape the analysis. ET primarily coded the data. A sample of transcripts was coded by all three researchers, and coding processes were regularly reviewed and discussed.

Working closely with the data the primary researcher (ET) coded and grouped data using Nvivo, sticky notes on flip chart paper, mind maps and writing prose. Themes

were derived from the data. At a distance from the data, ET made connections between theory and emerging findings. At all stages data analysis was discussed with co-authors CM and FJ, as well as other colleagues, members of research groups, stroke survivors and participants in the research. COREQ guidelines for reporting qualitative research were used[19].

Patient and Public Involvement

The King's College London Stroke Patients and Family Research group were involved in the development of the research question and design, and emerging findings were discussed with the group during data analysis.

Ethics

The study was conducted in an ethical and responsible manner, using the principles of 'ethical mindfulness' to navigate the unanticipated ethical decisions which inevitably arise in the field[20]. Ethical approval was obtained from National Research Ethics Committee on 18th July 2014. Site specific approval was obtained from each hospital's Research and Development (R&D) team. Written consent was provided by all interview participants.

Theoretical framework

In ethnographic research, theory is used inductively and deductively to broaden and deepen insights into the subject of study. The theoretical framework for the current study drew on Lipsky[21]and Power[22], framing therapists as street level bureaucrats in audit society. Lipsky's theory of street-level bureaucracy concerns the implementation of policy in direct encounters between front line workers in public services and citizens. The current study, constructing therapists as street-level bureaucrats (SLBs), sought to unpick what therapists do, and why. Lipsky claimed that policy becomes distorted in its

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implementation, as the use of discretion and autonomy by public service workers in complex interactions is inevitable.

Power's concept of audit society critiques the 'audit explosion' occurring within contemporary western society[22]. Use of this theory enabled a broader focus, and an understanding that audit and performance measurement should not just be seen as methods aimed at improving quality in the NHS, but are part of a wider context of audit culture.

RESULTS

Sites A and C were located in different NHS hospitals in London. Site B was located in a town in the South East of England. All the sites differed in their positions on the stroke pathway, in terms of referral pathways into and out of the SUs. For example, one was located in the same building as the Hyper-acute Stroke Unit (HASU), in which patients stay for the first 72 hours post-stroke, and which was its only source of referrals. Another accepted patients from a number of other hospitals, and patients had sometimes been to multiple hospitals before being transferred there. There was variation in the community services available to patients, and this influenced the point at which patients were considered ready to be discharged. The sites varied in their SSNAP results for therapy intensity. Site A consistently performed well, Site B had dramatically improved from low scores to good scores, and Site C was in the average range.

Over 300 hours of fieldwork were carried out across the three sites. Pseudonyms are used for the hospitals, places and participants to protect their identity. Information about participants is restricted to details considered relevant to the study in order to

reduce the risk of identification. Forty-three participants were interviewed including therapy staff, doctors, managers, a nurse, patients and a patient's wife. Interviews typically lasted for approximately one hour. In each site there were different prominent figures whom it appeared relevant to interview in addition to these core participants. For example, in one site a lead nurse was influential in decisions about when to withdraw therapy, and was a driving force for a focus on SSNAP within the wider multi-disciplinary team, therefore it was considered valuable to interview her. One physiotherapist was interviewed in two different sites, as by coincidence she moved jobs from one participating hospital to another. Nobody declined an invitation to participate, therefore interviewees were selected based on availability. One patient who had been keen to be interviewed became too unwell, and his wife consented to be interviewed. During data collection and analysis in the third site it was evident that common themes were recurring, which may be taken as a sign of data saturation. There were differences in all the sites, but this variation was seen as a finding in itself. Transcripts were not returned to participants, but preliminary findings were presented to participants at each site for comment.

Overall, we noted that there were key differences in the delivery of therapy in each site, including differences in the scope of activities therapy encompassed, and differences in the perceived remit of SUs and role of therapist. Measuring therapy was therefore problematic, as there was a lack of consensus about what counted as therapy. There was no uniformity in the way therapy time was recorded and reported for the audit. Therapists did not believe that their audit results reflected the quality of therapy provision. Regarding therapists' interpretation of the guideline and audit, they associated the SSNAP audit and the monitoring of therapy time with the commissioning

of their services. They expressed mistrust about auditing practices in other services, and worried about commissioners taking these results at face value. As in Lipsky's theory of Street Level Bureaucracy, the implementation of top-down policy was shaped at 'street level', by the front-line workers implementing it. However, we also found that the implementation of policy was shaped by local clinical leaders. Therapy leaders who were respected and trusted by their therapy team members influenced the level of importance given to various mandates, including the therapy guideline. Although therapists expressed individual values and judgements, they also repeated key messages from their leaders that had in some cases become like mantras. We conclude that although stroke policy, guidelines and audit are potential tools of improvement, their benefits are not automatic. Their actual effects depend largely on the attitudes, values and integrity of local influential 'street level leaders'.

What counts? Who counts?

The SSNAP audit records the quantity of therapy provided to patients, but there were key differences in what was considered to count as therapy in each site. In one SU, therapy was interpreted broadly, and could include groups and individual sessions in a range of environments, such as the gym, kitchen, or outdoors. Building therapeutic rapport and listening to patients' concerns were considered to be valid use of therapy time. A narrower conception of therapy was evident in the two other SUs, where there was a stronger emphasis on getting patients to the minimal level of physical ability required in order to discharge them. One participant had been a physiotherapist at Site A before working in Site C, and noted the contrast in ethos regarding therapy.

"On [Site A] when I was there, rehab was the ethos. You go there for rehab. So the way you come in you should go out at a different level, a better level, hopefully. Here we're just a stepping stone to having your rehab at home."

Joanne, Band 7 PT, Site C.

'Rehab happens in the community' was a mantra in Site C, and provision of SU rehabilitation was considered an 'old-fashioned model'. This frequently caused ethical tension for therapists who were keen to point out that access to rehabilitation after discharge varied depending on a patient's postcode. There was confusion of approaches when therapists began detailed assessments and treatment planning, and were then required to change course and quickly facilitate a patient's discharge. A shift of emphasis from treatment to discharge planning was acknowledged by leaders in Sites B and C.

"We don't use the word 'rehab' in relation to inpatient stroke services at [NHS organisation] anymore because the concept is about community. Rehab happens in the community… I think I'm very clear… yes, the therapists don't do therapy, but they get their patients home."

Rona, Clinical Lead, Site C.

For therapists in all SUs, there was ambiguity about what counted as auditable therapy. Therapists made individual decisions about how to record their time for the audit. Some strictly adhered to their perception of the rules of the audit, that only face to face time should be counted. Others would say things like 'his discharge paperwork will be his session today'. They would justify the recording of administration as therapy time

based on the argument that facilitating the patient's discharge was their therapy priority and should therefore be seen as valuable use of their therapists' time.

The calculation of SSNAP scores for therapy intensity takes into account the proportion of the caseload deemed appropriate for therapy. A patient's therapy time should only be included in the data reporting if that patient was deemed appropriate by the team. There were stark contrasts in how teams recorded whether patients were appropriate for therapy. Therapists in Sites A and C were unaware that this was an audit question. Inadvertently, these team were reporting that 100% of patients were auditable as being appropriate for therapy. When asked how they decided whether patients were appropriate for therapy, therapists in Site A typically stated that all stroke patients were appropriate for therapy in some form, even if it was only an assessment, some chest physiotherapy, some assistance with positioning or the ordering of a piece of equipment.

"I start by thinking that they're all appropriate… if they're medically unwell I'd say well can I treat them medically, as it were. And if I can't then I will say, there must be something I can do for this person. I nearly always think there's something I can do."

Tom, B5 PT, Site A

However, therapists also stated that 45 minutes of daily therapy was an inappropriate target for many of their patients. Alexia, Band 7 OT in Site A, noted that whilst everybody should receive some therapy of some sort, not everybody needed intensive or stroke-specific rehabilitation.

In Site C, therapists were similarly unaware of the fact that 'appropriateness for therapy' data were being reported. They were unaware that their SSNAP administrator had made a pragmatic decision to enter a date on which the patients no longer required therapy, based on their hospital discharge date. In contrast, therapists in Site B had a completely different approach. There, 'appropriateness for therapy' had become a daily clinical consideration for therapists, and they referred to patients who were appropriate for therapy according to the rules of the audit as 'SSNAPing'. As one OT said, SSNAP had become 'part of the jargon', and in their daily morning meetings it would be noted whether each patient was SSNAPing or not. Unless a patient was participating actively in 45 minutes of therapy every day, and was improving, they were not counted as appropriate for therapy on the SSNAP audit for this team.

'The quality beneath'

Therapists in each site expressed a lack of confidence in the SSNAP therapy data, both nationally and locally, and did not believe the data reflected the quality of therapy provided. They perceived wide variation in the way different teams interpreted audit requirements and managed their data. Site A had been a consistent high scorer at the time of data collection, but senior therapists stated that their local data was 'skewed' due to technical issues. It was easy to duplicate data entries accidentally on the local computer system, therefore therapy minutes were often disproportionate to the length of a patient's stay. Site B's therapy scores had improved in response to the changes they made to data reporting, yet therapists there did not believe their grades reflected their practice.

"I just am concerned about the value being attached to [SSNAP] in its raw kind of sense, so its overall grading system doesn't allow you to see the quality beneath."

Lucy, Clinical Lead, Site B

Several gave an example of a Christmas period during which they scored their best SSNAP grades despite feeling they were providing an inferior service due to staff pressures. Laura felt that over the Christmas period the OT score should have been an E (a low score) instead of an A (the top score), if it reflected the quality of service that was being provided. This was also raised separately by the clinical lead therapist.

"[The OTs] said we did really prioritise when we were really short staffed so that SSNAP did not suffer… I think patients were perhaps being SSNAP-stopped prematurely. So, I think they were making SSNAP-stop decisions on resource availability as opposed to patient need."

Lucy, Clinical Lead, Site B

Lucy charted the changes that she had initiated and the subsequent improvements in their SSNAP scores. When asked whether the improvements in their audit results reflected 'real life' improvement, she responded with a clear 'no'. When asked the same question, Laura, who was also very involved in the SSNAP data management replied,

"No, I think we're just jumping through more hoops."

Laura, B6 OT, Site B

Despite the gradual improvements in Site B's SSNAP performance, individuals expressed mixed feelings about the apparent trajectory of improvement. Some discussed changes in the nature of therapy, including its scope and quality, and the reduced availability of therapy spaces. Dr Adams echoed the statements of many Site B therapists when he stated that regarding inpatient rehabilitation,

"in some respects, I think we were doing it better at some stage in the past than we are now."

Dr Adams, Site B

Site B staff had detailed knowledge of their SSNAP performance as this had been specifically addressed, and results were regularly presented to the team. Therapists at Site C had a much more vague perception of their SSNAP performance, but still held the opinion that their score did not reflect their practice.

"Obviously the data that we're getting doesn't reflect our practice. So something is not quite right. So I think they're just trying to figure out what the problem is and have a bit more effective way of collecting that data… [B7 PT] has told me that we're complying. To be honest, I know it's not right, and she said, yes and that's why we need to actually look into it."

Ghita, B6 PT, Site C

This perspective was team-wide at Site C, and was raised in interviews as well as observed meetings. Therapists believed that their SSNAP score was too high, compared with their experiences of the service they provided.

"Apparently we were getting like 100% and we were like, 'no way'… because there's no way that we're seeing every patient 45 minutes a day. No way. You've seen it."

Nancy, B7 OT, Site C

Competition and Commissioner-Centred Care

In all sites, teams expressed rivalry and mistrust about neighbouring services' SSNAP practices. Therapists attended regional meetings and heard about how colleagues in other services were reporting SSNAP data, so were aware of the variation in audit practices across services. They questioned the quality of the national audit data for therapy, and they used language such as 'bending the rules', 'playing the numbers game', or 'lying' when discussing the practices of other teams. Some had visited neighbouring hospitals to find out about their audit practices.

"It was really interesting to get insight into how other people do it… So that was interesting to come away thinking: this is a high performing A rated unit. What I took away from that is, do we really want to be one of those?"

Lucy, Clinical Lead, Site B

Rivalry, mistrust and audit ratings were observed to go hand in hand. There was an unexpected frequency of references to funding and commissioning when therapists were asked about their SSNAP scores. In most cases, when asked what the implications of SSNAP results were, therapists expressed concerns about how they might be used to inform commissioning decisions.

"I worry that one day they'll look at our stats and say, ooh speech therapy isn't meeting the [45 minute] standard…. So if that was the case, if they were to take the contracts off us then some of us could lose our jobs."

Claire, SLT B7, Site A

Across all sites fears were expressed about potential implications of SSNAP for service commissioning. In interviews, hospital therapy managers and consultants endorsed this as a reasonable concern.

"Well there's a little bit of paranoia there but at the same time … what we don't want staff to do is to be naïve, and you know, shielded or protected from any sort of other conversation. So when the [neighbouring borough] stroke beds came here it was a tender for a service which this organisation won, and it's a tender for 3 years, so at any, you know, and obviously we're 2 years or so into that. So it will need to be reviewed at some point. So obviously as it goes increasingly closer to review, then people will become anxious. "

Ann, Therapy Manager, Site A

Ann talked about the 'new way of providing healthcare', with tenders coming out for very short-term contracts, sometimes just for one year. Her talk of not being able to 'bed down' services in this time resonated with Dr Adams' talk of organisational memory that had existed previously at Site B, but had not been developed since the SU changed location. It also related to the SSNAP administrator, Norma's story of disruption, change and the loss of an established workforce 'family' in Site C. Many changes therapists had perceived in their work were linked to service contracts and

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commissioning, and, for them, SSNAP was associated with these changes in the wider context of healthcare delivery. Few therapists associated SSNAP scores with quality of care, whilst most saw them as something services needed to use to 'please the commissioners', suggesting that the way the audit was implemented encouraged commissioner-centred, rather than patient-centred therapy delivery.

The influence of local clinical leadership

In each site it was evident that local clinical therapy leaders shaped priorities regarding the delivery of therapy and influenced attitudes regarding the 45 minute guideline and SSNAP audit. Their specific roles differed, but in each site there would be someone influential who clinicians respected due to their clinical experience, but who also had responsibility for ensuring implementation of top-down mandates. They would filter the many policies and mandates coming through to them, and promote, emphasise or soften them according their own ethical and professional priorities. Rona, clinical lead therapist at Site B, identified that she chose between policy messages in order to avoid giving staff conflicting targets.

In relation to the therapy intensity guideline, clinical leads in all sites talked about not wanting to put pressure on therapists to meet the target. They gave various reasons for not prioritising this amongst the different top-down mandates they were expected to reinforce to their teams. These included believing that using session length as a measure of therapy was problematic; believing it was unachievable; and wanting to protect therapists from additional pressure.

"Is it something that I'm going to beat the guys over the head? No because

actually I know that I've told them, "Get them out." And I'm not going to get therapy if

I've told them, "Get them out."

Rona, Clinical Lead, Site C

Many therapists knew what was expected of them by their clinical leaders but did not

know the origins of the protocols and guidelines they were expected to follow.

"The local target kind of protocol that's been put together I think by [clinical

lead], that is in the forefront of my mind, which I always kind of get a little bit confused

with, whether that is what is the kind of national targets."

Nancy, B7 OT, Site C

In Site A, the Band 7 therapists shared leadership responsibilities. Their manager, Ann,

oversaw therapy for the organisation, and expressed values that were aligned with those

that they had expressed. She spoke of 'light touch' leadership and the importance of

trusting the therapists, who she believed were hard working and provided a good quality

service. In Site B, Lucy was influential. She was a physiotherapist with a leadership

role across the inpatient and community team, and worked clinically in the community

team. Lucy explained that her role in implementing the guidelines was to make sure

that therapists understood the rationale behind it and were therefore 'making effective

decisions about intensity based on the patient need, as opposed to thinking in 45

minutes'. Her experience of the realities of practice was valued by the staff. Similarly,

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in Site C therapists valued Rona's clinical expertise and were openly influenced by her guidance.

Therapy staff identified opportunities for quality improvement at a local level, and this appeared to be more influential on them than national policy. National stroke guidelines and audit were used at management and service-commissioning levels to protect stroke services. Clinical leaders acted as an interface between the multifarious local and national policies and imperatives, and the therapists practising on SUs.

DISCUSSION

This study sought to investigate the delivery of therapy on stroke units (SUs) in the policy context of the 45 minute guideline and auditing of therapy time. The study illuminated experiences of SU therapists at a specific point in time when the national auditing of therapy was new. It offers insights into the factors influencing the delivery of therapy and the influence of guidelines and audit on this. Therapists were observed in their work and were questioned about their decision-making, prioritisation, and the extent to which the therapy intensity guideline and associated audit influenced therapy practice. The term 'therapy' was interpreted and delivered differently by therapists in different sites, and audit practices varied widely. Therapists were aware of this variation, and reported that audit results did not reflect the quality of their service. These factors undermined the credibility they attributed to the audit. There was mistrust regarding the auditing practices of neighbouring teams, and therapists were concerned that audit results would influence commissioners in decisions about service contracts. The guideline and audit were among many local and national policies and mandates that

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clinical leaders filtered for their teams. Therapists were strongly influenced by these leaders in their delivery of therapy and their interpretation of the guideline and audit.

Analysing these findings with inductive and deductive reference to the theoretical framework enabled rich insights into the influence of policy and audit on therapy delivery at 'street level'. Street level bureaucracy was introduced as a concept by Lipsky as a way of understanding the implementation of policy by the people who actually implement it[21]. Lipsky noted that in the case of complex interventions provided by street-level bureaucrats, calculating use of time is the simplest way of measuring performance, but is problematic and reveals nothing about the quality or appropriateness of the way that time has been used. In The Audit Society[22], Power claims that the use of audit in healthcare is prolific and increasing, and that this follows a trend in public services and Western society that he termed 'the audit explosion'. The Sentinel Stroke National Audit Programme (SSNAP) can be seen as one example of this. Within SSNAP the auditing of the 45 minute therapy standard is an example of using time as a performance measure.

There is mixed evidence regarding the efficacy of using performance measurement to improve quality[23,24,25]. It has been suggested that a good performance indicator should have reliability and validity; be based on agreed, fully described definitions; and be relevant and actionable for those using it [23,26,27]. Therapists in our study did not share an understanding of the rationale behind the 45 minute guideline; there was confusion about audit definitions and requirements, and therapists lacked confidence in its reliability and validity. The UK therapy intensity guideline is based on consensus, and this may be a reason for some of the confusion regarding its rationale and evidence

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base. It has been noted that internationally, recommendations regarding the intensity and appropriateness of stroke rehabilitation vary[28]. Therefore, there is a global need for more clarity regarding what is being recommended, and why. It should be noted that during and since the time of the study, the SSNAP team engaged with therapists to address points of confusion. SSNAP currently provides a detailed guide covering the definitions and methods that should be used to complete the therapy data[29].

In keeping with criticisms of performance measurement[21,22,30], we found examples of 'hitting the target but missing the point'. The intention behind the 45 minute guideline was to increase the time patients spent in therapy, and to reduce the time therapists spent doing paperwork. In practice therapists often made statements such as 'his paperwork will be his session today', which showed that the reality of practice was likely to be masked by their data reporting. There was variation in interpretations of 'what counted' as auditable therapy time. In line with Lipsky's theory regarding the implementation of policy, therapists typically reported that their clinical practice had not changed as a result of the guideline, but in some cases they had changed the way they recorded and reported on their clinical work.

Unexpectedly, wider contextual factors regarding the marketisation of healthcare were inextricably linked to much of the data. The perceived consequences of SSNAP discussed by therapists were less about patients' experiences and outcomes, and more about team reputations, rivalries and the vulnerability of their commissioned services. This links with critiques of the rise of audit in Western society, New Public Management (NPM) and neo-liberalism[22]. NPM refers to the public sector's adoption of certain private sector principles and practices[22,31]. This includes a style of

management that seeks effectiveness and efficiency through top-down control, a shift to greater competition[32] and an emphasis on performance management[33].

Although the language of neo-liberalism, NPM and marketisation was not used by participants in the current study, they were mindful of working in a competitive market and the audit itself engendered a spirit of competition.

Market competition is hailed by some as a driver for improvement in healthcare, and this is often based on the premise that patients (as consumers) can actively choose between providers for elective interventions, such as in Bloom et al's study[34]. However, stroke unit patients in this study did not have 'consumer choice' but were processed through local stroke pathways after the sudden and unanticipated event of a stroke. Rather than being used as tool for patients to choose their provider, therapists feared that ratings were used by funders to select services for investment. In this sense, the audit had potential to be a tool of commissioner-centred care. It has been claimed that focussing on numbers and statistics instead of people is a threat to person-centred, humanising practice[35]. Our findings suggest that guidelines and audit do not hold power on their own to improve patient care. Their implementation and impact is dependent on people with influence conveying a message about what is important and why, and attention to potentially important contextual factors is essential.

We found that local clinical leaders influenced attitudes regarding therapy delivery, including the extent to which guidelines and audit were valued and implemented. Lipsky's theory of Street Level Bureaucracy emphasises the autonomy of individual front line public service workers. We found that although SU therapists valued their autonomy, their priorities were shaped to a large extent by local leaders, who we

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suggest may be termed 'street level leaders' (SLLs). Lipsky distinguished between workers and managers, but he did not account for clinicians in leadership positions, who act as an interface between policy and practice. We found that SLLs filter diverse top-down expectations and understand that it is impossible to demand that therapists give them all equal weighting. They therefore prioritise and amplify the messages they consider to be most important. Hupe and van Kooten[36] noted that despite an abundance of literature regarding public management, this tends not to focus on middle management or work supervisors. They suggested that in processing rules, public managers either formulate additional rules, pass on rules, or buffer rules, and that in this way first-line supervisors are also discretionary actors[36]. Our findings support this claim in the case of SU therapists.

The role of clinical leaders in improving or maintaining quality has been widely discussed[37,38,39,40]. Some have claimed the importance of leaders being 'actually in the arena'[37], and discussed the role that embedded leaders can have in ensuring that values, such as putting the patient first, are upheld[37]. Little attention has been paid to the role leaders have in filtering or prioritising the conflicting demands placed on front line staff. Furthermore, the clinical leadership literature predominantly discusses medics or nurses, and not therapy leaders. This study offers new insights into the unexplored area of clinical therapy leaders as agents of discretion with a key role in shaping the delivery of policy on the ground and ensuring that the aspiration of improving quality for patients is not lost in the process of implementation.

Author Statement

The first author (ET) conducted the study, and this was supervised by CM and FJ. All authors made substantial contributions to the conception and design of the work. ET was primarily responsible for the acquisition, analysis, or interpretation of data for the work; drafting the work and revising it critically. CM and FJ viewed and commented on all drafts, and gave final approval of the version to be published. All authors agree to be accountable for all aspects of the work.

Declaration of interest statement

No competing interests declared

Data Sharing Statement

No additional data are available

References:

1. Sumathipala, K., Radcliffe, E., Sadler, E., Wolfe, C. & McKevitt C. (2012). Identifying the long-term needs of stroke survivors using the International Classification of Functioning, Disability and Health. *Chronic Illness*, 8: 31-44.

2. McKevitt, C., Fudge, N., Redfern, J., Sheldenkar, A., Crichton, S., Rudd, A., Forster, A., Young, J., Nazareth, I., Silver, L., Rothwell, P. & Wolfe, C. (2011). Self-reported long-term needs after stroke. *Stroke*, 42:1398–403.

3. Wolfe, C., Crichton, S., Heuschmann, P., McKevitt, C., Toschke, A., Grieve, A. et al. (2011). Estimates of outcomes up to ten years after stroke: analysis from the prospective South London stroke register, *PLoS Med* , vol. 8 pg. e1001033

4. Cloud, G., Hoffman, A. & Rudd, A. on behalf of the Intercollegiate Stroke Working Party. (2013). National Sentinel Stroke Audit 1998–2011. *Clinical Medicine*, 13(5), 444-448.

5. Department of Health (DoH). (2007). The national stroke strategy. London: Department of Health.

6. Foley, N., McClure, J., Meyer, M., Salter, K., Bureau, Y. & Teasell, R. (2012). Inpatient rehabilitation following stroke: Amount of therapy received and associations with functional recovery. *Disability and Rehabilitation*, 34(25), 2132-2138.

7. National Institute for Health and Care Excellence (NICE). (2013). Stroke rehabilitation: Long term rehabilitation after stroke. Planning and delivering stroke rehabilitation. London: National Clinical Guidelines Centre.

8. Intercollegiate Stroke Working Party (ISWP). (2012). National clinical guidelines for stroke (4th ed.). London: Royal College of Physicians.

9. Gagliardi, A., Brouwers, M., Palda, A., Lemieux-Charles, L. & Grimshaw, J. (2011). How can we improve guideline use? A conceptual framework of implementability. *Implementation Science*, 6:26.

10. Taylor, E., McKevitt, C. & Jones, F. (2015). Factors shaping the delivery of acute inpatient stroke therapy: A narrative synthesis. *Journal of Rehabilitation Medicine*, 47(2), 107-119.

11. Goodson, L. & Vassar, M. (2011). An overview of ethnography in healthcare and medical education research. *Journal of Educational Evaluation for Health Professions*, 8:4.

12. Lambert, H. & McKevitt, C. (2002). Anthropology in health research: From qualitative methods to multidisciplinarity. *BMJ*, 325, 210-213.

13. Andrews, T. (2012). What is social constructionism? *The Grounded Theory Review*, 11(1), 39-46.

14. Charmaz, K. (2000). *Handbook of qualitative research*. Thousand Oaks, CA: Sage.

15. Charmaz, K. (2006). *Constructing grounded theory: A practical guide through qualitative analysis*. Thousand Oaks, CA: Sage.

16. Cresswell, J. (2007). *Qualitative inquiry and research design: Choosing among five approaches* (2nd ed.). Thousand Oaks, CA: Sage.

17. Ritchie, J. & Lewis, J. (2003). Qualitative research practice: A guide for social science students and researchers. London: Sage.

18. Braun, V. & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2) 77-101.

19. Tong, A., Sainsbury, P. & Craig, J. (2007). Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *International Journal for Quality in Health Care*, 19(6) 349–357.

20. Pollock, K. (2012). Procedure versus process: Ethical paradigms and the conduct of qualitative research. *BMC Medical Ethics*, 13(25).

21. Lipsky, M. (2010). Street-level bureaucracy: Dilemmas of the individual in public services. New York: Russell Sage.

22. Power, M. (1997). The Audit Society: Rituals of verification. Oxford: Oxford University Press.

23. Raleigh, V. & Foot, C. (2010). Getting the measure of quality: Opportunities and challenges. London: The King's Fund.

24. Fung, C., Lim, Y., Mattke, S., Damberg, C. & Shekelle, P. (2008). Systematic review: The evidence that publishing patient care performance data improves quality of care. *Annals of Internal Medicine*, 148(2), 111-123.

25. Kirkup, B. (2015). The report of the Morecambe Bay Investigation. London: The Stationery Office.

26. Mainz, J. (2003). Developing evidence-based clinical indicators: A state of the art methods primer. *International Journal for Quality in Health Care*, 15(1), i5-i11.

27. Mainz, J. (2003). Defining and classifying clinical indicators for quality improvement. *International Journal for Quality in Health Care*, 15(6), 523-530.

28. Lynch, E., Cadilhac, D., Luker. J. & Hillier, S. (2017). Inequities in access to inpatient rehabilitation after stroke: An international scoping review. *Topics in Stroke Rehabilitation*, 24(8).

29. SSNAP (2018), Therapy https://ssnap.zendesk.com/hc/en-us/sections/115000451409-Therapy accessed April 2018.

30. Pflueger, D. (2015). Accounting for quality: On the relationship between accounting and quality improvement in healthcare. *BMC Health Services Research*, 15, 178.

31. Hood, C. (1995). The "new public management" in the 1980s: Variations on a theme. *Accounting, Organisations and Society*, 20(2/3), 93-109.

32. Hood, C. (1991). A public management for all seasons. *Public Administration*, 69(1), 3-19.

33. Van Dooren, W., Bouckaert, G., & Halligan, J. (2015). Performance management in the public sector. London: Routledge.

34. Bloom, N., Propper, C., Seiler, S. & Van Reenen, J. (2015). The impact of competition on management quality: Evidence from public hospitals. *The Review of Economic Studies*, 82(2), 457-489.

35. Galvin, K., & Todres, L. (2013). Caring and well-being: A lifeworld approach. Abingdon: Routledge.

36. Hupe, P. & van Kooten, E. (2015). First-line supervisors as gate-keepers: Rule processing by head teachers. In P. Hupe, M. Hill & A. Buffat (Eds.), Understanding street-level bureaucracy (pp. 227-242). Bristol: Policy Press.

37. Fielden, J. (2015). A medical director's perspective on healthcare leadership. *Future Hospital Journal*, 2(3), 190-193.

38. National Institute for Health Research (NIHR). (2013). New evidence on management and leadership. Retrieved from http://www.nets.nihr.ac.uk/data/assets/pdf_file /0003/95655/New-Evidence-on-Management-and-Leadership.pdf

39. Storey, J. & Holti, R. (2013). Possibilities and pitfalls for clinical leadership in improving service quality, innovation and productivity, final report. *National Institute for Health Research Service Delivery and Organisation Programme*.

40. West, M., Armit, K., Loewenthal, L., Eckert, R., West, T. & Lee, A. (2015). Leadership and leadership development in health care: The evidence base. London: Faculty of Medical Leadership and Management.

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Appendix: Research Checklist

Consolidated criteria for reporting qualitative studies (COREQ): 32-item checklist

No	Item	Guide questions/description
Domain 1: Research team and reflexivity		
Personal Characteristics		*These are addressed under the heading 'Research Team and Reflexivity' on page 6*
1.	Interviewer/facilitator	Which author/s conducted the interview or focus group? *ET* **p6**
2.	Credentials	What were the researcher's credentials? *MA, MSc, PGDip* **p6**
3.	Occupation	What was their occupation at the time of the study? *PhD Student* **p6**
4.	Gender	Was the researcher male or female? *Female* **p6**
5.	Experience and training	What experience or training did the researcher have? *Previous qualitative research PI* **p6**
Relationship with participants		
6.	Relationship established	Was a relationship established prior to study commencement? *Yes* **p6**
7.	Participant knowledge of the interviewer	What did the participants know about the researcher? *Professional background as an OT in stroke, PhD student* **p6**

No	Item	Guide questions/description
8.	Interviewer characteristics	What characteristics were reported about the interviewer/facilitator? *Background as a therapist, but also doing PhD study with links to people working on the stroke guidelines and SSNAP audit.* **p6**
Domain 2: study design		*Addressed in methods section*
Theoretical framework		*Power: Audit Society and Lipsky: Street Level Bureaucracy* **p9-10**
9.	Methodological orientation and Theory	What methodological orientation was stated to underpin the study? *Ethnography* **p5-6**
Participant selection		
10.	Sampling	How were participants selected? *Purposive and pragmatic* **p7-8**
11.	Method of approach	How were participants approached? *Face-to-face* **p8**
12.	Sample size	How many participants were in the study? *43 (See results section)* **p10**
13.	Non-participation	How many people refused to participate or dropped out? Reasons? *One patient who had been keen to be interviewed became too unwell, and his wife consented to be interviewed* **p11**
Setting		

No	Item	Guide questions/description
14.	Setting of data collection	Where was the data collected? *Hospital stroke units (**see results section**) **p10***
15.	Presence of non-participants	Was anyone else present besides the participants and researchers? *On stroke units there were often people present who were not directly participating in the study, but this was not the case during interviews* **p8**
16.	Description of sample	What are the important characteristics of the sample? *Stroke patients, members of staff working with stroke patients (**see methods**)* **p7-8**
Data collection		*See data collection*
17.	Interview guide	Were questions, prompts, guides provided by the authors? Was it pilot tested? *An interview topic guide was used* **p8**
18.	Repeat interviews	Were repeat interviews carried out? If yes, how many? *One therapist was interviewed in two different sites, as she coincidentally worked in both (**see results**)* **p11**
19.	Audio/visual recording	Did the research use audio or visual recording to collect the data? *Interviews were recorded on a Dictaphone* **p8**
20.	Field notes	Were field notes made during and/or after the interview or focus group? *Yes* **p8**

No	Item	Guide questions/description
21.	Duration	What was the duration of the interviews or focus group? *Interviews lasted for approximately one hour each* **p10**
22.	Data saturation	Was data saturation discussed? *During data collection and analysis in the third site it was evident that common themes were recurring. There were differences in all the sites, but this variation was a finding in itself.* **p11**
23.	Transcripts returned	Were transcripts returned to participants for comment and/or correction? *No* **p11**
Domain 3: analysis and findings		
Data analysis		
24.	Number of data coders	How many data coders coded the data? *One, but a sample of transcripts was coded by all three researchers and coding was reviewed by all three. (**see data collection**)* **p8-9**
25.	Description of the coding tree	Did authors provide a description of the coding tree? *No*
26.	Derivation of themes	Were themes identified in advance or derived from the data? *Derived from the data (**see data collection and analysis**)* **p8-9**

No	Item	Guide questions/description
27.	Software	What software, if applicable, was used to manage the data? *Nvivo* **p8-9**
28.	Participant checking	Did participants provide feedback on the findings? *Yes* **p9 and p11**
Reporting		
29.	Quotations presented	Were participant quotations presented to illustrate the themes / findings? Was each quotation identified? *Yes* **p12-21**
30.	Data and findings consistent	Was there consistency between the data presented and the findings? *Yes* **p12-21**
31.	Clarity of major themes	Were major themes clearly presented in the findings? *Yes* **p12-21**
32.	Clarity of minor themes	Is there a description of diverse cases or discussion of minor themes? *Yes* **p12-21**

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How is auditing therapy intensity influencing stroke unit rehabilitation? An ethnographic study

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How is auditing therapy intensity influencing stroke unit rehabilitation? An ethnographic study.

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How is auditing therapy intensity influencing stroke unit rehabilitation? An ethnographic study.

Abstract

Objectives: Occupational therapy, physiotherapy and speech and language therapy are central to rehabilitation after a stroke. The UK has introduced an audited performance target: that 45 minutes of each therapy should be provided to patients deemed appropriate. We sought to understand how this has influenced delivery of stroke unit therapy.

Design: Ethnographic study, including observation and interviews. The theoretical framework drew on the work of Lipsky and Power, framing therapists as 'street level bureaucrats' in an 'audit society'.

Setting: Stroke units in three English hospitals.

Participants: Forty-three participants were interviewed, including patients, therapists and other staff.

Results: There was wide variation in how therapy time was recorded and in decision-making regarding which patients were 'appropriate for therapy', or auditable. Therapists interpreted their roles differently in each stroke unit. Therapists doubted the validity of the audit results and did not believe their results reflected the quality of services they provided. Some assumed their audit results would inform commissioning decisions. Senior therapy leaders shaped priorities and practices in each therapy team. Patients were inactive outside therapy sessions. They differed regarding the quantity of therapy they felt they needed, but consistently wanted to be more involved in decisions and treated as individuals.

Conclusions and implications: Stroke unit therapy has different meanings in different hospitals. Measuring therapy time is problematic due to varied interpretations of 'what counts' and variation in reporting practices. Although stroke policy, guidelines and audit are potential tools of improvement, their benefits are not automatic. Their actual effects depend largely on the attitudes and values of local influential 'street level leaders'. More work is needed to promote an integrated whole team approach to rehabilitation. Further research into contextual and human factors, including the roles and views of therapy

leaders, would enable a better understanding of implementation of guidelines and service improvement.

Keywords: stroke; rehabilitation; audit; guidelines; therapy; quality improvement; street level bureaucracy; leadership; implementation

Strengths and Limitations

- This is the first study to use an ethnographic and theory-based approach to investigate therapy practice in the context of a newly implemented guideline and audit

- Large scale ethnographic study with over 300 hours of observational data and 43 participants interviewed. This provided rich data and allowed the researcher to compare what researchers said with what they did, and question them about any differences between the two.

- Theoretical framework utilised for data analysis highlights that therapists are now on the threshold of the audit culture that is increasing in proliferation in healthcare. The insights offered have wide application across the field of healthcare, as national audits are increasingly being used for evaluation of services.

- Data could be interpreted differently by different researchers using different theory to analyse findings. We offer one interpretation.

INTRODUCTION

A stroke is a sudden and potentially catastrophic brain event that can lead to any combination of difficulties in movement, cognition, perception and behaviour[1,2,3]. Since

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1995 the Stroke Programme at the Royal College of Physicians (RCP) has been driving service improvements across multiple areas of stroke care in the United Kingdom (UK)[4]. Therapy is considered to be effective in increasing independence and reducing disability after a stroke. It is widely agreed that more is better[5,6,7,] although the specifics regarding how therapy should be provided and the required intensity remain unclear[6,7]. Increasing the intensity of therapy provided to stroke patients has become a target for improvement. The therapy intensity guideline, which aimed to increase the amount of therapy offered to stroke patients, was set out in the National Clinical Guidelines for Stroke[8] and incorporated into the NICE guidelines for Stroke Rehabilitation[7]. It applies to occupational therapists (OTs), physiotherapists (PTs) and speech and language therapists (SLTs). The guideline stated:

"Patients with stroke should be offered a minimum of 45 minutes of each appropriate therapy that is required, for a minimum of 5 days per week, at a level that enables the patient to meet their rehabilitation goals for as long as they are continuing to benefit from the therapy and are able to tolerate it" [8] .

The recommendation of a specific intensity of therapy treatment is one among many stroke standards, yet proved controversial. A consensus meeting held by the Intercollegiate Working Party for Stroke and the Stroke Research Network[9] showed therapists continued to oppose the guideline. Some criticised it on the grounds of being unachievable due to resource issues. Others questioned the desirability of the recommendation, criticising the rationale and evidence base[10].

The Sentinel Stroke National Audit Programme (SSNAP) began auditing stroke services against the therapy intensity guideline in 2013. SSNAP results showed national variation in the amount of each therapy stroke patients were receiving and in

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the proportion of patients each team recorded as appropriate for each therapy. SSNAP provides a detailed guide covering the definitions and methods that should be used to complete the therapy data[11]. Although there have been steady improvements in therapy results since its inception, many services are still measured as not meeting the 45 minute guideline. There continues to be wide variation in the proportion of patients considered appropriate for therapy.

Despite the proliferation of data generated through the audit, there is little information about how the national policy is being interpreted or implemented locally in practice. It is recognised that despite an assumption that guidelines will lead to improved care, implementation of guidelines can be problematic, with poor compliance and under-utilisation in practice[12]. Given the context of a new stroke therapy intensity guideline being measured and monitored in a national audit, we sought to investigate the influence of the guideline and audit on therapy practice: specifically, how it was adopted, its influence on care, and the role of the audit in these processes. There is an identified need for qualitative research examining how therapists negotiate the different and sometimes conflicting factors shaping delivery of therapy[13]. Using ethnographic research with a theoretical framework to shape data analysis is regarded as a valuable approach to investigate healthcare[14,15]. Despite large quantities of numerical data regarding therapy intensity, there is little understanding of how therapists interpret and enact their roles on stroke units, or of how they interpret and enact the relevant guideline and audit. This study therefore sought to investigate the delivery of therapy on stroke units in the policy context of the 45 minute guideline and auditing of therapy intensity.

METHODS

An ethnographic approach was used to study therapy practice in three different stroke units. Ethnographic research utilises a combination of observation and interviews to elicit descriptive information about a given group or setting, and was considered an appropriate method for examining how therapy decisions are made and acted on in everyday settings. Its use in healthcare research has been found to be valuable, particularly for understanding differences in health care delivery[14,15]. This approach allows comparisons to be made between what participants say in interviews and what they do in practice[15]. Participant observation can be viewed as a continuum with full immersion at one extreme and detached observation at the other[16]. Adler and Adler[17] describe three different types of membership role in fieldwork: peripheral, active and complete. Our researcher membership role was peripheral, with the primary researcher assisting with general tasks (such as cleaning equipment) but not working as a therapist.

The ontological position for this study is that the application of any specific therapy intervention involves factors that are not objectively 'out there' in the world. The epistemological position is that attempts to quantify 'therapy' (which could involve any variety of interventions) in general terms could involve misleading over-simplification. Quantifying the amount of time spent in therapy can reveal little about what is being offered, what is being received or why it is or is not beneficial. Instead, in keeping with constructivist and constructionist paradigms, the most appropriate means of furthering understanding in this area is to seek and interpret participants' views and observe their behaviour, whilst being mindful of how the researcher's own background and perspective might shape this interpretation[18,19,20,21].

Research team and reflexivity

ET conducted the study as part of a PhD in Health Services Research and previously conducted and published qualitative research in the area of stroke rehabilitation. CM and FJ supervised the research and have extensive experience of leading on and publishing findings of qualitative research in healthcare settings, including research specifically regarding stroke rehabilitation. ET had a previous background as a senior occupational therapist in stroke rehabilitation and had last worked in a stroke unit eight years prior to the study. She had previous connections with one of the hospitals, and knew some participants across the sites. FJ had a clinical background in physiotherapy. CM had been a member of the Intercollegiate Stroke Working Party responsible for developing national guidelines for stroke and had links with key influencers in the Stroke Programme and Sentinel Stroke National Audit Programme. It was important to acknowledge and consider the potential influence of the research team's previous roles, relationships and experiences on participants, as well as on the analysis and interpretation of findings. Relationships were established with participants either prior to or at the start of fieldwork at each site. Previous knowledge of one site and familiarity to some staff might be beneficial for building trust and gaining access, but across sites staff were equally open and trusting. The influence of the main researcher's background on patients only caused an issue on one occasion, when a carer sought advice about the therapy team's decisions. Reflexive fieldnotes were made on a daily basis during fieldwork and these were shared with the research team along with interview transcripts to ensure rigour. A basic knowledge of the field was an advantage as it was possible to understand the terminology and jargon used in meetings, and the fact that the prior experience of this setting was not recent gave it sufficient unfamiliarity to be viewed from an outsider's perspective.

Participants and recruitment

Purposive and pragmatic sampling was used to select stroke units with different characteristics which were considered by the team to have the potential to influence the response to the research question, allowing a wide range of perspectives[22]. For example, we sought to include sites within and outside London, with different levels of performance reported in the therapy domains of the SSNAP audit. The decision to use three sites for fieldwork was based on the need to balance rich, detailed data from each site with diversity from a range of sites, within the timescales afforded by the study. Therapy leaders at each site gave initial approval for the study to take place, in consultation with relevant managers. Local approvals were sought and provided at each site. Fieldwork was carried out one site at a time, and at the beginning of each episode of fieldwork a meeting was arranged to explain the project to the team. Posters were placed in ward areas to explain the study to staff, patients and visitors and invite them to contact the research team. Verbal consent from staff / patients was sought for observations, and written consent was provided for interviews.

Staffing in all the stroke units included therapy assistants (TAs) who worked across the therapy professions, often working with patients on activities delegated to them by therapists. Some TAs had more of a focus on SLT or OT and PT, but most of them worked to support all three therapy professions. All OTs, PTs, SLTs and therapy assistants (TAs) working in each site and the patients they were working with during the fieldwork were considered for observation and invited to participate in interviews.

(Note: National Health Service (NHS) therapy posts in the UK are banded according to levels of knowledge, skills and responsibility required. Band 5 is the entry level for a

qualified therapist. Band 6 is a senior clinical post. Band 7s are expected to have a higher level of knowledge, skills and responsibility, and these posts often involve team leadership. The inclusion and structuring of Band 8 posts varies across services. Band 8s are likely to be clinical specialists or therapy managers.)

For interviews, the core sample sought in each site included:

- staff from each of the three therapy professions (OT, PT and SLT), and TAs.
- staff with diversity in years of experience and seniority.
- patients working with therapists, with contrasting characteristics such as level of impairment / dependence; social situation; discharge destination; ethnicity; age.

Participants meeting these criteria were approached face to face and selected based on their availability and willingness to participate. In each site we sought the same core range of interview participants, with an openness to interviewing others who were found to play a key role relevant to the enquiry, such as a medical consultant, nurse, manager, administrator or relative. On the advice of the research ethics committee who approved the study, the researcher checked with the team on a case by case basis to ensure they did not have any concerns about the about patients being approached based on factors such as cognition or medical status. All interview participants were observed in practice prior to being interviewed. This meant that there had been establishment of some rapport between interviewer and interviewee, and it was possible to question participants about areas that had been noticed during observations.

Data collection and analysis

Data collection included observations of therapy work and interviews with therapists, therapy assistants, managers, patients and carers in three stroke units.

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Observations were unstructured, and the aim was to become immersed in the day to day working of therapists in each stroke unit in order to understand how they worked, how they made decisions and how they prioritised their time. Approaches to observation varied. For example, in the first site therapists used timetables to plan their weekly sessions with patients, including individual and group work. Initially the primary researcher joined in with timetabling, using the same timetable template and booking in joint sessions with therapists. Frequently these sessions were cancelled or re-arranged, and we therefore changed strategy to accompany individual therapists for a morning or afternoon. This was more useful, as it enabled emersion in the pace and pattern of therapists' work time rather than just joining in with certain sessions, and was used in the second and third sites. All aspects of therapists' working day were observed, including meetings, administration and lunch times.

Observational data were gathered using detailed fieldnotes and were used to document events as well as to prompt further questions for consideration or investigation. Topic guides were used for interviews (see appendix A), and these were audio-recorded and transcribed for analysis. Nvivo software was used to manage the data.

A constructionist approach to thematic analysis was used to identify, analyse and report latent themes[22]. Fieldnotes and interview transcripts were analysed inductively alongside deductive use of theory to support and shape the analysis. To ensure rigour, a sample of transcripts was coded by all three researchers, and coding processes were regularly reviewed and discussed. Fieldnotes differed from interview data in that they often included the researcher's interpretation of the observations. Therefore interview data were coded without the fieldnotes, and fieldnotes were consulted as a reminder of

activities and events observed and experienced, and any early interpretations of these.

Data analysis took place in between data collection at each site, and preliminary

findings were shared with teams shortly after fieldwork at each site had ended, the

interpretation of the data and links with underlying theory developed during this

process.

Working closely with the data, the primary researcher coded and grouped data using

Nvivo, sticky notes on flip chart paper, mind maps and writing prose. Nvivo was used

for the first round of coding, although this was subsequently repeated by hand. Most

data analysis was conducted using Word or on paper, but Nvivo was used at later stages

to conduct word counts on terms that appeared to have arisen frequently e.g.

'commissioners'. Themes were derived from the data and connections made between

theory and emerging findings. At all stages data analysis was discussed with co-authors

CM and FJ, as well as other colleagues, members of research groups, stroke survivors

and participants in the research for member checking. This often occurred in the form

of a presentation followed by a discussion. COREQ guidelines for reporting qualitative

research were used[23].

Patient and Public Involvement

The King's College London Stroke Patients and Family Research group were involved

in the development of the research question and design, and emerging findings were

discussed with the group during data analysis.

Ethics

The study was conducted using the principles of 'ethical mindfulness' to navigate the

unanticipated ethical decisions which inevitably arise in the field[24]. Ethical approval was obtained from National Research Ethics Committee on 18th July 2014. Site specific approval was obtained from each hospital's Research and Development team. Written consent was provided by all interview participants.

Theoretical framework

In ethnographic research, theory is used inductively and deductively to broaden and deepen insights into the subject of study. Various potentially relevant theories were considered during the course of data collection, and appraising their usefulness in illuminating the driving forces underpinning the findings was a part of the ongoing data analysis. The theoretical framework for the analysis presented here drew on the work of Lipsky[25] and Power[26], framing therapists as street level bureaucrats in an audit society. Lipsky's theory of street-level bureaucracy concerns the implementation of policy through direct encounters between front line public service workers and citizens. Lipsky claimed that policy becomes distorted in its implementation, as the use of discretion and autonomy by public service workers in complex interactions is inevitable. The current study, constructing therapists as street-level bureaucrats (i.e. public service workers on the front line who use their autonomy in the implementation of policy) sought to unpick what therapists do and why.

Power's concept of audit society critiques the 'audit explosion' occurring within contemporary western society[27]. Power associates the rise of audit with new public management and neo-liberal governmentality, and suggests it is an example of the public sector adopting private sector principles and practices. The power relation of audit is hierarchical and paternalistic, involving the scrutinizer and the observed. The observed are not involved in discourse, but instead become objects of information. The

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focus is to produce a quantifiable score and rank departments and institutions against each other. Use of this theory enabled a broader perspective, and prompted an understanding of SSNAP as part of a wider context of audit culture.

RESULTS

Sites A and C were located in different NHS hospitals in London. Site B was located in a town in the South East of England. All the sites differed in terms of referral pathways into and out of the stroke units. For example, one was located in the same building as the Hyper-acute Stroke Unit (HASU), in which patients stay for the first 72 hours post-stroke, and which was its only source of referrals. Another accepted patients from a number of other hospitals, and patients had sometimes been to multiple hospitals before being transferred there. The ratio of therapy staff to patients varied, with Site A having the highest ratio of therapy staff to patients, and Site A having the lowest. There was variation in the community services available to patients, and this influenced the point at which patients were considered ready to be discharged. The sites varied in their SSNAP results for therapy intensity. Site A consistently performed well on their scores (scoring A grades), Site B had dramatically improved from low scores (e.g. E grades) to good scores in the four most recent quarterly reports, and Site C was in the average range.

Over 300 hours of fieldwork were carried out across the three sites. Pseudonyms are used for the hospitals, places and participants to protect their identity. The pseudonyms given to interviewees reflect the name most commonly used to address them, i.e. if a person introduced themselves with their first name then we have chosen an alternative first name. Doctors have been given full names as they would sometimes be referred to formally and sometimes by their first name. Information about participants is restricted

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to details considered relevant to the study in order to reduce the risk of identification (see appendix B). Forty-three participants were interviewed including therapy staff, doctors, managers, a nurse, patients and a patient's wife. Interviews typically lasted for approximately one hour. In each site there were different prominent figures whom it appeared relevant to interview in addition to these core participants. For example, in one site a lead nurse was influential in decisions about when to withdraw therapy and was a driving force for a focus on SSNAP within the wider multi-disciplinary team, therefore it was considered valuable to interview her. Nobody declined an invitation to participate, therefore interviewees were selected based on availability. One patient who had been keen to be interviewed became too unwell, and his wife consented to be interviewed. During data collection and analysis in the third site it was evident that common themes were recurring. There were differences in all the sites, but this variation was seen as a finding in itself.

Overall, we found:

- There were key differences in the delivery of therapy in each site, including differences in the scope of activities therapy encompassed, and differences in the perceived remit of stoke units and role of therapist.

- Measuring therapy was therefore problematic, as there was a lack of consensus about what counted as therapy. There was no uniformity in the way therapy time was recorded and reported for the audit.

- Therapists did not believe that their audit results reflected the quality of therapy provision.

- There was an absence of an integrated, patient-centred approach to rehabilitation in the multi-disciplinary teams.

- Therapists associated the SSNAP audit and the monitoring of therapy time with the commissioning of their services. They expressed mistrust about auditing practices in other services, and they worried about commissioners taking these results at face value.

- Therapy practice, including implementation of guidelines, was shaped by local clinical leaders.

What counts? Who counts?

The SSNAP audit records the quantity of therapy time provided to patients, but there were key differences in what was considered to count as therapy in each site. In one stroke unit, therapy was interpreted broadly. It could include groups and individual sessions in a range of environments, such as the gym, kitchen, or outdoors. There, building therapeutic rapport and listening to patients' concerns were considered to be valid use of therapy time. A narrower conception of therapy was evident in the two other stroke units, where there was a stronger emphasis on getting patients to the minimal level of physical ability required in order to discharge them. The influence of the local contextual factors on the delivery of therapy came through strongly in observations at each hospital.

> "[Where I used to work], rehab was the ethos. You go there for rehab. So the way you come in you should go out at a different level, a better level, hopefully. Here we're just a stepping stone to having your rehab at home."
>
> Joanne, Band 7 PT, Site C.

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'Rehab happens in the community' was a mantra in Site C. This frequently caused ethical tensions for therapists who were keen to point out that the required rehabilitation would not be provided to many of their patients on discharge, depending on their home address. Nevertheless, provision of stroke unit rehabilitation beyond the essentials required for discharge was considered an 'old-fashioned model'. A shift of emphasis from treatment to discharge planning was acknowledged by leaders in Sites B and C.

"We don't use the word 'rehab' in relation to inpatient stroke services at [NHS organisation] anymore because the concept is about community. Rehab happens in the community… I think I'm very clear… yes, the therapists don't do therapy, but they get their patients home."

Rona, Clinical Lead, Site C.

Rona was referring to the fact that therapists needed to prioritise administration to facilitate discharge planning rather than providing rehabilitation. In our observations we saw that therapists often set out to assess and treat patients, but then abandoned their plans when the pressure of expediting discharge mounted. The following fieldnotes from observations at a multi-disciplinary meeting illustrate the focus on discharge rather than rehabilitation.

The lady in bed 5 is cortically blind, fatigued, confused, anxious. OT says she was unwell when she tried to see her, and she would like to see her again as she really needs more assessment. She needs assistance of two for transfers, and the community team where she lives won't see people who need assistance of two. Nevertheless,

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discharge date is tomorrow. It seems to me that ideally she would have more time and

input either in hospital or at home, but she will get neither.

Fieldnotes from Site C

Individuals in all sites expressed mixed feelings about the apparent trajectory of

improvement in stroke services. The nurse specialist in Site B was driving the nursing

team to improve on various processes that were audited for SSNAP, and she was sure

that the audit had led to improvements which would be ongoing in these aspects of care.

Whilst the early medical management of stroke was seen as continually improving,

there was less positivity as people discussed changes in therapy over recent years,

including its scope and quality and the reduced availability of therapy spaces. Dr

Adams echoed the comments of many Site B therapists when he stated about inpatient

rehabilitation,

"in some respects, I think we were doing it better at some stage in the past than

we are now."

Dr Adams, Lead Medical Consultant, Site B

For therapists in all stroke units, there was ambiguity about what counted as auditable

therapy. The team based at Site B had fully engaged with the guidance and support

offered by SSNAP, but other teams had not. Therapists in all stroke units made

individual decisions about how to record their time for the audit. Some strictly adhered

to their perception of the rules of the audit, that only face to face time should be

counted. Others would say things like 'his discharge paperwork will be his session

today'. They would justify the recording of administration as therapy time based on the

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argument that facilitating the patient's discharge was their therapy priority and should therefore be seen as valuable use of their therapists' time.

The calculation of SSNAP scores for therapy intensity takes into account the proportion of the caseload deemed appropriate for therapy. This is measured against set benchmarks: that 80% of patients will require OT, 85% will require PT, and 50% will require SLT. The stated rationale for these benchmarks is that they have been guided by previous audit data. From SSNAP guidance, a patient's therapy time should only be included in the data reporting if that patient was deemed appropriate by the team. We observed stark contrasts in how teams recorded whether patients were appropriate for therapy. Therapists in Sites A and C were unaware that this was an audit question. Unknown to the therapists, administrators in these teams were reporting that 100% of patients were auditable and were appropriate for therapy. In contrast, in Site B 'appropriateness for therapy' had become a daily clinical consideration for therapists, and they referred to patients who were appropriate for therapy according to the rules of the audit as 'SSNAPing'. As one OT said, SSNAP had become 'part of the jargon', and in their daily morning meetings we observed that it would be noted whether each patient was SSNAPing or not. Unless a patient was participating actively in 45 minutes of goal-focussed therapy every day, and was improving, they were not counted as appropriate for therapy on the SSNAP audit for this team. Often the answer was not clear to therapists, and became a point of debate and discussion.

'The quality beneath'

Therapists in each site expressed a lack of confidence in the SSNAP therapy data, both nationally and locally, and they did not believe the data reflected the quality of therapy

provided. They perceived wide variation in the way different teams interpreted audit requirements and managed their data. Site A had been a consistent high scorer at the time of data collection, but senior therapists stated that their local data was 'skewed' as it was easy to accidentally duplicate data entries on the local computer system. Site B's therapy scores had improved in response to the changes they made to data reporting, yet therapists there did not believe their grades reflected their practice. Several gave an example of a Christmas period during which they scored their best SSNAP grades despite feeling they were providing an inferior service due to staff pressures. A number of OTs felt that over the Christmas period the OT score should have been an E (a low score) instead of an A (the top score), if it reflected the quality of service that was being provided. This was also raised by the clinical lead therapist.

"[The OTs] said we did really prioritise when we were really short staffed so that SSNAP did not suffer… I think patients were perhaps being SSNAP-stopped prematurely. So, I think they were making SSNAP-stop decisions on resource availability as opposed to patient need."

Lucy, Clinical Lead, Site B

Lucy charted the changes that she had initiated and the subsequent improvements in their SSNAP scores. When asked whether the improvements in their audit results reflected 'real life' improvement, she and her colleagues consistently responded with a clear 'no', explaining that most of their changes had been in their audit processes.

"I just am concerned about the value being attached to [SSNAP] in its raw kind of sense, so its overall grading system doesn't allow you to see the quality beneath."

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Lucy, Clinical Lead, Site B

We observed that Site B staff had detailed knowledge of their SSNAP performance, and their SSNAP results were regularly presented to the team. Therapists at Site C had a much more vague perception of their SSNAP performance, but still held the opinion that their score did not reflect their practice.

"Obviously the data that we're getting doesn't reflect our practice. So something is not quite right. So I think they're just trying to figure out what the problem is and have a bit more effective way of collecting that data… [B7 PT] has told me that we're complying. To be honest, I know it's not right, and she said, yes and that's why we need to actually look into it."

Ghita, B6 PT, Site C

This perspective was team-wide at Site C, and was raised in interviews as well as observed meetings and informal discussions with the researcher. Therapists believed that their SSNAP score was too high, compared with their perception of the service they provided.

"Apparently we were getting like 100% and we were like, 'no way'… because there's no way that we're seeing every patient 45 minutes a day. No way. You've seen it."

Nancy, B7 OT, Site C

Therapists in all sites discussed having internalised the message that 'more is better', but this had become a voice of guilt in the backs of their minds rather than something that changed their practice.

"I'm always waiting [for] when somebody comes heavy handed and says, "*You* haven't been doing this!", and I'll be punished. It always feels like that, the guilt is there. There's lots of guilt. 'Oh I haven't been seeing patients as often as I would like to.'"

Agata, Band 6 OT, Site A

We observed that in all sites for the majority of the day patients were lying in bed or sitting at their own bedside, as one patient said, "just gazing". We noticed that in team meetings patients were ascribed different functional levels for therapists and nurses, meaning that nursing staff could not enable patients to do the things they had achieved in therapy sessions until the therapists gave their approval. Therapists' and nurses' work was hidden from each other behind the closed curtains around each patients' bed area, or in the therapy spaces that therapists took patients to for their designated therapy sessions. In informal discussions staff and patients frequently referred to the lack of an integrated approach to rehabilitation and the wasted time experienced by patients and staff. Some suggested that the SSNAP audit had encouraged a uni-disciplinary focus, with professions focussing on their own scores rather than working cohesively as a team with the patient at the centre.

Patients varied in the extent to which they reported feeling happy with the amount of therapy they received. Some wanted more, some thought they were receiving too much

or it was 'too heavy'. Patients were less concerned about the quantity of therapy

offered to them than the quality of care and the nature of the therapy they received.

"Depends on the nature of the therapy. If you were in the therapy that I was

telling you when I first came into the room, about "come on come on you can do it,

stand up stand up", that nonsense therapy, that's not therapy. That's bullying. Not 45

minutes - God! People wouldn't come out of the therapy… You should be able to

attune yourself to the patient. And you can't train somebody to do that. They've either

got it, because they love people, and they've got an empathy, it's natural it's innate in

their nature. Some people are not like that… They've got to have that disposition."

Eddie, Site A

In general, patients felt that the professionals involved should know best about what

they needed, but they consistently wanted to be involved in the discussion and treated as

individuals, and this was not their experience.

Competition and Commissioner-Centred Care

In all sites, teams expressed scepticism about neighbouring services' SSNAP practices.

Therapists attended regional meetings and heard about how colleagues in other services

were reporting SSNAP data, so were aware of the variation in audit practices across

services. They questioned the quality of the national audit data for therapy, and they

used language such as 'bending the rules', 'playing the numbers game', or 'lying' when

discussing the practices of other teams. Some had visited neighbouring hospitals to find

out about their audit practices.

"It was really interesting to get insight into how other people do it… So that was interesting to come away thinking: this is a high performing A rated unit. What I took away from that is, do we really want to be one of those?"

Lucy, Clinical Lead, Site B

Rivalry and mistrust were observed to go hand in hand with discussion of the audit ratings. Many staff mentioned funding and commissioning when asked about their SSNAP scores. In most cases, when asked what the implications of SSNAP results were, therapists expressed concerns about how they might be used to inform commissioning decisions.

"I worry that one day they'll look at our stats and say, ooh speech therapy isn't meeting the [45 minute] standard…. So if that was the case, if they were to take the contracts off us then some of us could lose our jobs."

Claire, SLT B7, Site A

Across all sites fears were expressed about potential implications of SSNAP for service commissioning. In interviews, hospital therapy managers and consultants endorsed this as a reasonable concern.

"Well there's a little bit of paranoia there but at the same time … what we don't want staff to do is to be naïve, and you know, shielded or protected from any sort of other conversation. So when the [neighbouring borough] stroke beds came here it was a tender for a service which this organisation won, and it's a tender for 3 years, so at any,

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you know, and obviously we're 2 years or so into that. So it will need to be reviewed at some point. So obviously as it goes increasingly closer to review, then people will become anxious. "

Ann, Therapy Manager, Site A

Ann talked about the 'new way of providing healthcare', with tenders coming out for very short-term contracts, sometimes just for one year. Many changes therapists had perceived in their work were linked to service contracts and commissioning and, for them, SSNAP was associated with these changes in the wider context of healthcare delivery. Few therapists associated SSNAP scores with quality of care, whilst most saw them as something services needed to use to 'please the commissioners', suggesting that the way the audit was implemented encouraged commissioner-centred, rather than patient-centred therapy delivery.

The influence of local clinical leadership

In each site it was evident that local clinical therapy leaders shaped priorities regarding the delivery of therapy and influenced attitudes regarding the 45 minute guideline and SSNAP audit. Their specific roles differed, but in each site there was someone influential who clinicians respected due to their clinical experience, but who also had responsibility for ensuring implementation of top-down mandates. They would filter the many policies and mandates coming through to them, and promote, emphasise or soften them according their own judgement.

Clinical leads in all sites talked about not wanting to put pressure on therapists to meet the target of therapy intensity. They gave various reasons for not prioritising this

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amongst the different top-down mandates they were expected to reinforce to their teams. These included believing that using session length as a measure of the quality of therapy was problematic; believing it was unachievable; and wanting to protect therapists from additional pressure.

Many therapists knew what was expected of them by their clinical leaders but did not know the origins of the protocols and guidelines they were expected to follow.

"The local target kind of protocol that's been put together I think by [clinical lead], that is in the forefront of my mind, which I always kind of get a little bit confused with, whether that is what is the kind of national targets."

Nancy, B7 OT, Site C

Therapy staff identified opportunities for quality improvement at a local level, and this appeared to be more influential on them than national policy. National stroke guidelines and audit were used at management and service-commissioning levels to protect stroke services. Clinical leaders acted as an interface between the multiple local and national policies and imperatives and the therapists practising on stroke units.

DISCUSSION

This study sought to investigate the delivery of therapy on stroke units in the policy context of the 45 minute guideline and auditing of therapy time. The study illuminated experiences of stroke unit therapists at a specific point in time when the national auditing of therapy was new. It offers insights into the factors influencing the delivery of therapy and the influence of guidelines and audit on therapy delivery. Strengths of

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the study included its scale, with 300 hours of observational fieldwork completed as well as 43 interviews. The ethnographic approach of sustained periods of observation as well as interviews allowed insider insights into what participants actually do, as well as what they say they do[15]. The use of theory allowed deeper insights into the findings, and suggests that the findings are likely to have broader applicability. A possible criticism of this design is that our account is interpretative and open to discussion and alternative analyses. During fieldwork we noticed some practices and attitudes change, therefore completing the study at a different time could have captured different findings. The selection of three stroke units with contrasting features was a strength, and it was useful that one of the teams had consciously addressed their audit scores and staff there were able to describe this process. However, it is a limitation of the study that we did not include a stroke unit that was performing poorly on the audit at the time of the study. It is also a limitation that the stroke units were all located in the south east of England. However, our findings have similarities to those of a recently published mixed methods case study evaluation of eight stroke units[27], and this suggests the issues identified are not specific to the time or regions of the UK at which our study took place. The global relevance of our study could be challenged on the basis that it took place in the UK. Many countries now have a therapy intensity guideline contained within their stroke guidelines, and the question of whether this should be audited is timely. Further research into the influence of similar guidelines and audit in other countries would allow useful comparisons to be made.

We found that the term 'therapy' was interpreted and delivered differently by therapists in different sites, and audit practices varied widely. Therapists were aware of this variation and reported that audit results did not reflect the quality of their service.

These factors undermined the credibility they attributed to the audit. There was mistrust regarding the auditing practices of neighbouring teams, and therapists were concerned that audit results would influence commissioners in decisions about service contracts, potentially leading to a negative outcome for their particular service. Therapists wanted to provide more rehabilitation and felt guilty about not doing so. Meanwhile, a focus on integrated multi-disciplinary rehabilitation was absent, and patients were often observed as inactive outside their designated therapy sessions. The guideline and audit were among many local and national policies and mandates that clinical leaders filtered for their teams. Therapists were strongly influenced by these leaders in their delivery of therapy and their interpretation of the guideline and audit.

Analysing these findings with inductive and deductive reference to the theoretical framework enabled rich insights into the influence of policy and audit on therapy delivery at 'street level'. In The Audit Society[27], Power claims that the use of audit in healthcare is prolific and increasing and that this follows a trend in public services and Western society that he termed 'the audit explosion'. The Sentinel Stroke National Audit Programme (SSNAP) can be seen as one example of this. Within SSNAP the auditing of the 45 minute therapy standard is an example of using time as a performance measure. Street level bureaucracy was introduced as a concept by Lipsky as a way of understanding the implementation of policy by the people who actually implement it[25]. Lipsky noted that in the case of complex interventions provided by street-level bureaucrats, calculating use of time is the simplest way of measuring performance, but is problematic and reveals nothing about the quality or appropriateness of the way that time has been used.

There is mixed evidence regarding the efficacy of using performance measurement to improve quality[28,29,30]. It has been suggested that a good performance indicator should have reliability and validity; be based on agreed, fully described definitions; and be relevant and actionable for those using it [28,31,32]. The UK therapy intensity guideline is based on consensus, and this may be a reason for some of the confusion regarding its rationale and evidence base. It has been noted that internationally, recommendations regarding the intensity and appropriateness of stroke rehabilitation vary[33]. Therefore, there is a global need for more clarity regarding what is being recommended and why.

The lack of consensus regarding 'what counts' as therapy, or how therapists should be using their time, also calls for the attention of policy makers and those funding services. The various pressures on staff are sometimes in conflict, and clear and consistent messages are needed regarding what is expected of them. The need for a broader interpretation of therapy that includes listening to patients' concerns echoes recent findings from the ATTENDS trial in India[34]. If discharge from hospital is to be the primary focus of inpatient therapists, then more work is needed to reduce the evident disparities in community services to prevent patients from missing out on the opportunity of rehabilitation.

In keeping with criticisms of performance measurement[25,26,35] we found examples of 'hitting the target but missing the point'. 'The point' was to improve rehabilitation for stroke patients, but stroke units are not universally functioning as rehabilitative environments. This finding is in line with those of various observational studies that have quantified the amount of time stroke unit patients spend active or in therapy, and suggests that this has not improved over time[36,37,38,39,40,27]. In fact, our findings suggest

that profession specific guidelines and measures may encourage sileod working, rather than a team approach focussed on the individual needs of each patient. In an era of audit and big data, it is important to recall that "not everything that can be counted counts, and not everything that counts can be counted"[41]. The challenge of determining how best to measure and monitor what matters to patients remains unsolved.

Wider contextual factors regarding the marketisation of healthcare were inextricably linked to much of the data. The perceived consequences of SSNAP discussed by therapists were less about patients' experiences and outcomes, and more about team reputations, rivalries and the vulnerability of their commissioned services. This links with critiques of the rise of audit in Western society, New Public Management (NPM) and neo-liberalism[26]. NPM refers to the public sector's adoption of certain private sector principles and practices[26,42]. This includes a style of management that seeks effectiveness and efficiency through top-down control, a shift to greater competition[43] and an emphasis on performance management[44]. Although the language of neo-liberalism, NPM and marketisation was not used by participants in the current study, they were mindful of working in a competitive market and the audit itself engendered a spirit of competition.

Market competition is hailed by some as a driver for improvement in healthcare, and this is often based on the premise that patients (as consumers) can actively choose between providers for elective interventions, such as in Bloom et al's study[45]. However, stroke unit patients in this study did not have 'consumer choice' but were processed through local stroke pathways after the sudden and unanticipated event of a stroke. Rather than being used as tool for patients to choose their provider, therapists

feared that ratings were used by funders to select services for investment. In this sense, the audit had potential to be a tool of commissioner-centred care. This possibility calls for further exploration, and further research should also incorporate the perspectives of commissioners and funders. It has been claimed that focussing on numbers and statistics instead of people is a threat to person-centred, humanising practice[46]. Our findings suggest that guidelines and audit do not hold power on their own to improve patient care. Their implementation and impact is dependent on people with influence conveying a message about what is important and why, and attention to potentially important contextual factors is essential. Alongside quantitative measures, there is a need to encourage creativity and bottom-up improvement to address local problems in order to improve patients' experiences.

Lipsky's theory of Street Level Bureaucracy emphasises the autonomy of individual front line public service workers. Lipsky distinguished between workers and managers, but he did not account for clinicians in leadership positions, who act as an interface between policy and practice. We found that street level leaders filter diverse top-down expectations and understand that it is impossible to demand that therapists give them all equal weighting. They therefore prioritise and amplify the messages they consider to be most important. Hupe and van Kooten[47] noted that despite an abundance of literature regarding public management, this tends not to focus on middle management or work supervisors. They suggested that in processing rules, public managers either formulate additional rules, pass on rules, or buffer rules, and that in this way first-line supervisors are also discretionary actors[47]. Our findings support this claim in the case of stroke unit therapists, and this highlights a need for consideration of their role as clinical leaders.

The role of clinical leaders in improving or maintaining quality has been widely discussed[48,49,50, 51]. Some have claimed the importance of leaders being 'actually in the arena'[48], and discussed the role that embedded leaders can have in ensuring that values, such as putting the patient first, are upheld[48]. Little attention has been paid to the role leaders have in filtering or prioritising the conflicting demands placed on front line staff. Furthermore, the clinical leadership literature predominantly discusses medics or nurses but not therapy leaders. This study offers new insights into the unexplored area of clinical therapy leaders as agents of discretion with a key role in shaping the delivery of policy on the ground. This is an area that warrants further investigation.

Conclusion

National audit results have identified variations in the delivery of therapy to stroke patients. This study contributes to the literature by illustrating the problematic nature of auditing therapy time. The guidelines and audit of adherence to guidelines were intended to increase therapy intensity. There were local and individual variations in interpreting guidelines and recording inputs. Therapists were aware of this, and expressed cynicism about the audit results. They described a mismatch between their results and their actual performance, and did not feel that changes in their audit results reflected the quality of therapy delivered. In the wider context of health care organisation and changes, the audit was associated with concerns about investment in services. We found this led to a focus on commissioners of services, rather than the experiences of patients.

We conclude that although stroke policy, guidelines and audit are potential tools of improvement, their benefits are not automatic. Their actual effects depend largely on

the attitudes and values of local influential 'street level leaders'. This study highlights the importance of attending to contextual factors and potential negative consequences when implementing strategies for improvement. Approaches to health services research are needed that investigate whole systems and the human factors involved in improvement and implementation. Further work is needed to determine how best to ensure that the aspiration of improving quality for patients is not lost in the process of implementation.

Author Statement

The first author (ET) conducted the study, supervised by CM and FJ. All authors made substantial contributions to the conception and design of the work. ET was primarily responsible for the acquisition, analysis, or interpretation of data for the work; drafting the work and revising it critically. CM and FJ viewed and commented on all drafts and gave final approval of the version to be published. All authors agree to be accountable for all aspects of the work.

Declaration of interest statement

No competing interests declared

Data Sharing Statement

No additional data are available

References:

1. Sumathipala, K., Radcliffe, E., Sadler, E., Wolfe, C. & McKevitt C. (2012). Identifying the long-term needs of stroke survivors using the International Classification of Functioning, Disability and Health. *Chronic Illness*, 8: 31-44.

2. McKevitt, C., Fudge, N., Redfern, J., Sheldenkar, A., Crichton, S., Rudd, A., Forster, A., Young, J., Nazareth, I., Silver, L., Rothwell, P. & Wolfe, C. (2011). Self-reported long-term needs after stroke. *Stroke*, 42:1398–403.

3. Wolfe, C., Crichton, S., Heuschmann, P., McKevitt, C., Toschke, A., Grieve, A. et al. (2011). Estimates of outcomes up to ten years after stroke: analysis from the prospective South London stroke register, *PLoS Med* , vol. 8 pg. e1001033

4. Cloud, G., Hoffman, A. & Rudd, A. on behalf of the Intercollegiate Stroke Working Party. (2013). National Sentinel Stroke Audit 1998–2011. *Clinical Medicine*, 13(5), 444-448.

5. Department of Health (DoH). (2007). The national stroke strategy. London: Department of Health.

6. Foley, N., McClure, J., Meyer, M., Salter, K., Bureau, Y. & Teasell, R. (2012). Inpatient rehabilitation following stroke: Amount of therapy received and associations with functional recovery. *Disability and Rehabilitation*, 34(25), 2132-2138.

7. National Institute for Health and Care Excellence (NICE). (2013). Stroke rehabilitation: Long term rehabilitation after stroke. Planning and delivering stroke rehabilitation. London: National Clinical Guidelines Centre.

8. Intercollegiate Stroke Working Party (ISWP). (2012). *National clinical guidelines for stroke (4th ed.)*. London: Royal College of Physicians.

9. Intercollegiate Stroke Working Party / Stroke Research Network (ISWP/SRN). (2012) Intensity of therapy after stroke consensus meeting 26th March 2012. London: Royal College of Physicians.

10. Foley, Norine & Pereira, Shelialah & Salter, Katherine & Meyer, Matthew & Mcclure, J Andrew & Teasell, Robert. (2012). Are Recommendations Regarding Inpatient Therapy Intensity Following Acute Stroke Really Evidence-Based?. *Topics in stroke rehabilitation*. 19. 96-103

11. SSNAP (2018), Therapy [online] https://ssnap.zendesk.com/hc/en-us/sections/115000451409-Therapy Accessed: April 2018.

12. Gagliardi, A., Brouwers, M., Palda, A., Lemieux-Charles, L. & Grimshaw, J. (2011). How can we improve guideline use? A conceptual framework of implementability. *Implementation Science*, 6:26.

13. Taylor, E., McKevitt, C. & Jones, F. (2015). Factors shaping the delivery of acute inpatient stroke therapy: A narrative synthesis. *Journal of Rehabilitation Medicine*, 47(2), 107-119.

14. Goodson, L. & Vassar, M. (2011). An overview of ethnography in healthcare and medical education research. *Journal of Educational Evaluation for Health Professions*, 8:4.

15. Lambert, H. & McKevitt, C. (2002). Anthropology in health research: From qualitative methods to multidisciplinarity. *BMJ*, 325, 210-213.

16. O'Reilly, K. (2009). *Key concepts in ethnography*. London: Sage.

17. Adler, P. & Adler, P. (1987). Membership roles in field research. Newbury Park, CA: Sage Publications.

18. Andrews, T. (2012). What is social constructionism? *The Grounded Theory Review*, 11(1), 39-46.

19. Charmaz, K. (2000). Handbook of qualitative research. Thousand Oaks, CA: Sage.

20. Charmaz, K. (2006). Constructing grounded theory: A practical guide through qualitative analysis. Thousand Oaks, CA: Sage.

21. Cresswell, J. (2007). Qualitative inquiry and research design: Choosing among five approaches (2nd ed.). Thousand Oaks, CA: Sage.

22. Braun, V. & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2) 77-101.

23. Tong, A., Sainsbury, P. & Craig, J. (2007). Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *International Journal for Quality in Health Care*, 19(6) 349–357.

24. Pollock, K. (2012). Procedure versus process: Ethical paradigms and the conduct of qualitative research. *BMC Medical Ethics*, 13(25).

25. Lipsky, M. (2010). Street-level bureaucracy: Dilemmas of the individual in public services. New York: Russell Sage.

26. Power, M. (1997). The Audit Society: Rituals of verification. Oxford: Oxford University Press.

27. Clarke DJ, Burton LJ, Tyson SF et al (2018). Why do inpatient stroke survivors not receive the recommended amount of active therapy? A mixed-methods case-study evaluation in eight stroke units *Clinical Rehabilitation e-pub 27th March 2018*.

28. Raleigh, V. & Foot, C. (2010). Getting the measure of quality: Opportunities and challenges. London: The King's Fund.

29. Fung, C., Lim, Y., Mattke, S., Damberg, C. & Shekelle, P. (2008). Systematic review: The evidence that publishing patient care performance data improves quality of care. *Annals of Internal Medicine*, 148(2), 111-123.

30. Kirkup, B. (2015). *The report of the Morecambe Bay Investigation*. London: The Stationery Office.

31. Mainz, J. (2003). Developing evidence-based clinical indicators: A state of the art methods primer. *International Journal for Quality in Health Care*, 15(1), i5-i11.

32. Mainz, J. (2003). Defining and classifying clinical indicators for quality improvement. *International Journal for Quality in Health Care*, 15(6), 523-530.

33. Lynch, E., Cadilhac, D., Luker. J. & Hillier, S. (2017). Inequities in access to inpatient rehabilitation after stroke: An international scoping review. *Topics in Stroke Rehabilitation*, 24(8).

34. Family-led rehabilitation after stroke in India (ATTEND): a randomised controlled trial (2017). *The Lancet.* 390 (10094) 588-599

35. Pflueger, D. (2015). Accounting for quality: On the relationship between accounting and quality improvement in healthcare. *BMC Health Services Research*, 15, 178.

36. Ada, L., Dean, C., & Mackey, F. (2006). Increasing the amount of physical activity undertaken after stroke, *Physical Therapy Reviews*, 11, 91-100.

37. Bernhardt, J., Chan, J., Nicola, I. & Collier, J. (2007). Little therapy, little physical activity: Rehabilitation within the first 14 days of organised stroke unit care. *Journal of Rehabilitation Medicine*, 39(1), 43-48.

38. Keith, R. & Cowell, K. (1987). Time use of stroke patients in three rehabilitation hospitals. *Social Science and Medicine*, 24(6), 529-533.

39. King, A., McCluskey, A. & Schurr, K. (2011). The time use and activity levels of inpatients in a co-located acute and rehabilitation stroke unit: An observational study. *Topics in Stroke Rehabilitation*, 18(1), 654-665.

40. de Weerdt, W., Selz, B., Nuyens, G., Staes, F., Swinnen, D., Van de Winckel, A., Nieuwboer, A., Lysens, R. & Feys, H. (2000). Time use of stroke patients in an intensive rehabilitation unit: A comparison between a Belgian and a Swiss setting. *Disability & Rehabilitation*, 22(4), 181-186.

41. Cameron, W.B., (1963), Informal Sociology, a casual introduction to sociological thinking. New York: Random House, p13

42. Hood, C. (1995). The "new public management" in the 1980s: Variations on a theme. *Accounting, Organisations and Society*, 20(2/3), 93-109.

43. Hood, C. (1991). A public management for all seasons. *Public Administration*, 69(1), 3-19.

44. Van Dooren, W., Bouckaert, G., & Halligan, J. (2015). Performance management in the public sector. London: Routledge.

45. Bloom, N., Propper, C., Seiler, S. & Van Reenen, J. (2015). The impact of competition on management quality: Evidence from public hospitals. *The Review of Economic Studies*, 82(2), 457-489.

46. Galvin, K., & Todres, L. (2013). Caring and well-being: A lifeworld approach. Abingdon: Routledge.

47. Hupe, P. & van Kooten, E. (2015). First-line supervisors as gate-keepers: Rule processing by head teachers. In P. Hupe, M. Hill & A. Buffat (Eds.), Understanding street-level bureaucracy (pp. 227-242). Bristol: Policy Press.

48. Fielden, J. (2015). A medical director's perspective on healthcare leadership. *Future Hospital Journal*, 2(3), 190-193.

49. National Institute for Health Research (NIHR). (2013). New evidence on management and leadership. Retrieved from http://www.nets.nihr.ac.uk/data/assets/pdf_file /0003/95655/New-Evidence-on-Management-and-Leadership.pdf

50. Storey, J. & Holti, R. (2013). Possibilities and pitfalls for clinical leadership in improving service quality, innovation and productivity, final report. *National Institute for Health Research Service Delivery and Organisation Programme*.

51. West, M., Armit, K., Loewenthal, L., Eckert, R., West, T. & Lee, A. (2015). *Leadership and leadership development in health care: The evidence base.* London: Faculty of Medical Leadership and Management.

Appendix A: Interview topic guides (staff and patient)

Interview topic guide (staff)

- Can you explain your role?
- How long have you worked on a stroke unit for? (Different ones? Is this different from other ones?)
- How does your role on the SU differ from your role in other settings?
- Can you describe a typical working day to me?
- How do you manage your time? Do you use a timetable and plan sessions in advance? Is it up to you how you manage your time or are there structures in place?

- Are you aware of the guidelines regarding therapy intensity for stroke patients? (And SSNAP)
- Can you tell me your understanding of them? (What are they? What do you think the rationale for them is? Evidence based?)
- Do you think your practice has changed at all because of the guidelines or SSNAP audit? (How – trying to do a better job / pressure from above / reputation of hospital…?)
- What do you think about the 45 minute guideline? (Do you think the guideline is good / appropriate? Why / why not?)

- The SSNAP audit asks you to say whether you think a patient was appropriate / applicable / required therapy. Can you describe how you decide whether or not therapy is applicable?

- If you had unlimited resources, how would you decide how much therapy each patient should receive?

- Do you think your SSNAP score reflects the quality of your service?

- The audit data shows a lot of variation in the proportion of patients considered applicable for therapy, and the intensity provided. What are your thoughts about that?

- If you could change the therapy guidelines (if you wanted to), what would you have instead of the current 45 minute recommendation?

- If you could wave a magic wand and set up stroke unit therapy in the way you thought was best for the patients, what would that look like? What do you think prevents that from being reality?

Interview topic guide (patients)

- Can you tell me a bit about what happened to you and why you are on the stroke unit?
- What did you know about strokes /rehab / therapy before this happened to you?
- Have you seen an OT / PT / SLT on the stroke unit?
- What sorts of things do they do?
- How much therapy have you been getting?
- Do you think that is the right amount? Or too much?   Or too little? Please explain…

- Do you know when you are going to be having therapy (i.e. do you have a timetable?)?

- Do you think most people get the same, or have you noticed that some patients seem to get more than others? Have you got any thoughts about that? Do you think everyone should get the same?

- Are you aware that there are guidelines regarding therapy intensity for stroke patients? (And SSNAP) [If not, I will explain]
- Do you think the guideline and audit is good / appropriate? Why / why not?
- How does it compare with your experience?
- Did anyone ever ask you what you thought you needed, in terms of therapy?

- If resources were not an issue, how much therapy would you want? What would you like it to involve?

- If you could change the therapy guidelines, what would you have instead of the current 45 minute recommendation?

- If you could wave a magic wand and set up stroke unit therapy in the way you thought was best for the patients, what would that look like? What do you think prevents that from being reality?

Appendix: Research Checklist

Consolidated criteria for reporting qualitative studies (COREQ): 32-item checklist

No	Item	Guide questions/description
Domain 1: Research team and reflexivity		
Personal Characteristics		*These are addressed under the heading 'Research Team and Reflexivity' on page 6*
1.	Interviewer/facilitator	Which author/s conducted the interview or focus group? *ET* **p6**
2.	Credentials	What were the researcher's credentials? *MA, MSc, PGDip* **p6**
3.	Occupation	What was their occupation at the time of the study? *PhD Student* **p6**
4.	Gender	Was the researcher male or female? *Female* **p6**
5.	Experience and training	What experience or training did the researcher have? *Previous qualitative research PI* **p6**
Relationship with participants		
6.	Relationship established	Was a relationship established prior to study commencement? *Yes* **p6**
7.	Participant knowledge of the interviewer	What did the participants know about the researcher? *Professional background as an OT in stroke, PhD student* **p6**

No	Item	Guide questions/description
8.	Interviewer characteristics	What characteristics were reported about the interviewer/facilitator? *Background as a therapist, but also doing PhD study with links to people working on the stroke guidelines and SSNAP audit.* **p6**
Domain 2: study design		*Addressed in methods section*
Theoretical framework		*Power: Audit Society and Lipsky: Street Level Bureaucracy* **p9-10**
9.	Methodological orientation and Theory	What methodological orientation was stated to underpin the study? *Ethnography* **p5-6**
Participant selection		
10.	Sampling	How were participants selected? *Purposive and pragmatic* **p7-8**
11.	Method of approach	How were participants approached? *Face-to-face* **p8**
12.	Sample size	How many participants were in the study? *43 (See results section)* **p10**
13.	Non-participation	How many people refused to participate or dropped out? Reasons? *One patient who had been keen to be interviewed became too unwell, and his wife consented to be interviewed* **p11**
Setting		

No	Item	Guide questions/description
14.	Setting of data collection	Where was the data collected? *Hospital stroke units (**see results section**)* **p10**
15.	Presence of non-participants	Was anyone else present besides the participants and researchers? *On stroke units there were often people present who were not directly participating in the study, but this was not the case during interviews* **p8**
16.	Description of sample	What are the important characteristics of the sample? *Stroke patients, members of staff working with stroke patients (**see methods**)* **p7-8**
Data collection		*See data collection*
17.	Interview guide	Were questions, prompts, guides provided by the authors? Was it pilot tested? *An interview topic guide was used* **p8**
18.	Repeat interviews	Were repeat interviews carried out? If yes, how many? *One therapist was interviewed in two different sites, as she coincidentally worked in both (**see results**)* **p11**
19.	Audio/visual recording	Did the research use audio or visual recording to collect the data? *Interviews were recorded on a Dictaphone* **p8**
20.	Field notes	Were field notes made during and/or after the interview or focus group? *Yes* **p8**

No	Item	Guide questions/description
21.	Duration	What was the duration of the interviews or focus group? *Interviews lasted for approximately one hour each* **p10**
22.	Data saturation	Was data saturation discussed? *During data collection and analysis in the third site it was evident that common themes were recurring. There were differences in all the sites, but this variation was a finding in itself.* **p11**
23.	Transcripts returned	Were transcripts returned to participants for comment and/or correction? *No* **p11**
Domain 3: analysis and findings		
Data analysis		
24.	Number of data coders	How many data coders coded the data? *One, but a sample of transcripts was coded by all three researchers and coding was reviewed by all three. (see data collection)* **p8-9**
25.	Description of the coding tree	Did authors provide a description of the coding tree? *No*
26.	Derivation of themes	Were themes identified in advance or derived from the data? *Derived from the data (see data collection and analysis)* **p8-9**

No	Item	Guide questions/description
27.	Software	What software, if applicable, was used to manage the data? *Nvivo* **p8-9**
28.	Participant checking	Did participants provide feedback on the findings? *Yes* **p9 and p11**
Reporting		
29.	Quotations presented	Were participant quotations presented to illustrate the themes / findings? Was each quotation identified? *Yes* **p12-21**
30.	Data and findings consistent	Was there consistency between the data presented and the findings? *Yes* **p12-21**
31.	Clarity of major themes	Were major themes clearly presented in the findings? *Yes* **p12-21**
32.	Clarity of minor themes	Is there a description of diverse cases or discussion of minor themes? *Yes* **p12-21**

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How is the audit of therapy intensity influencing rehabilitation in inpatient stroke units in the United Kingdom? An ethnographic study

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How is the audit of therapy intensity influencing rehabilitation in inpatient stroke units in the United Kingdom? An ethnographic study.

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How is auditing therapy intensity influencing stroke unit rehabilitation? An ethnographic study.

Abstract

Objectives: Occupational therapy, physiotherapy and speech and language therapy are central to rehabilitation after a stroke. The UK has introduced an audited performance target: that 45 minutes of each therapy should be provided to patients deemed appropriate. We sought to understand how this has influenced delivery of stroke unit therapy.

Design: Ethnographic study, including observation and interviews. The theoretical framework drew on the work of Lipsky and Power, framing therapists as 'street level bureaucrats' in an 'audit society'.

Setting: Stroke units in three English hospitals.

Participants: Forty-three participants were interviewed, including patients, therapists and other staff.

Results: There was wide variation in how therapy time was recorded and in decision-making regarding which patients were 'appropriate for therapy', or auditable. Therapists interpreted their roles differently in each stroke unit. Therapists doubted the validity of the audit results and did not believe their results reflected the quality of services they provided. Some assumed their audit results would inform commissioning decisions. Senior therapy leaders shaped priorities and practices in each therapy team.   Patients were inactive outside therapy sessions. Patients differed regarding the quantity of therapy they felt they needed, but consistently wanted to be more involved in decisions and treated as individuals.

Conclusions and implications: Stroke unit therapy has different meanings in different hospitals. Measuring therapy time is problematic due to varied interpretations of 'what counts' and variation in reporting practices. Although stroke policy, guidelines and audit are potential tools of improvement, their benefits are not automatic. Their actual effects depend largely on the attitudes and values of local influential 'street level leaders'. More work is needed to promote an integrated whole team approach to rehabilitation. Further research into contextual and human factors, including the roles and views of therapy

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leaders, would enable a better understanding of implementation of guidelines and service improvement.

Strengths and Limitations

- First study to use an ethnographic and theory-based approach to investigate therapy practice in the context of a newly implemented guideline and audit.

- Large scale study with over 300 hours of observational data and 43 participants interviewed.

- Ethnographic methods provided rich data and allowed the researchers to compare what participants said with what they did, and question them about any differences between the two.

- Theoretical framework utilised for data analysis offers insights that have wide application across the field of healthcare, as national audits are increasingly being used for evaluation of services.

- We offer one interpretation, but data could be interpreted differently by different researchers using different theory to analyse findings.

INTRODUCTION

A stroke is a sudden and potentially catastrophic brain event that can lead to any combination of difficulties in movement, cognition, perception and behaviour[1,2,3]. Since 1995 the Stroke Programme at the Royal College of Physicians (RCP) has been driving

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service improvements across multiple areas of stroke care in the United Kingdom

(UK)[4]. Therapy is considered to be effective in increasing independence and reducing

disability after a stroke. It is widely agreed that more is better[5,6,7,] although the specifics

regarding how therapy should be provided and the required intensity remain unclear[6,7].

Increasing the intensity of therapy provided to stroke patients has become a target for

improvement. The therapy intensity guideline, which aimed to increase the amount of

therapy offered to stroke patients, was set out in the National Clinical Guidelines for

Stroke[8] and incorporated into the NICE guidelines for Stroke Rehabilitation[7]. It applies

to occupational therapists (OTs), physiotherapists (PTs) and speech and language

therapists (SLTs). The guideline stated:

"Patients with stroke should be offered a minimum of 45 minutes of each appropriate

therapy that is required, for a minimum of 5 days per week, at a level that enables the

patient to meet their rehabilitation goals for as long as they are continuing to benefit

from the therapy and are able to tolerate it" [8].

The recommendation of a specific intensity of therapy treatment is one among many

stroke standards, yet proved controversial. A consensus meeting held by the

Intercollegiate Working Party for Stroke and the Stroke Research Network[9] showed

therapists continued to oppose the guideline. Some criticised it on the grounds of being

unachievable due to resource issues. Others questioned the desirability of the

recommendation, criticising the rationale and evidence base[10].

The Sentinel Stroke National Audit Programme (SSNAP) began auditing stroke

services against the therapy intensity guideline in 2013. SSNAP results showed

national variation in the amount of each therapy stroke patients were receiving and in

the proportion of patients each team recorded as appropriate for each therapy. SSNAP

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provides a detailed guide covering the definitions and methods that should be used to complete the therapy data[11]. Although there have been steady improvements in therapy results since its inception, many services are still measured as not meeting the 45 minute guideline. There continues to be wide variation in the proportion of patients considered appropriate for therapy.

Despite the proliferation of data generated through the audit, there is little information about how the national policy is being interpreted or implemented locally in practice. It is recognised that despite an assumption that guidelines will lead to improved care, implementation of guidelines can be problematic, with poor compliance and under-utilisation in practice[12]. Given the context of a new stroke therapy intensity guideline being measured and monitored in a national audit, we sought to investigate the influence of the guideline and audit on therapy practice: specifically, how it was adopted, its influence on care, and the role of the audit in these processes. There is an identified need for qualitative research examining how therapists negotiate the different and sometimes conflicting factors shaping delivery of therapy[13]. Using ethnographic research with a theoretical framework to shape data analysis is regarded as a valuable approach to investigate healthcare[14,15]. Despite large quantities of numerical data regarding therapy intensity, there is little understanding of how therapists interpret and enact their roles on stroke units, or of how they interpret and enact the relevant guideline and audit. This study therefore sought to investigate the delivery of therapy on stroke units in the policy context of the 45 minute guideline and auditing of therapy intensity.

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METHODS

An ethnographic approach was used to study therapy practice in three different stroke units. Ethnographic research utilises a combination of observation and interviews to elicit descriptive information about a given group or setting, and was considered an appropriate method for examining how therapy decisions are made and acted on in everyday settings. Its use in healthcare research has been found to be valuable, particularly for understanding differences in health care delivery[14,15]. This approach allows comparisons to be made between what participants say in interviews and what they do in practice[15]. Participant observation can be viewed as a continuum with full immersion at one extreme and detached observation at the other[16]. Adler and Adler[17] describe three different types of membership role in fieldwork: peripheral, active and complete. Our researcher membership role was peripheral, with the primary researcher assisting with general tasks (such as cleaning equipment) but not working as a therapist.

The ontological position for this study is that the application of any specific therapy intervention involves factors that are not objectively 'out there' in the world. The epistemological position is that attempts to quantify 'therapy' (which could involve any variety of interventions) in general terms could involve misleading over-simplification. Quantifying the amount of time spent in therapy can reveal little about what is being offered, what is being received or why it is or is not beneficial. Instead, in keeping with constructivist and constructionist paradigms, the most appropriate means of furthering understanding in this area is to seek and interpret participants' views and observe their behaviour, whilst being mindful of how the researcher's own background and perspective might shape this interpretation[18,19,20,21].

Research team and reflexivity

ET conducted the study as part of a PhD in Health Services Research and previously conducted and published qualitative research in the area of stroke rehabilitation. CM and FJ supervised the research and have extensive experience of leading on and publishing findings of qualitative research in healthcare settings, including research specifically regarding stroke rehabilitation. ET had a previous background as a senior occupational therapist in stroke rehabilitation and had last worked in a stroke unit eight years prior to the study. She had previous connections with one of the hospitals, and knew some participants across the sites. FJ had a clinical background in physiotherapy. CM had been a member of the Intercollegiate Stroke Working Party responsible for developing national guidelines for stroke and had links with key influencers in the Stroke Programme and Sentinel Stroke National Audit Programme. It was important to acknowledge and consider the potential influence of the research team's previous roles, relationships and experiences on participants, as well as on the analysis and interpretation of findings. Relationships were established with participants either prior to or at the start of fieldwork at each site. Previous knowledge of one site and familiarity to some staff might be beneficial for building trust and gaining access, but across sites staff were equally open and trusting. The influence of the main researcher's background on patients only caused an issue on one occasion, when a carer sought advice about the therapy team's decisions. Reflexive fieldnotes were made on a daily basis during fieldwork and these were shared with the research team along with interview transcripts to ensure rigour. A basic knowledge of the field was an advantage as it was possible to understand the terminology and jargon used in meetings, and the fact that the prior experience of this setting was not recent gave it sufficient unfamiliarity to be viewed from an outsider's perspective.

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Participants and recruitment

Purposive and pragmatic sampling was used to select stroke units with different

characteristics which were considered by the team to have the potential to influence the

response to the research question, allowing a wide range of perspectives[22]. For

example, we sought to include sites within and outside London, with different levels of

performance reported in the therapy domains of the SSNAP audit. The decision to use

three sites for fieldwork was based on the need to balance rich, detailed data from each

site with diversity from a range of sites, within the timescales afforded by the study.

Therapy leaders at each site gave initial approval for the study to take place, in

consultation with relevant managers. Local approvals were sought and provided at each

site. Fieldwork was carried out one site at a time, and at the beginning of each episode

of fieldwork a meeting was arranged to explain the project to the team. Posters were

placed in ward areas to explain the study to staff, patients and visitors and invite them to

contact the research team. Verbal consent from staff / patients was sought for

observations, and written consent was provided for interviews.

Staffing in all the stroke units included therapy assistants (TAs) who worked across the

therapy professions, often working with patients on activities delegated to them by

therapists. Some TAs had more of a focus on SLT or OT and PT, but most of them

worked to support all three therapy professions. All OTs, PTs, SLTs and therapy

assistants (TAs) working in each site and the patients they were working with during the

fieldwork were considered for observation and invited to participate in interviews.

(Note: National Health Service (NHS) therapy posts in the UK are banded according to

levels of knowledge, skills and responsibility required. Band 5 is the entry level for a

qualified therapist. Band 6 is a senior clinical post. Band 7s are expected to have a higher level of knowledge, skills and responsibility, and these posts often involve team leadership. The inclusion and structuring of Band 8 posts varies across services. Band 8s are likely to be clinical specialists or therapy managers.)

For interviews, the core sample sought in each site included:

- staff from each of the three therapy professions (OT, PT and SLT), and TAs.
- staff with diversity in years of experience and seniority.
- patients working with therapists, with contrasting characteristics such as level of impairment / dependence; social situation; discharge destination; ethnicity; age.

Participants meeting these criteria were approached face to face and selected based on their availability and willingness to participate. In each site we sought the same core range of interview participants, with an openness to interview others who were found to play a key role relevant to the enquiry, such as a medical consultant, nurse, manager, administrator or relative. On the advice of the research ethics committee who approved the study, the researcher checked with the team on a case by case basis to ensure they did not have any concerns about patients being approached based on factors such as cognition or medical status. All interview participants were observed in practice prior to being interviewed. This meant that there had been establishment of some rapport between interviewer and interviewee, and it was possible to question participants about areas that had been noticed during observations.

Data collection and analysis
Data collection included observations of therapy work and interviews with therapists, therapy assistants, managers, patients and carers in three stroke units.

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Observations were unstructured, and the aim was to become immersed in the day to day working of therapists in each stroke unit in order to understand how they worked, how they made decisions and how they prioritised their time. Approaches to observation varied. For example, in the first site therapists used timetables to plan their weekly sessions with patients, including individual and group work. Initially the primary researcher joined in with timetabling, using the same timetable template and to book joint sessions with therapists. Frequently these sessions were cancelled or re-arranged, and we therefore changed strategy to accompany individual therapists for a morning or afternoon. This was more useful, as it enabled emersion in the pace and pattern of therapists' work time rather than just joining in with certain sessions, and was used in the second and third sites. All aspects of therapists' working day were observed, including meetings, administration and lunch times.

Observational data were gathered using detailed fieldnotes and were used to document events as well as to prompt further questions for consideration or investigation. Topic guides were used for interviews (see appendix A), which were audio-recorded and transcribed for analysis. Nvivo software was used to manage the data.

A constructionist approach to thematic analysis was used to identify, analyse and report latent themes[22]. Fieldnotes and interview transcripts were analysed inductively alongside deductive use of theory to support and shape the analysis. To ensure rigour, a sample of transcripts was coded by all three researchers, and coding processes were regularly reviewed and discussed. Fieldnotes differed from interview data in that they often included the researcher's interpretation of the observations. Therefore interview data were coded without the fieldnotes, and fieldnotes were consulted as a reminder of

activities and events observed and experienced, and any early interpretations of these.

Data analysis took place in between data collection at each site, and preliminary

findings were shared with teams shortly after fieldwork at each site had ended, the

interpretation of the data and links with underlying theory developed during this

process.

Working closely with the data, the primary researcher coded and grouped data using

Nvivo, sticky notes on flip chart paper, mind maps and writing prose. Nvivo was used

for the first round of coding, although this was subsequently repeated by hand. Most

data analysis was conducted using Word or on paper, but Nvivo was used at later stages

to conduct word counts on terms that appeared to have arisen frequently e.g.

'commissioners'. Themes were derived from the data and connections made between

theory and emerging findings. At all stages, data analysis was discussed with co-

authors CM and FJ, as well as other colleagues, members of research groups, stroke

survivors and participants in the research for member checking. This often occurred in

the form of a presentation followed by a discussion. COREQ guidelines for reporting

qualitative research were used[23].

Patient and Public Involvement

The King's College London Stroke Patients and Family Research group were involved

in the development of the research question and design, and emerging findings were

discussed with the group during data analysis.

Ethics

The study was conducted using the principles of 'ethical mindfulness' to navigate the

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unanticipated ethical decisions which inevitably arise in the field[24]. Ethical approval was obtained from National Research Ethics Committee on 18th July 2014. Site specific approval was obtained from each hospital's Research and Development team. Written consent was provided by all interview participants.

Theoretical framework

In ethnographic research, theory is used inductively and deductively to broaden and deepen insights into the subject of study. Various potentially relevant theories were considered during the course of data collection, and appraising their usefulness in illuminating the driving forces underpinning the findings was a part of the ongoing data analysis. The theoretical framework for the analysis presented here drew on the work of Lipsky[25] and Power[26], framing therapists as street level bureaucrats in an audit society. Lipsky's theory of street-level bureaucracy concerns the implementation of policy through direct encounters between front line public service workers and citizens. Lipsky claimed that policy becomes distorted in its implementation, as the use of discretion and autonomy by public service workers in complex interactions is inevitable. The current study, constructing therapists as street-level bureaucrats (i.e. public service workers on the front line who use their autonomy in the implementation of policy) sought to unpick what therapists do and why.

Power's concept of audit society critiques the 'audit explosion' occurring within contemporary western society[27]. Power associates the rise of audit with new public management and neo-liberal governmentality, and suggests it is an example of the public sector adopting private sector principles and practices. The power relation of audit is hierarchical and paternalistic, involving the scrutinizer and the observed. The observed are not involved in discourse, but instead become objects of information. The

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focus is to produce a quantifiable score and rank departments and institutions against each other. Use of this theory enabled a broader perspective, and prompted an understanding of SSNAP as part of a wider context of audit culture.

RESULTS

Sites A and C were located in different NHS hospitals in London. Site B was located in a town in the South East of England. All the sites differed in terms of referral pathways into and out of the stroke units. For example, one was located in the same building as the Hyper-acute Stroke Unit, in which patients stay for the first 72 hours post-stroke, and which was its only source of referrals. Another accepted patients from a number of other hospitals, and patients had sometimes been to multiple hospitals before being transferred there. The ratio of therapy staff to patients varied, with Site A having the highest ratio of therapy staff to patients, and Site C having the lowest. There was variation in the community services available to patients, and this influenced the point at which patients were considered ready to be discharged. The sites varied in their SSNAP results for therapy intensity. Site A consistently performed well on their scores (scoring A grades), Site B had dramatically improved from low scores (e.g. E grades) to good scores in the four most recent quarterly reports, and Site C was in the average range.

Over 300 hours of fieldwork were carried out across the three sites. Pseudonyms are used for the hospitals, places and participants to protect their identity. The pseudonyms given to interviewees reflect the name most commonly used to address them, i.e. if a person introduced themselves with their first name then we have chosen an alternative first name. Doctors have been given full names as they would sometimes be referred to formally and sometimes by their first name. Information about participants is restricted

to details considered relevant to the study in order to reduce the risk of identification (see appendix B). Forty-three participants were interviewed including therapy staff, doctors, managers, a nurse, patients and a patient's wife. Interviews typically lasted for approximately one hour. In each site there were different prominent figures whomappeared relevant to interview in addition to these core participants. For example, in one site a lead nurse was influential in decisions about when to withdraw therapy and was a driving force for a focus on SSNAP within the wider multi-disciplinary team, therefore it was considered valuable to interview her. Nobody declined an invitation to participate, therefore interviewees were selected based on availability. One patient who had been keen to be interviewed became too unwell, and his wife consented to be interviewed. During data collection and analysis in the third site, it was evident that common themes were recurring. There were differences in all the sites, but this variation was seen as a finding in itself.

Overall, we found:

- There were key differences in the delivery of therapy in each site, including differences in the scope of activities therapy encompassed, and differences in the perceived remit of stoke units and role of therapist.

- Measuring therapy was therefore problematic, as there was a lack of consensus about what counted as therapy. There was no uniformity in the way therapy time was recorded and reported for the audit.

- Therapists did not believe that their audit results reflected the quality of therapy provision.

- There was an absence of an integrated, patient-centred approach to rehabilitation in the multi-disciplinary teams.

- Therapists associated the SSNAP audit and the monitoring of therapy time with the commissioning of their services. They expressed mistrust about auditing practices in other services, and they worried about commissioners taking these results at face value.

- Therapy practice, including implementation of guidelines, was shaped by local clinical leaders.

What counts? Who counts?

The SSNAP audit records the quantity of therapy time provided to patients, but there were key differences in what was considered to count as therapy in each site. In one stroke unit, therapy was interpreted broadly. It could include groups and individual sessions in a range of environments, such as the gym, kitchen, or outdoors. There, building therapeutic rapport and listening to patients' concerns were considered to be valid use of therapy time. A narrower conception of therapy was evident in the two other stroke units, where there was a stronger emphasis on getting patients to the minimal level of physical ability required in order to discharge them. The influence of the local contextual factors on the delivery of therapy came through strongly in observations at each hospital.

"[Where I used to work], rehab was the ethos. You go there for rehab. So the way you come in you should go out at a different level, a better level, hopefully. Here we're just a stepping stone to having your rehab at home."

Joanne, Band 7 PT, Site C.

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‘Rehab happens in the community’ was a mantra in Site C. This frequently caused ethical tensions for therapists who were keen to point out that the required rehabilitation would not be provided to many of their patients on discharge, depending on their home address. Nevertheless, provision of stroke unit rehabilitation beyond the essentials required for discharge was considered an ‘old-fashioned model’. A shift of emphasis from treatment to discharge planning was acknowledged by leaders in Sites B and C.

"We don't use the word ‘rehab’ in relation to inpatient stroke services at [NHS organisation] anymore because the concept is about community. Rehab happens in the community… I think I'm very clear… yes, the therapists don't do therapy, but they get their patients home."

Rona, Clinical Lead, Site C.

Rona was referring to the fact that therapists needed to prioritise administration to facilitate discharge planning rather than providing rehabilitation. In our observations we saw that therapists often set out to assess and treat patients, but then abandoned their plans when the pressure of expediting discharge mounted. The following fieldnotes from observations at a multi-disciplinary meeting illustrate the focus on discharge rather than rehabilitation.

The lady in bed 5 is cortically blind, fatigued, confused, anxious. OT says she was unwell when she tried to see her, and she would like to see her again as she really needs more assessment. She needs assistance of two for transfers, and the community team where she lives won't see people who need assistance of two.   Nevertheless,

discharge date is tomorrow. It seems to me that ideally she would have more time and input either in hospital or at home, but she will get neither.

Fieldnotes from Site C

Individuals in all sites expressed mixed feelings about the apparent trajectory of improvement in stroke services. The nurse specialist in Site B was driving the nursing team to improve on various processes that were audited for SSNAP, and she was sure that the audit had led to improvements which would be ongoing in these aspects of care. Whilst the early medical management of stroke was seen as continually improving, there was less positivity as people discussed changes in therapy over recent years, including its scope and quality and the reduced availability of therapy spaces. Dr Adams echoed the comments of many Site B therapists when he stated about inpatient rehabilitation,

"in some respects, I think we were doing it better at some stage in the past than we are now."

Dr Adams, Lead Medical Consultant, Site B

For therapists in all stroke units, there was ambiguity about what counted as auditable therapy. The team based at Site B had fully engaged with the guidance and support offered by SSNAP, but other teams had not. Therapists in all stroke units made individual decisions about how to record their time for the audit. Some strictly adhered to their perception of the rules of the audit, that only face to face time should be counted. Others would say things like 'his discharge paperwork will be his session today'. They would justify the recording of administration as therapy time based on the

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argument that facilitating the patient's discharge was their therapy priority and should therefore be seen as valuable use of their therapists' time.

The calculation of SSNAP scores for therapy intensity takes into account the proportion of the caseload deemed appropriate for therapy. This is measured against set benchmarks: that 80% of patients will require OT, 85% will require PT, and 50% will require SLT. The stated rationale for these benchmarks is that they have been guided by previous audit data.   From SSNAP guidance, a patient's therapy time should only be included in the data reporting if that patient was deemed appropriate by the team. We observed stark contrasts in how teams recorded whether patients were appropriate for therapy. Therapists in Sites A and C were unaware that this was an audit question. Unknown to the therapists, administrators in these teams were reporting that 100% of patients were auditable and were appropriate for therapy.   In contrast, in Site B 'appropriateness for therapy' had become a daily clinical consideration for therapists, and they referred to patients who were appropriate for therapy according to the rules of the audit as 'SSNAPing'. As one OT said, SSNAP had become 'part of the jargon', and in their daily morning meetings we observed that it would be noted whether each patient was SSNAPing or not. Unless a patient was participating actively in 45 minutes of goal-focussed therapy every day, and was improving, they were not counted as appropriate for therapy on the SSNAP audit for this team. Often therapists would ask each other, "Are they 'SNAPPing?", and this would become a point of debate and discussion.

'The quality beneath'

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Therapists in each site expressed a lack of confidence in the SSNAP therapy data, both nationally and locally, and they did not believe the data reflected the quality of therapy provided either for their own teams or at a national level. They perceived wide variation in the way different teams interpreted audit requirements and managed their data. Site A had been a consistent high scorer at the time of data collection, but senior therapists stated that their local data was 'skewed' as it was easy to accidentally duplicate data entries on the local computer system. Site B's therapy scores had improved in response to the changes they made to data reporting, yet therapists there did not believe their grades reflected their practice. Several gave an example of a Christmas period during which they scored their best SSNAP grades despite feeling they were providing an inferior service due to staff pressures. A number of OTs felt that over the Christmas period the OT score should have been an E (a low score) instead of an A (the top score), if it reflected the quality of service that was being provided. This was also raised by the clinical lead therapist.

"[The OTs] said we did really prioritise when we were really short staffed so that SSNAP did not suffer… I think patients were perhaps being SSNAP-stopped prematurely. So, I think they were making SSNAP-stop decisions on resource availability as opposed to patient need."

Lucy, Clinical Lead, Site B

Lucy charted the changes that she had initiated and the subsequent improvements in their SSNAP scores. When asked whether the improvements in their audit results reflected 'real life' improvement, she and her colleagues consistently responded with a clear 'no', explaining that most of their changes had been in their audit processes.

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"I just am concerned about the value being attached to [SSNAP] in its raw kind of sense, so its overall grading system doesn't allow you to see the quality beneath."

Lucy, Clinical Lead, Site B

We observed that Site B staff had detailed knowledge of their SSNAP performance, and their SSNAP results were regularly presented to the team. Therapists at Site C had a much more vague perception of their SSNAP performance, but still held the opinion that their score did not reflect their practice.

"Obviously the data that we're getting doesn't reflect our practice. So something is not quite right. So I think they're just trying to figure out what the problem is and have a bit more effective way of collecting that data… [B7 PT] has told me that we're complying. To be honest, I know it's not right, and she said, yes and that's why we need to actually look into it."

Ghita, B6 PT, Site C

This perspective was team-wide at Site C, and was raised in interviews as well as observed meetings and informal discussions with the researcher. Therapists believed that their SSNAP score was too high, compared with their perception of the service they provided.

"Apparently we were getting like 100% and we were like, 'no way'… because there's no way that we're seeing every patient 45 minutes a day. No way. You've seen it."

Nancy, B7 OT, Site C

Therapists in all sites discussed having internalised the message that 'more is better', but this had become a voice of guilt in the backs of their minds rather than something that changed their practice.

"I'm always waiting [for] when somebody comes heavy handed and says, "*You* haven't been doing this!*", and I'll be punished. It always feels like that, the guilt is there. There's lots of guilt. 'Oh I haven't been seeing patients as often as I would like to.'"

Agata, Band 6 OT, Site A

We observed that in all sites for the majority of the day patients were lying in bed or sitting at their own bedside, as one patient said, "just gazing". We noticed that in team meetings, patients were ascribed different functional levels for therapists and nurses, meaning that nursing staff could not enable patients to do the things they had achieved in therapy sessions until the therapists gave their approval. Therapists' and nurses' work was hidden from each other behind the closed curtains around each patients' bed area, or in the therapy spaces that therapists took patients to for their designated therapy sessions. In informal discussions, staff and patients frequently referred to the lack of an integrated approach to rehabilitation and the wasted time experienced by patients and staff. Some suggested that the SSNAP audit had encouraged a uni-disciplinary focus, with professions focussing on their own scores rather than working cohesively as a team with the patient at the centre.

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Patients varied in the extent to which they reported feeling happy with the amount of therapy they received. Some wanted more, some thought they were receiving too much or it was 'too heavy'. Patients were less concerned about the quantity of therapy offered to them than the quality of care and the nature of the therapy they received.

"Depends on the nature of the therapy. If you were in the therapy that I was telling you when I first came into the room, about "come on come on you can do it, stand up stand up", that nonsense therapy, that's not therapy. That's bullying. Not 45 minutes - God! People wouldn't come out of the therapy… You should be able to attune yourself to the patient. And you can't train somebody to do that. They've either got it, because they love people, and they've got an empathy, it's natural it's innate in their nature. Some people are not like that… They've got to have that disposition."

Eddie, Site A

In general, patients felt that the professionals involved should know best about what they needed, but they consistently wanted to be involved in the discussion and treated as individuals, and this was not their experience.

Competition and Commissioner-Centred Care

In all sites, teams expressed scepticism about neighbouring services' SSNAP practices. Therapists attended regional meetings and heard about how colleagues in other services were reporting SSNAP data, so were aware of the variation in audit practices across services. They questioned the quality of the national audit data for therapy, and they used language such as 'bending the rules', 'playing the numbers game', or 'lying' when

discussing the practices of other teams. Some had visited neighbouring hospitals to find out about their audit practices.

"It was really interesting to get insight into how other people do it… So that was interesting to come away thinking: this is a high performing A rated unit. What I took away from that is, do we really want to be one of those?"

Lucy, Clinical Lead, Site B

Rivalry and mistrust were observed to go hand in hand with discussion of the audit ratings. Many staff mentioned funding and commissioning when asked about their SSNAP scores. In most cases, when asked what the implications of SSNAP results were, therapists expressed concerns about how they might be used to inform commissioning decisions.

"I worry that one day they'll look at our stats and say, ooh speech therapy isn't meeting the [45 minute] standard…. So if that was the case, if they were to take the contracts off us then some of us could lose our jobs."

Claire, SLT B7, Site A

Across all sites, fears were expressed about potential implications of SSNAP for service commissioning. In interviews, hospital therapy managers and consultants endorsed this as a reasonable concern.

"Well there's a little bit of paranoia there but at the same time … what we don't want staff to do is to be naïve, and you know, shielded or protected from any sort of

other conversation. So when the [neighbouring borough] stroke beds came here it was a tender for a service which this organisation won, and it's a tender for 3 years, so at any, you know, and obviously we're 2 years or so into that. So it will need to be reviewed at some point. So obviously as it goes increasingly closer to review, then people will become anxious. "

Ann, Therapy Manager, Site A

Ann talked about the 'new way of providing healthcare', with tenders coming out for very short-term contracts, sometimes just for one year. Many changes therapists had perceived in their work were linked to service contracts and commissioning and, for them, SSNAP was associated with these changes in the wider context of healthcare delivery. Few therapists associated SSNAP scores with quality of care, whilst most saw them as something services needed to use to 'please the commissioners', suggesting that the way the audit was implemented encouraged commissioner-centred, rather than patient-centred therapy delivery.

The influence of local clinical leadership

In each site it was evident that local clinical therapy leaders shaped priorities regarding the delivery of therapy and influenced attitudes regarding the 45 minute guideline and SSNAP audit. Their specific roles differed, but in each site there was someone influential who clinicians respected due to their clinical experience, but who also had responsibility for ensuring implementation of top-down mandates. They would filter the many policies and mandates coming through to them, and promote, emphasise or soften them according their own judgement.

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Clinical leads in all sites talked about not wanting to put pressure on therapists to meet the target of therapy intensity. They gave various reasons for not prioritising this amongst the different top-down mandates they were expected to reinforce to their teams. These included believing that using session length as a measure of the quality of therapy was problematic; believing it was unachievable; and wanting to protect therapists from additional pressure.

Many therapists knew what was expected of them by their clinical leaders but did not know the origins of the protocols and guidelines they were expected to follow.

"The local target kind of protocol that's been put together I think by [clinical lead], that is in the forefront of my mind, which I always kind of get a little bit confused with, whether that is what is the kind of national targets."

Nancy, B7 OT, Site C

Therapy staff identified opportunities for quality improvement at a local level, and this appeared to be more influential on them than national policy. National stroke guidelines and audit were used at management and service-commissioning levels to protect stroke services. Clinical leaders acted as an interface between the multiple local and national policies and imperatives and the therapists practising on stroke units.

DISCUSSION

This study sought to investigate the delivery of therapy on stroke units in the policy context of the 45 minute guideline and auditing of therapy time. The study illuminated experiences of stroke unit therapists at a specific point in time when the national

auditing of therapy was new. It offers insights into the factors influencing the delivery of therapy and the influence of guidelines and audit on therapy delivery. Strengths of the study included its scale, with 300 hours of observational fieldwork completed as well as 43 interviews. The ethnographic approach of sustained periods of observation as well as interviews allowed insider insights into what participants actually do, as well as what they say they do[15]. The use of theory allowed deeper insights into the findings, and suggests that the findings are likely to have broader applicability. A possible criticism of this design is that our account is interpretative and open to discussion and alternative analyses. During fieldwork we noticed some practices and attitudes change, therefore completing the study at a different time could have captured different findings. The selection of three stroke units with contrasting features was a strength, and it was useful that one of the teams had consciously addressed their audit scores and staff there were able to describe this process. However, it is a limitation of the study that we did not include a stroke unit that was performing poorly on the audit at the time of the study. It is also a limitation that the stroke units were all located in the south east of England. However, our findings have similarities to those of a recently published mixed methods case study evaluation of eight stroke units[27], and this suggests the issues identified are not specific to the time or regions of the UK at which our study took place. The global relevance of our study could be challenged on the basis that it took place in the UK. Many countries now have a therapy intensity guideline contained within their stroke guidelines, and the question of whether this should be audited is timely. Further research into the influence of similar guidelines and audit in other countries would allow useful comparisons to be made.

We found that the term 'therapy' was interpreted and delivered differently by therapists in different sites, and audit practices varied widely. Therapists were aware of this variation and reported that audit results did not reflect the quality of their service. These factors undermined the credibility they attributed to the audit. There was mistrust regarding the auditing practices of neighbouring teams, and therapists were concerned that audit results would influence commissioners' decisions about service contracts, potentially leading to a negative outcome for their particular service. Therapists wanted to provide more rehabilitation and felt guilty about not doing so. Meanwhile, a focus on integrated multi-disciplinary rehabilitation was absent, and patients were often observed as inactive outside their designated therapy sessions. The guideline and audit were among many local and national policies and mandates that clinical leaders filtered for their teams. Therapists were strongly influenced by these leaders in their delivery of therapy and their interpretation of the guideline and audit.

Analysing these findings with inductive and deductive reference to the theoretical framework enabled rich insights into the influence of policy and audit on therapy delivery at 'street level'. In The Audit Society[27], Power claims that the use of audit in healthcare is prolific and increasing and that this follows a trend in public services and Western society that he termed 'the audit explosion'. The Sentinel Stroke National Audit Programme (SSNAP) can be seen as one example of this. Within SSNAP the auditing of the 45 minute therapy standard is an example of using time as a performance measure. Street level bureaucracy was introduced as a concept by Lipsky as a way of understanding the implementation of policy by the people who actually implement it[25]. Lipsky noted that in the case of complex interventions provided by street-level bureaucrats, calculating use of time is the simplest way of measuring performance, but

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is problematic and reveals nothing about the quality or appropriateness of the way that time has been used.

There is mixed evidence regarding the efficacy of using performance measurement to improve quality[28,29,30]. It has been suggested that a good performance indicator should have reliability and validity; be based on agreed, fully described definitions; and be relevant and actionable for those using it [28,31,32]. The UK therapy intensity guideline is based on consensus, and this may be a reason for some of the confusion regarding its rationale and evidence base. It has been noted that internationally, recommendations regarding the intensity and appropriateness of stroke rehabilitation vary[33]. Therefore, there is a global need for more clarity regarding what is being recommended and why.

The lack of consensus regarding 'what counts' as therapy, or how therapists should be using their time, also calls for the attention of policy makers and those funding services. The various pressures on staff are sometimes in conflict, and clear and consistent messages are needed regarding what is expected of them. The need for a broader interpretation of therapy that includes listening to patients' concerns echoes recent findings from the ATTENDS trial in India[34]. If discharge from hospital is to be the primary focus of inpatient therapists, then more work is needed to reduce the evident disparities in community services to prevent patients from missing out on the opportunity of rehabilitation.

In keeping with criticisms of performance measurement[25,26,35] we found examples of 'hitting the target but missing the point'. 'The point' was to improve rehabilitation for stroke patients, but stroke units are not universally functioning as rehabilitative

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environments. This finding is in line with those of various observational studies that have quantified the amount of time stroke unit patients spend active or in therapy, and suggests that this has not improved over time[36,37,38,39,40,27]. In fact, our findings suggest that profession specific guidelines and measures may encourage siloed working, rather than a team approach focussed on the individual needs of each patient. In an era of audit and big data, it is important to recall that "not everything that can be counted counts, and not everything that counts can be counted"[41]. The challenge of determining how best to measure and monitor what matters to patients remains unsolved.

Wider contextual factors regarding the marketisation of healthcare were inextricably linked to much of the data. The perceived consequences of SSNAP discussed by therapists were less about patients' experiences and outcomes, and more about team reputations, rivalries and the vulnerability of their commissioned services. This links with critiques of the rise of audit in Western society, New Public Management (NPM) and neo-liberalism[26]. NPM refers to the public sector's adoption of certain private sector principles and practices[26,42]. This includes a style of management that seeks effectiveness and efficiency through top-down control, a shift to greater competition[43] and an emphasis on performance management[44]. Although the language of neo-liberalism, NPM and marketisation was not used by participants in the current study, they were mindful of working in a competitive market and the audit itself engendered a spirit of competition.

Market competition is hailed by some as a driver for improvement in healthcare, and this is often based on the premise that patients (as consumers) can actively choose between providers for elective interventions, such as in Bloom et al's study[45].

However, stroke unit patients in this study did not have 'consumer choice' but were processed through local stroke pathways after the sudden and unanticipated event of a stroke. Rather than being used as tool for patients to choose their provider, therapists feared that ratings were used by funders to select services for investment. In this sense, the audit had potential to be a tool of commissioner-centred care. This possibility calls for further exploration, and further research should also incorporate the perspectives of commissioners and funders. It has been claimed that focussing on numbers and statistics instead of people is a threat to person-centred, humanising practice[46]. Our findings suggest that guidelines and audit do not hold power on their own to improve patient care. Their implementation and impact is dependent on people with influence conveying a message about what is important and why, and attention to potentially important contextual factors is essential. Alongside quantitative measures, there is a need to encourage creativity and bottom-up improvement to address local problems in order to improve patients' experiences.

Lipsky's theory of Street Level Bureaucracy emphasises the autonomy of individual front line public service workers. Lipsky distinguished between workers and managers, but he did not account for clinicians in leadership positions, who act as an interface between policy and practice. We found that street level leaders filter diverse top-down expectations and understand that it is impossible to demand that therapists give them all equal weighting. They therefore prioritise and amplify the messages they consider to be most important. Hupe and van Kooten[47] noted that despite an abundance of literature regarding public management, this tends not to focus on middle management or work supervisors. They suggested that in processing rules, public managers either formulate additional rules, pass on rules, or buffer rules, and that in this way first-line supervisors

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are also discretionary actors[47]. Our findings support this claim in the case of stroke unit therapists, and this highlights a need for consideration of their role as clinical leaders.

The role of clinical leaders in improving or maintaining quality has been widely discussed[48,49,50, 51]. Some have claimed the importance of leaders being 'actually in the arena'[48], and discussed the role that embedded leaders can have in ensuring that values, such as putting the patient first, are upheld[48]. Little attention has been paid to the role leaders have in filtering or prioritising the conflicting demands placed on front line staff. Furthermore, the clinical leadership literature predominantly discusses medics or nurses but not therapy leaders. This study offers new insights into the unexplored area of clinical therapy leaders as agents of discretion with a key role in shaping the delivery of policy on the ground. This is an area that warrants further investigation.

Conclusion

National audit results have identified variations in the delivery of therapy to stroke patients. This study contributes to the literature by illustrating the problematic nature of auditing therapy time. The guidelines and audit of adherence to guidelines were intended to increase therapy intensity. There were local and individual variations in interpreting guidelines and recording inputs. Therapists were aware of this, and expressed cynicism about the audit results. They described a mismatch between their results and their actual performance, and did not feel that changes in their audit results reflected the quality of therapy delivered. In the wider context of health care organisation and changes, the audit was associated with concerns about investment in services. We found this led to a focus on commissioners of services, rather than the experiences of patients.

We conclude that although stroke policy, guidelines and audit are potential tools of improvement, their benefits are not automatic. Their actual effects depend largely on the attitudes and values of local influential 'street level leaders'. This study highlights the importance of attending to contextual factors and potential negative consequences when implementing strategies for improvement. Approaches to health services research are needed that investigate whole systems and the human factors involved in improvement and implementation. Further work is needed to determine how best to ensure that the aspiration of improving quality for patients is not lost in the process of implementation.

Author Statement

The first author (ET) conducted the study, supervised by CM and FJ. All authors made substantial contributions to the conception and design of the work. ET was primarily responsible for the acquisition, analysis, or interpretation of data for the work; drafting the work and revising it critically. CM and FJ viewed and commented on all drafts and gave final approval of the version to be published. All authors agree to be accountable for all aspects of the work.

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No competing interests declared

Data Sharing Statement

No additional data are available

References:

1. Sumathipala, K., Radcliffe, E., Sadler, E., Wolfe, C. & McKevitt C. (2012).
   Identifying the long-term needs of stroke survivors using the International
   Classification of Functioning, Disability and Health. *Chronic Illness*, 8: 31-44.

2. McKevitt, C., Fudge, N., Redfern, J., Sheldenkar, A., Crichton, S., Rudd, A.,
   Forster, A., Young, J., Nazareth, I., Silver, L., Rothwell, P. & Wolfe, C. (2011).
   Self-reported long-term needs after stroke. *Stroke*, 42:1398–403.

3. Wolfe, C., Crichton, S., Heuschmann, P., McKevitt, C., Toschke, A., Grieve, A.
   et al. (2011). Estimates of outcomes up to ten years after stroke: analysis from
   the prospective South London stroke register, *PLoS Med* , vol. 8 pg. e1001033

4. Cloud, G., Hoffman, A. & Rudd, A. on behalf of the Intercollegiate Stroke Working Party. (2013). National Sentinel Stroke Audit 1998–2011. *Clinical Medicine*, 13(5), 444-448.

5. Department of Health (DoH). (2007). The national stroke strategy. London: Department of Health.

6. Foley, N., McClure, J., Meyer, M., Salter, K., Bureau, Y. & Teasell, R. (2012). Inpatient rehabilitation following stroke: Amount of therapy received and associations with functional recovery. *Disability and Rehabilitation*, 34(25), 2132-2138.

7. National Institute for Health and Care Excellence (NICE). (2013). Stroke rehabilitation: Long term rehabilitation after stroke. Planning and delivering stroke rehabilitation. London: National Clinical Guidelines Centre.

8. Intercollegiate Stroke Working Party (ISWP). (2012). *National clinical guidelines for stroke (4th ed.)*. London: Royal College of Physicians.

9. Intercollegiate Stroke Working Party / Stroke Research Network (ISWP/SRN). (2012) Intensity of therapy after stroke consensus meeting 26th March 2012. London: Royal College of Physicians.

10. Foley, Norine & Pereira, Shelialah & Salter, Katherine & Meyer, Matthew & Mcclure, J Andrew & Teasell, Robert. (2012). Are Recommendations Regarding Inpatient Therapy Intensity Following Acute Stroke Really Evidence-Based?. *Topics in stroke rehabilitation*. 19. 96-103

11. SSNAP (2018), Therapy [online] https://ssnap.zendesk.com/hc/en-us/sections/115000451409-Therapy Accessed: April 2018.

34

12. Gagliardi, A., Brouwers, M., Palda, A., Lemieux-Charles, L. & Grimshaw, J. (2011). How can we improve guideline use? A conceptual framework of implementability. *Implementation Science*, 6:26.

13. Taylor, E., McKevitt, C. & Jones, F. (2015). Factors shaping the delivery of acute inpatient stroke therapy: A narrative synthesis. *Journal of Rehabilitation Medicine*, 47(2), 107-119.

14. Goodson, L. & Vassar, M. (2011). An overview of ethnography in healthcare and medical education research. *Journal of Educational Evaluation for Health Professions*, 8:4.

15. Lambert, H. & McKevitt, C. (2002). Anthropology in health research: From qualitative methods to multidisciplinarity. *BMJ*, 325, 210-213.

16. O'Reilly, K. (2009). *Key concepts in ethnography*. London: Sage.

17. Adler, P. & Adler, P. (1987). Membership roles in field research. Newbury Park, CA: Sage Publications.

18. Andrews, T. (2012). What is social constructionism? *The Grounded Theory Review*, 11(1), 39-46.

19. Charmaz, K. (2000). Handbook of qualitative research. Thousand Oaks, CA: Sage.

20. Charmaz, K. (2006). Constructing grounded theory: A practical guide through qualitative analysis. Thousand Oaks, CA: Sage.

21. Cresswell, J. (2007). Qualitative inquiry and research design: Choosing among five approaches (2nd ed.). Thousand Oaks, CA: Sage.

22. Braun, V. & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2) 77-101.

23. Tong, A., Sainsbury, P. & Craig, J. (2007). Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *International Journal for Quality in Health Care*, 19(6) 349–357.

24. Pollock, K. (2012). Procedure versus process: Ethical paradigms and the conduct of qualitative research. *BMC Medical Ethics*, 13(25).

25. Lipsky, M. (2010). Street-level bureaucracy: Dilemmas of the individual in public services. New York: Russell Sage.

26. Power, M. (1997). The Audit Society: Rituals of verification. Oxford: Oxford University Press.

27. Clarke DJ, Burton LJ, Tyson SF et al (2018). Why do inpatient stroke survivors not receive the recommended amount of active therapy? A mixed-methods case-study evaluation in eight stroke units *Clinical Rehabilitation e-pub 27th March 2018*.

28. Raleigh, V. & Foot, C. (2010). Getting the measure of quality: Opportunities and challenges. London: The King's Fund.

29. Fung, C., Lim, Y., Mattke, S., Damberg, C. & Shekelle, P. (2008). Systematic review: The evidence that publishing patient care performance data improves quality of care. *Annals of Internal Medicine*, 148(2), 111-123.

30. Kirkup, B. (2015). *The report of the Morecambe Bay Investigation*. London: The Stationery Office.

31. Mainz, J. (2003). Developing evidence-based clinical indicators: A state of the art methods primer. *International Journal for Quality in Health Care*, 15(1), i5-i11.

32. Mainz, J. (2003). Defining and classifying clinical indicators for quality improvement. *International Journal for Quality in Health Care*, 15(6), 523-530.

33. Lynch, E., Cadilhac, D., Luker. J. & Hillier, S. (2017). Inequities in access to inpatient rehabilitation after stroke: An international scoping review. *Topics in Stroke Rehabilitation*, 24(8).

34. Family-led rehabilitation after stroke in India (ATTEND): a randomised controlled trial (2017). *The Lancet.* 390 (10094) 588-599

35. Pflueger, D. (2015). Accounting for quality: On the relationship between accounting and quality improvement in healthcare. *BMC Health Services Research*, 15, 178.

36. Ada, L., Dean, C., & Mackey, F. (2006). Increasing the amount of physical activity undertaken after stroke, *Physical Therapy Reviews*, 11, 91-100.

37. Bernhardt, J., Chan, J., Nicola, I. & Collier, J. (2007). Little therapy, little physical activity: Rehabilitation within the first 14 days of organised stroke unit care. *Journal of Rehabilitation Medicine*, 39(1), 43-48.

38. Keith, R. & Cowell, K. (1987). Time use of stroke patients in three rehabilitation hospitals. *Social Science and Medicine*, 24(6), 529-533.

39. King, A., McCluskey, A. & Schurr, K. (2011). The time use and activity levels of inpatients in a co-located acute and rehabilitation stroke unit: An observational study. *Topics in Stroke Rehabilitation*, 18(1), 654-665.

40. de Weerdt, W., Selz, B., Nuyens, G., Staes, F., Swinnen, D., Van de Winckel, A., Nieuwboer, A., Lysens, R. & Feys, H. (2000). Time use of stroke patients in an intensive rehabilitation unit: A comparison between a Belgian and a Swiss setting. *Disability & Rehabilitation*, 22(4), 181-186.

41. Cameron, W.B., (1963), Informal Sociology, a casual introduction to sociological thinking. New York: Random House, p13

37

42. Hood, C. (1995). The "new public management" in the 1980s: Variations on a theme. *Accounting, Organisations and Society*, 20(2/3), 93-109.

43. Hood, C. (1991). A public management for all seasons. *Public Administration*, 69(1), 3-19.

44. Van Dooren, W., Bouckaert, G., & Halligan, J. (2015). Performance management in the public sector. London: Routledge.

45. Bloom, N., Propper, C., Seiler, S. & Van Reenen, J. (2015). The impact of competition on management quality: Evidence from public hospitals. *The Review of Economic Studies*, 82(2), 457-489.

46. Galvin, K., & Todres, L. (2013). Caring and well-being: A lifeworld approach. Abingdon: Routledge.

47. Hupe, P. & van Kooten, E. (2015). First-line supervisors as gate-keepers: Rule processing by head teachers. In P. Hupe, M. Hill & A. Buffat (Eds.), Understanding street-level bureaucracy (pp. 227-242). Bristol: Policy Press.

48. Fielden, J. (2015). A medical director's perspective on healthcare leadership. *Future Hospital Journal*, 2(3), 190-193.

49. National Institute for Health Research (NIHR). (2013). New evidence on management and leadership. Retrieved from http://www.nets.nihr.ac.uk/data/assets/pdf_file /0003/95655/New-Evidence-on-Management-and-Leadership.pdf

50. Storey, J. & Holti, R. (2013). Possibilities and pitfalls for clinical leadership in improving service quality, innovation and productivity, final report. *National Institute for Health Research Service Delivery and Organisation Programme*.

51. West, M., Armit, K., Loewenthal, L., Eckert, R., West, T. & Lee, A. (2015).

Leadership and leadership development in health care: The evidence base.

London: Faculty of Medical Leadership and Management.

Appendix A: Interview topic guides (staff and patient)

Interview topic guide (staff)

- Can you explain your role?
- How long have you worked on a stroke unit for? (Different ones? Is this different from other ones?)
- How does your role on the SU differ from your role in other settings?
- Can you describe a typical working day to me?
- How do you manage your time? Do you use a timetable and plan sessions in advance? Is it up to you how you manage your time or are there structures in place?

- Are you aware of the guidelines regarding therapy intensity for stroke patients? (And SSNAP)
- Can you tell me your understanding of them? (What are they? What do you think the rationale for them is? Evidence based?)
- Do you think your practice has changed at all because of the guidelines or SSNAP audit? (How – trying to do a better job / pressure from above / reputation of hospital…?)
- What do you think about the 45 minute guideline? (Do you think the guideline is good / appropriate? Why / why not?)

- The SSNAP audit asks you to say whether you think a patient was appropriate / applicable / required therapy. Can you describe how you decide whether or not therapy is applicable?

- If you had unlimited resources, how would you decide how much therapy each patient should receive?

- Do you think your SSNAP score reflects the quality of your service?

- The audit data shows a lot of variation in the proportion of patients considered applicable for therapy, and the intensity provided. What are your thoughts about that?

- If you could change the therapy guidelines (if you wanted to), what would you have instead of the current 45 minute recommendation?

- If you could wave a magic wand and set up stroke unit therapy in the way you thought was best for the patients, what would that look like? What do you think prevents that from being reality?

Interview topic guide (patients)

- Can you tell me a bit about what happened to you and why you are on the stroke unit?
- What did you know about strokes /rehab / therapy before this happened to you?
- Have you seen an OT / PT / SLT on the stroke unit?
- What sorts of things do they do?
- How much therapy have you been getting?
- Do you think that is the right amount? Or too much?   Or too little? Please explain…

- Do you know when you are going to be having therapy (i.e. do you have a timetable?)?

- Do you think most people get the same, or have you noticed that some patients seem to get more than others? Have you got any thoughts about that? Do you think everyone should get the same?

- Are you aware that there are guidelines regarding therapy intensity for stroke patients? (And SSNAP) [If not, I will explain]
- Do you think the guideline and audit is good / appropriate? Why / why not?
- How does it compare with your experience?
- Did anyone ever ask you what you thought you needed, in terms of therapy?

- If resources were not an issue, how much therapy would you want? What would you like it to involve?

- If you could change the therapy guidelines, what would you have instead of the current 45 minute recommendation?

- If you could wave a magic wand and set up stroke unit therapy in the way you thought was best for the patients, what would that look like? What do you think prevents that from being reality?

Appendix B: Participant Information

Staff

Site	Staff Name (pseudonym)	Role and band
Site A	Nathalie	OT B5
	Agata	OT B6
	Alexia	OT B7
	Tom	PT B5
	Joanne	PT B6
	Jackie	PT B7
	Heidi	SLT B5
	Claire	SLT B7
	Tina	TA
	Dr Julie Hiller	Stroke Consultant
	Ann	Therapy Manager (overseeing all therapies throughout the trust)
Site B	Laura	OT B6
	Cheryl	OT B6
	Katie	PT B5
	Susie	PT B6
	Helen	PT B7
	Lucy	Clinical Lead (B8 PT)
	Sinead	SLT B5
	Sandy	SLT B6
	Judy	SLT B7
	Pip	TA
	Linda	Stroke Nurse Specialist
	Dr Stephen Adams	Stroke Consultant
Site C	Ken	OT B5
	Nancy	OT B7
	Rona	Clinical Lead (B8 OT)
	Ghita	PT B6
	Joanne	PT B7
	Mary	SLT B5
	Catherine	SLT B6
	Becky	TA
	Diedre	Therapy Manager
	Michael	Consultant

Patients / Carer

Site	Patient name (pseudonym)	Age	Time since stroke and functional level	Social situation / discharge plans
Site A	Eddie	72	3 months post stroke. No movement on right side. Dependent on wheelchair and needing assistance to use it.	'Unbefriended' and previously unemployed. No next of kin. Previous accommodation no longer suitable as not wheelchair accessible. Discharge delayed due to need to re-house with appropriate support.
	Simon (wife, Mrs Rosenfeld, interviewed)	79	1 month post stroke. Dependent on a hoist to move between bed and specialist chair. Increasingly unwell – cause unknown.	Previously had a respected role in community, living with wife and family. As condition deteriorated, family and team planned for him to be discharged to a nursing home when medically stable.
	Yemi	58	2 months post stroke. Left sided weakness. Doubly incontinent and using a hoist to move from bed to wheelchair. Progressing in therapy and managing to stand with support.	Mother of young adult children, employed as a mental health care assistant. On waiting list to be transferred to neuro-rehab unit.
	Rafael	48	2 months post stroke. Made significant progress – at time of interview was able to walk with a stick and making progress with speech and use of right hand.	Was renting a room in a house share, now considered unsuitable due to stairs. Following a lengthy hospital stay, transferred to a nursing home to await rehousing.
Site B	Marcus	61	12 days post stroke. Speech difficulties (expressive dysphasia), arm weakness, able to walk but deemed impulsive and at risk of falls by therapists.	Lives with girlfriend. Discharged home on day of interview with ESD input.
	Richard	80	11 days post stroke. Speech difficulties (dysarthria), right sided weakness, inattention to right side.	Lives alone. Very active and independent prior to stroke. Plan to discharge home with ESD.
	Cerys	89	13 days post stroke. Left sided weakness. Swallowing difficulties. Needing assistance to move between bed and wheelchair. Practising walking with assistance in therapy. Memory problems, sleep difficulties, anxious and low in mood.	Was living with husband in sheltered accommodation. Planned for one week of further rehabilitation then discharge home, but this was delayed as Cerys became unwell with a chest infection.
Site C	Tristan	60	18 days post stroke. Right sided facial and arm weakness. Dysphasia and dysarthria.	Previously lived alone in own flat in, but unable to return there due to uninhabitable condition of flat. Discharge already delayed by 12 days at time of interview, as distant relatives were taking responsibility for re-housing.
	Imran	66	14 days post stroke. Dense left sided weakness. Able to move between bed and wheelchair using a rotastand and assistance of two.	Lives with wife. Aiming to go home with support from ESD.
	John	68	20 days post stroke. Able to walk with supervision. Incontinent. Cognitive impairment. Apraxia.	Lives with wife who has health problems, children are concerned about him being discharged home. Admission prolonged due to family concerns and poorer community services.

Appendix: Research Checklist

Consolidated criteria for reporting qualitative studies (COREQ): 32-item checklist

No	Item	Guide questions/description
Domain 1: Research team and reflexivity		
Personal Characteristics		*These are addressed under the heading 'Research Team and Reflexivity' on page 6*
1.	Interviewer/facilitator	Which author/s conducted the interview or focus group? *ET* **p6**
2.	Credentials	What were the researcher's credentials? *MA, MSc, PGDip* **p6**
3.	Occupation	What was their occupation at the time of the study? *PhD Student* **p6**
4.	Gender	Was the researcher male or female? *Female* **p6**
5.	Experience and training	What experience or training did the researcher have? *Previous qualitative research PI* **p6**
Relationship with participants		
6.	Relationship established	Was a relationship established prior to study commencement? *Yes* **p6**
7.	Participant knowledge of the interviewer	What did the participants know about the researcher? *Professional background as an OT in stroke, PhD student* **p6**

No	Item	Guide questions/description
8.	Interviewer characteristics	What characteristics were reported about the interviewer/facilitator? *Background as a therapist, but also doing PhD study with links to people working on the stroke guidelines and SSNAP audit.* **p6**
Domain 2: study design		***Addressed in methods section***
Theoretical framework		*Power: Audit Society and Lipsky: Street Level Bureaucracy* **p9-10**
9.	Methodological orientation and Theory	What methodological orientation was stated to underpin the study? *Ethnography* **p5-6**
Participant selection		
10.	Sampling	How were participants selected? *Purposive and pragmatic* **p7-8**
11.	Method of approach	How were participants approached? *Face-to-face* **p8**
12.	Sample size	How many participants were in the study? *43 (**See results section**)* **p10**
13.	Non-participation	How many people refused to participate or dropped out? Reasons? *One patient who had been keen to be interviewed became too unwell, and his wife consented to be interviewed* **p11**
Setting		

No	Item	Guide questions/description
14.	Setting of data collection	Where was the data collected? *Hospital stroke units (**see results section**) **p10***
15.	Presence of non-participants	Was anyone else present besides the participants and researchers? *On stroke units there were often people present who were not directly participating in the study, but this was not the case during interviews* **p8**
16.	Description of sample	What are the important characteristics of the sample? *Stroke patients, members of staff working with stroke patients (**see methods**)* **p7-8**
Data collection		*See data collection*
17.	Interview guide	Were questions, prompts, guides provided by the authors? Was it pilot tested? *An interview topic guide was used* **p8**
18.	Repeat interviews	Were repeat interviews carried out? If yes, how many? *One therapist was interviewed in two different sites, as she coincidentally worked in both (**see results**)* **p11**
19.	Audio/visual recording	Did the research use audio or visual recording to collect the data? *Interviews were recorded on a Dictaphone* **p8**
20.	Field notes	Were field notes made during and/or after the interview or focus group? *Yes* **p8**

No	Item	Guide questions/description
21.	Duration	What was the duration of the interviews or focus group? *Interviews lasted for approximately one hour each* **p10**
22.	Data saturation	Was data saturation discussed? *During data collection and analysis in the third site it was evident that common themes were recurring. There were differences in all the sites, but this variation was a finding in itself.* **p11**
23.	Transcripts returned	Were transcripts returned to participants for comment and/or correction? *No* **p11**
Domain 3: analysis and findings		
Data analysis		
24.	Number of data coders	How many data coders coded the data? *One, but a sample of transcripts was coded by all three researchers and coding was reviewed by all three. (**see data collection**)* **p8-9**
25.	Description of the coding tree	Did authors provide a description of the coding tree? *No*
26.	Derivation of themes	Were themes identified in advance or derived from the data? *Derived from the data (**see data collection and analysis**)* **p8-9**

No	Item	Guide questions/description
27.	Software	What software, if applicable, was used to manage the data? *Nvivo* **p8-9**
28.	Participant checking	Did participants provide feedback on the findings? *Yes* **p9 and p11**
Reporting		
29.	Quotations presented	Were participant quotations presented to illustrate the themes / findings? Was each quotation identified? *Yes* **p12-21**
30.	Data and findings consistent	Was there consistency between the data presented and the findings? *Yes* **p12-21**
31.	Clarity of major themes	Were major themes clearly presented in the findings? *Yes* **p12-21**
32.	Clarity of minor themes	Is there a description of diverse cases or discussion of minor themes? *Yes* **p12-21**