Intentional rounding in hospital wards: What works, for whom and in what circumstances?

Detailed project description

Summary of research

Research question: What is it about intentional rounding (IR) in hospital wards that works, for whom and in what circumstances?
Aim: To investigate the impact and effectiveness of IR in hospital wards on the organisation, delivery and experience of care from the perspective of patients, their family members and staff. We will investigate this at the three levels of the organisation and delivery of health services: national, service provider organisation and individual ward/unit. We will identify the ways in which the context (i.e. the environment and organisation) at each of these levels influences the mechanisms (i.e. the assumptions and theories about the ways in which intentional rounds achieve their objectives) and the outcomes or impact.
Method: A multi-method study design will be undertaken drawing upon a realist evaluation approach. The study will be conducted in four phases. As available theory on the potential of IR is limited, phase 1 will involve theory development, drawing upon principles of realist synthesis. Searches of the relevant academic and grey literature and a stakeholder consultation event will be held to generate hypotheses on what the mechanisms of IR may be, what particular groups may benefit most or least from IR and what contextual factors might be important to its success or failure. The evidence base for other quality improvement initiatives aimed at improving nurse/patient interaction, such as the named nurse and team nursing, may also be included in this evidence synthesis where appropriate to further enhance the review. The hypotheses generated in phase 1 will be interrogated and tested in phases 2 and 3 of the study. Phase 2 will involve a national survey of all non-specialist NHS acute trusts to explore how IR is implemented and supported across England. The survey will be administered online via Survey Monkey to a senior trust manager with responsibility for implementing nursing services. Phase 3 will purposively select six case study wards across three geographically spread hospitals in England using findings from the national survey conducted in Phase 2. Within each of the three hospitals, a range of data will be collected from two wards (one acute, one care of the elderly): a qualitative interview with a ward manager (n=1), individual interviews with ward nursing staff and healthcare assistants (n=5), patients (n=5), family members (n=5) and other stakeholders e.g.doctors, non-nursing mangers and therapy staff (n=5). Nurse shadowing and observations of intentional rounds will be conducted to observe how they are implemented 'on the ground'. Routinely collected ward outcome data will be retrieved from the NHS Safety Thermometer to establish what changes occurred in outcomes alongside changes in IR and other interventions that might impact on these aspects of patient safety. A bottom-up analysis of costs will also be undertaken to identify the resources used by case study wards to develop and implement IR. The framework approach will be used for the qualitative analysis of staff, patient and family member interview data. Observation data will be analysed using descriptive statistics and thematic analysis of detailed ethnographic fieldnotes. Quantitative analyses of the NHS Safety Thermometer data will be exploratory and, as per the realist approach, will be specifically tailored to the individual circumstances associated with the implementation of IR on each ward. Phase 4 will involve accumulative data analysis across the phases. Data will be scrutinised for patterns of congruence and discordance to develop an overall evaluation of what aspects of IR work, for whom and in what circumstances. A study advisory group including nine patient and carer representatives and nine NHS senior managers and healthcare professionals will work alongside the research team. This advisory group will be led by study collaborator Sally Brearley, Fellow in Patient and Public Involvement at Kingston University and St George's, University of London and Chair of the DH Nursing and Care Quality Forum for England.
Main benefits: This research will provide robust information about what good practice of IR looks like, how it is delivered and the factors that facilitate and hinder implementation. It will also shed light on poor or ineffectual practice and the factors that influence this. This research will provide benefit by

enabling trusts to target their effort and resources on supporting good practice (and redirecting resources from aspects of IR that are not useful) and will inform operational guidelines and policies directing the delivery of direct patient care.
Impact to NHS: As IR has been extensively implemented in some form throughout the NHS the information generated by this study will have widespread impact. The findings will directly inform nursing practice, provide policy messages for the Care Quality Commission (CQC) of what good IR looks like and advice on the type of data to collect for quality monitoring.

Background and rationale

"The NHS belongs to the people. It touches our lives at times of basic human need, when care and compassion are what matter most." (The NHS Constitution, DH 2013a).

"Patients first and foremost" (DH 2013b) is the government's priority for the NHS. However as demand for health services is increasing so are concerns that the delivery of patient care is lacking in compassion and less tailored to individual patient need, particularly for older people (Cornwell et al, 2012). These concerns were highlighted in the Francis Inquiry (DH 2013c) which examined evidence about the reasons for the failures in patient care at Mid Staffordshire NHS Trust and made recommendations to address these failures.

The delivery of high quality, safe and compassionate care has always been a key priority for nursing (Nightingale, 1860; Prime Minister's Commission on the Future of Nursing and Midwifery in England, 2010). Over the years there has been a great deal of research and discussion in the nursing literature about what caring is, how it is experienced, how it can be observed and how it can be improved (Morse et al, 1991; McCance et al, 1997; Kitson, 2001; Tierney, 2003). Several theories or conceptualisations of caring have been developed (Watson, 1988; Roach, 1984; Leininger, 1991; Boykin and Schoenhofer, 1993). However, despite this, it remains an elusive and complex concept encompassing technical, interpersonal and philosophical dimensions. Von Essen and Sjödén (1991) found that nursing staff and patients differed markedly in their perceptions of the most important nurse caring behaviours. Although patients valued more affective caring behaviours, they prioritised nurses' technical competence and know how. In contrast, nurses considered that more affective behaviours, such as listening to the patients and using touch to comfort patients, were most important in making patients feel cared for.

Over the years there have been numerous nursing innovations, some of which have been supported by the Department of Health, to improve patient experience, including the pattern of the in-patient day (Standing Nursing Advisory Committee, 1961), individualised patient care (Redfern, 1996), nursing process (Latimer, 1995), primary nursing (Wright, 1990), team nursing (Thomas, 1992) and the productive ward (NHS Institute for Innovation and Improvement, 2012). These innovations share a central tenet – to develop ways to organise nursing to enable the development of meaningful, supportive nurse-patient relationships to improve patient engagement and the quality of care. Some of these innovations have been more successful and sustainable than others, yet not consistently so across healthcare services and concerns about the quality of care and compassion remain. Furthermore, although research has been conducted to evaluate nursing quality innovations, the impact of organisational and professional context have not been fully addressed and this has limited our understanding of why certain innovations are successful and accepted in some organisations and not in others. Important contextual issues to address are organisational culture, leadership, service structures, incentives and governance, nursing skill mix and how nursing is valued (Ross et al, 2011; Smith et al, 2012; Allen et al, 2013). This study builds on previous work by evaluating IR, taking into account how context influences its mechanisms and their relationship with outcomes.

The Francis Inquiry made key recommendations to strengthen local systems to deliver safe, compassionate, patient-centred care. Engagement with patients is highlighted as a mechanism to

promote well-being and improve patients' experience of healthcare treatment and this is seen as principally the role of nursing staff (Vol III, p1606). One of the Inquiry's recommendations states that "Regular interaction and engagement between nurses and patients and those close to them should be systematised though regular ward rounds" (Vol III, p1610) and refers to the use of a regular ward round as suggested by the Prime Minister in January 2012. Following this announcement, the majority of NHS trusts have introduced IR, a structured process whereby nurses in hospitals carry out regular checks, usually hourly, with individual patients using a standardised protocol to address issues of positioning, pain, personal needs and placement of items. The Chief Nursing Officer and Lead Public Health Nurse's Compassion in Practice action plans will support those wards that have yet to implement IR to do so by the end of 2013 (Snelling, 2013).

Conducting hourly rounds is not a new nursing concept, and 'care rounds' or 'comfort rounds' have been carried out for many years by nurses with the belief that they have the potential to improve the dignity of patients and the compassionate nature of the care they receive (Dix et al, 2012; Halm, 2009). However, IR offers a more structured version of this process, using a standardised protocol purposively aimed at keeping patients comfortable and safe (Halm, 2009). According to Bartley (2011), the following standardised protocol is used by a nurse for each patient during an intentional round. Firstly, an opening phrase is used by the nurse to introduce his or herself and to put the patient at ease. Scheduled tasks are then performed, followed by a discussion of the four key elements of the round: 1) Making sure the patient is comfortable and assessing the risk of pressure sores; 2) Assessing the patients' personal needs, including whether they need assistance with getting to the toilet; 3) Asking patients to rate their level of pain on a scale of 0-10; and 4) Ensuring any items a patient needs are within easy reach. The nurse also conducts an assessment of the care environment, such as checking the temperature of the room or any fall hazards, before ending the interaction with a closing phrase such as "Is there anything else I can do for you before I go?" The patient is informed of when the nurse will return and the interaction is appropriately documented by the nurse. If patients are unable to respond during the round, the nurse may follow this process with family members (Halm, 2009).

Evidence in the form of local audits and published studies has claimed that IR has numerous benefits, including a reduction in call bell use, falls and pressure sores as well as increased patient satisfaction and the delivery of care that demonstrates compassion (e.g. Dix et al, 2012; Meade et al, 2006; Sherrod et al, 2012; Studer Group, 2007). However, there is limited research to support this and the majority of research that has been conducted comes from US hospitals, therefore findings may not be applicable to the UK. Substantial limitations to the evidence base for IR have recently been highlighted by Snelling (2013), who states that due to concerns around selection bias, potential conflict of interest, study design and data analysis, results asserting the benefits of IR should be interpreted with caution. Other published reviews have also highlighted the weaknesses in the design of IR studies (Halm 2009; NNRU, 2012). There is evidence, however, that IR is popular with patients and their family members as it makes patients feel less isolated knowing that they will be checked upon regularly (Snelling, 2013).

Little is also known about how NHS healthcare trusts in the UK currently define IR and whether there is consistency in its implementation (e.g. which nurses undertake the rounds - qualified or unqualified? What is the frequency and duration of intentional rounds? What aspects of care are addressed and documented from the rounds? Are all wards utilising the standardised protocol and if not, how are rounds being implemented? Are all wards and all patients included in intentional rounds? How are patients informed about the rounds? etc). It is also unknown whether there are any unintended consequences on other aspects of nursing activity (for example, nurses not being able to attend team meetings and ward rounds or not having time for the training and supervision of students and healthcare assistants). These have all been highlighted as key issues that require further investigation (Halm, 2009; NNRU, 2012; Snelling, 2013). Thus, while IR is intuitively a good idea and

is supported by patients and implemented in hospital trusts, there is currently no robust research evidence to support its widespread adoption in the UK. With the increased scrutiny as a result of the Francis Inquiry and financial pressures on the NHS, it is important to establish evidence of the effectiveness and costs of IR by finding out what works (or otherwise), for whom and in what circumstances. This information will enable trusts to implement IR well, by ensuring staff understand what it is and how to apply it appropriately within their setting and for different patient groups.

Need

This research is needed now because recently published reviews have found that the evidence for this intervention is not robust and therefore recent healthcare policy and practice are not evidence based (Snelling, 2013; Halm, 2009; NNRU 2012). Nonetheless, the majority of hospitals in the NHS have been reported to have implemented this intervention in some form and there are plans for all hospitals to have implemented it by the end of 2013. It is imperative that healthcare practice is not based on what is assumed to be beneficial to patients but is informed by the best available evidence of the effectiveness and cost of interventions to ensure that patients' and their family members' needs for competent and compassionate care are met. IR already features as part of larger quality improvement initiatives such as the Hospital Pathways Programme and the Government response to the Francis Inquiry also states that the CQC will use IR as one criterion for assessing hospital standards. It is therefore essential that the CQC not only asks if trusts are implementing intentional rounds, but if they are implementing them in the appropriate way based upon the best available evidence. Undertaking this research now will ensure that the necessary evidence required is available to successfully guide the development and implementation of IR across the country, which will ensure it is built in as a core part of patient-centred nursing practice. This will ultimately help to improve individualised and compassionate care and the experiences of patients and their family members.

Aims and objectives

This study aims to investigate the impact and effectiveness of IR in hospital wards on the organisation, delivery and experience of care from the perspective of patients, their family members and staff. The research question is: 'What is it about IR in hospital wards that works, for whom and in what circumstances?' We will investigate this at the three levels of the organisation and delivery of health services: national, service provider organisation and individual ward/unit. We will identify the ways in which the context (i.e. the environment and organisation) at each of these levels influences the mechanisms (i.e. the assumptions and theories about the ways in which intentional rounds achieve their objectives) and the outcomes or impact. In order to evaluate what aspects of IR work, for whom and in what circumstances, our specific study objectives are to:

1. Determine how many NHS trusts nationally have implemented IR and analyse how it has been developed and supported.
2. Identify how IR has been implemented 'on the ground' and evaluate its contribution to the delivery of patient care as a whole and how it fits in alongside other approaches to improving quality and safety.
3. Explore nursing staff, healthcare assistants and other clinical and management staff experiences of IR and how it impacts on the way they deliver care.
4. Explore patients' and their family members' experiences and perceptions of how IR influences their experiences of care.
5. Investigate trends in patient outcomes (retrieved from routinely collected NHS ward data) within the context of the introduction of IR and other care improvement initiatives that have been introduced by using statistical process controls methods such as CUSUM charts.
6. Examine the barriers and facilitators to the successful implementation of IR.
7. Conduct a bottom-up analysis of the costs of IR by identifying the resources used by case study wards to develop and implement it.

8. Synthesise the data from each of the study phases to identify which aspects work, for whom and in what circumstances.

Project Methodology

Study design and conceptual basis

A multi-method study design will be undertaken drawing upon a realist evaluation approach (Pawson and Tilley, 1997) to evaluate the implementation of IR in England. Ideally a randomized, experimental study would be used to assess the effectiveness of a new intervention. However, the use of this approach is not possible as the implementation of IR has been strongly advocated and promoted by the current government and very few trusts are reported not to have implemented it. Therefore, it is timely and appropriate to use realist evaluation and this is the conceptual basis or approach that will structure the study. Realist evaluation is a theory-driven approach designed for evaluating complex social interventions (Pawson and Tilley, 2004; Hewitt et al, 2012). It does not seek to answer the question 'does this intervention work?' but instead acknowledges that complex social interventions only ever work for certain people in particular circumstances. The key task of a realist evaluation is to understand and explain these patterns of success and failure by asking the exploratory question: what is it about this intervention that works, for whom and in what circumstances? (Pawson and Tilley, 1997; Hewitt et al, 2012). It achieves this through the identification of context-mechanism-outcome configurations. IR is considered to be a complex social intervention (MRC, 2008), where the outcomes of an intervention are influenced by the way it is delivered and the context in which it is delivered (Hewitt et al, 2012). Therefore, intentional rounds may have a very positive influence on experience in one hospital ward but a negative impact in another. This complexity is further increased by the wider social system in which the intervention is implemented (Pawson and Tilley, 2004). The use of realist evaluation in this study provides the opportunity to explore what aspects of IR work, for whom and in what circumstances, with a particular focus on how best to develop and implement intentional rounds to improve the quality and appropriateness of patient care.

The conceptual framework guiding the study design is informed by work on the nurse/patient relationship and understanding about the interaction. For example, Steis et al's (2009) work on the pivotal concept of 'recognition', where nurses see patient need during interactions with patients and then choose to act or not to act and the ensuing consequences (see Figure 1: taken from Steis et al, 2009). They identify organisational culture, the nurse as a clinician and person, and the patient as a person in a compromised state of health as contextual features that inform recognition. We will also draw on other pertinent work that contributes to understanding of the impact of nurses and nursing to patient experience e.g. nurses' workload (Freeney, 2001), staff morale (Maben et al, 2012), relational capacity (Hartrick, 1997) and presence of the nurse (Fredriksson, 1999). The theoretical framework will be interrogated by experts (i.e. NHS trust managers, senior nurses, patients and carers etc) in the stakeholder consultation group described in phase 1 to refine and develop this theory so that it forms a pertinent and appropriate theoretical base for the whole study.

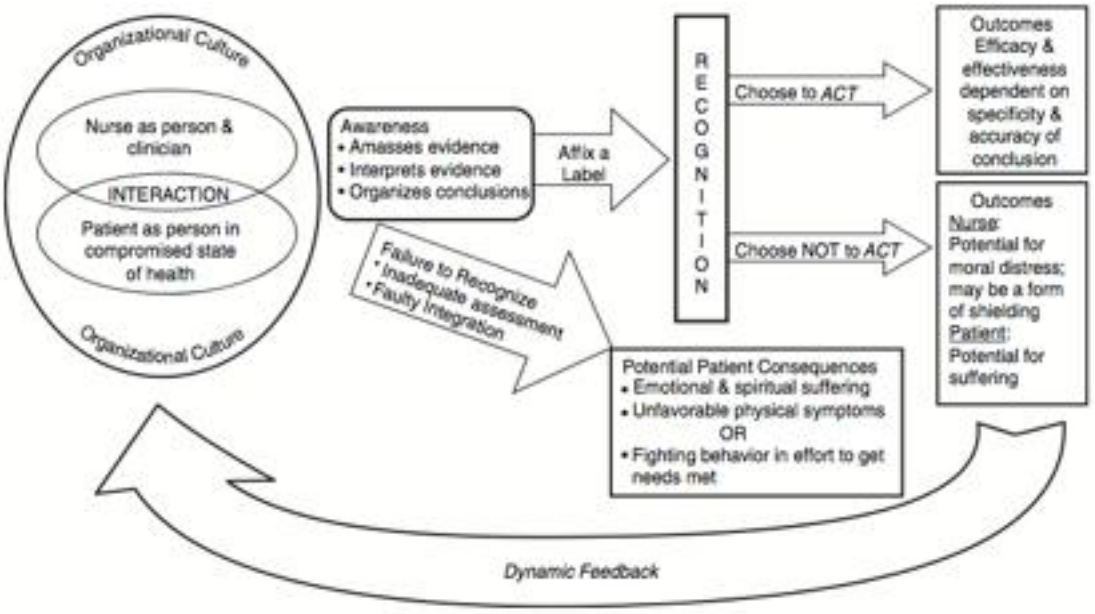

Figure 1 Conceptual model of recognition in the context of nurse–patient interactions.

The study will be conducted in four phases: 1) theory development; 2) a national survey of all non-specialist NHS acute trusts in England; 3) individual interviews with healthcare staff, patients and their family members, observations of intentional rounds and nurse shadowing, the retrieval of routinely collected ward outcome data and an analysis of costs; and 4) the synthesis of the study findings.

Phase 1: Theory development

As with all social interventions, it can be assumed that IR will work for different stakeholders in various settings in different ways. However, available theory on its potential is limited. Therefore we will begin with a period of theory development drawing upon principles of realist synthesis (Pawson et al, 2004). This approach has been successfully used by the co-applicants in a recently completed NIHR-funded study (Harris et al, 2013, SDO 08/1810/128). A range of strategies will be employed during this period, including searches of relevant academic and grey literature including healthcare policy documents and a stakeholder consultation event. The aim of phase 1 is to generate hypotheses on what the mechanisms may be, what particular groups may benefit most or least and the contextual factors that might be important to its success or failure. These hypotheses will be interrogated and tested in phases 2 and 3 of the study.

Literature will be identified from electronic searches of databases including Medline, BMJ Journals, CINAHL, Embase, Internurse, RCN Archive, PsychINFO, Health Management Information Consortium (HMIC) and the Cochrane Library. Reference lists of relevant papers will be scanned and citation searches conducted in order to identify further materials. Searches will be conducted in Google Scholar and other relevant databases. Expert advice about generating relevant search terms will be sought from Library and Information Sciences Specialists and revised as additional key words are generated. Grey literature relating to policy and organisational-based material will be sought by searching government and other specialist websites. Papers and other information that satisfy any of the following criteria will be identified as potentially relevant and will be retrieved for review:

- describe or evaluate IR
- detail its implementation or development in various settings
- address the experience of individual team members, team leaders, policy makers, patients or their family members around implementing, conducting or experiencing intentional rounds

- describe the organisational or political context of IR
- reviews of IR

The researchers will also consider broadening the scope of the synthesis to include other quality improvement initiatives aimed at improving nurse/patient interaction, such as the named nurse and team nursing where appropriate.

Only English language documents will be included in the review of the literature. In line with realist methodology, we will not have specific predetermined inclusion and exclusion criteria based upon research method or quality, but we will report areas of general weakness in evidence and individual study weakness where appropriate. Selection of papers will depend upon the volume of relevant material identified. We anticipate that the yield of relevant material will be small in proportion to the volume of "hits" from electronic searches. However, since the purpose of the review is descriptive, if a large number of relevant papers are identified we will select the most relevant to the study aims and objectives. The abstracts of all papers identified by searches will be screened for suitability. All potentially relevant papers will be retrieved and assessed by a member of the research team using a structured data extraction form. It is envisaged that the following information will be recorded for each potentially relevant paper:

- literature item details (type of item e.g. descriptive, evaluative, review)
- area in which the intentional round is situated (e.g. acute care, care of the elderly etc)
- details of the intentional round (e.g. frequency, duration, who it is conducted by etc)
- outcomes (e.g. reduction in call bell use, falls and pressure sores etc)
- enablers and inhibitors (e.g. factors recorded as enabling or inhibiting the implementation or delivery of intentional rounds)

Each of the data extraction forms will be independently examined by at least two members of the research team for inclusion. Data or information from each of the studies selected will be analysed thematically to provide a comprehensive description of the purported mechanisms of IR. Contexts that appear to trigger or inhibit the mechanisms will be identified and outcomes for patients and their family members, healthcare staff, teams and organisations when the mechanism is present or absent will be noted. A qualitative identification of the likely costs and incremental costs of IR both in terms of fixed and variable costs will also be identified from this literature. These costs will be included in the data collection in phases 2 and 3 and will be used in the cost analysis.

In addition to the review of the relevant literature, a stakeholder consultation event will be held, in which key figures (n=9) associated with IR (e.g. Directors of Nursing of NHS hospitals, healthcare staff etc) plus the study's advisory group (n=18) will be asked to elicit realist theories on the mechanisms (e.g. 'What is it about intentional rounds which might generate improvements in patient care and experience?') and contexts (e.g. 'With which sort of patients in which settings might intentional rounds be successful?'). This process is recommended in realist evaluation, as understanding what key stakeholders know about an intervention and their reasoning for or against its implementation is essential to understanding it. Attendees at the consultation event will be asked to think about their own knowledge and experience of intentional rounds. For example, healthcare staff will be asked to comment upon their own personal experiences of IR and discuss instances when they felt it worked particularly well or not so well. In realist evaluation, such anecdotes are useful for their insight and explanatory nature and invariably identify the contexts and mechanisms which are conducive to the outcome of an intervention (Pawson and Tilley, 1997). A further benefit of the stakeholder event is that it will also assist the researchers with the volume of data generated from the search of the academic and grey literature. If available theory on the potential of IR is limited within the literature, the consultation event is likely to generate additional theories that were not previously identified. If the number of theories identified from the literature is unwieldy, the stakeholder event will

enable key figures within the field to advise the researchers on which theories should be selected for further investigation.

Data from the review of the academic and grey literature and from the stakeholder consultation event will be synthesised and the evidence from these diverse sources will be drawn together to provide a rich and detailed picture of the intervention of IR. Hypotheses will then be generated around what the mechanisms may be, what particular groups may benefit most or least from it and what contextual factors might be important to its success or failure. These hypotheses will be interrogated and tested in phases 2 and 3 of the study.

Phase 2: National survey of non-specialist NHS acute trusts in England

Phase 2 addresses objective 1 of the study and will explore how IR is currently being implemented and supported nationally within non-specialist NHS acute trusts across England and the way in which organisational context (or features of services and healthcare organisations) has influenced its implementation. The findings will inform the in-depth case studies conducted in phase 3, including case study site selection.

A national survey of all non-specialist NHS acute trusts in England will be undertaken using a structured questionnaire. The study will only focus on non-specialist acute NHS trusts because IR is an intervention intended for implementation as part of general hospital care (though specialist trusts may or may not also implement the intervention). The questionnaire will include questions about:

- when IR was implemented and why
- staff training needs to conduct IR and how these were addressed
- specific details about how the intervention is being implemented e.g. whether it occurs in all wards and for all patients and if not, which wards and which patients are included, which members of staff conduct the rounds (qualified or unqualified), how often they are conducted, what duration are the rounds, whether they occur during the night, whether a structured format is used, how the rounds are documented and audited etc
- how implementation is managed and monitored
- future development needs
- the implementation of other nursing innovations to improve quality of nurse/patient interaction and:
- trust nursing leadership and the nursing workforce e.g. staffing levels and skill mix

The survey will be administered online via Survey Monkey to a senior trust manager with responsibility for implementing nursing services. After consulting with local trust nursing directors and managers, this appears to be the favoured approach for questionnaire completion and it is anticipated that administering the questionnaire in this way will maximise the response rate. However, trust managers will also be given the opportunity to complete the survey over the telephone should they so choose. Details of all non-specialist acute NHS trusts in England will be accessed online from NHS Choices (http://www.nhs.uk/servicedirectories/pages/acutetrustlisting.aspx) and each trust's Director of Nursing office will be contacted directly to get the contact details of the appropriate trust manager. Trust managers will be emailed a link to the online survey and asked to complete it at their earliest convenience. Each manager will be sent up to three reminders by email or telephone and a clear audit trail will be maintained, recording which managers have been contacted and participated/declined to participate in the survey. Reponses to the survey will be entered into the statistics package SPSS, collated and subjected to quantitative analyses to explore and provide a detailed picture of how IR has been implemented nationally and provide estimates for the costs associated with implementation and continued management. Robert Grant, a medical statistician and Senior Research Fellow in Quantitative Methods with considerable expertise in statistics and quantitative research methods will lead the analysis of phase 2 data with input from Professor

Giampiero Favato, Head of the Department of Accounting Finance and Informatics at Kingston University, who has considerable expertise in economic analysis and evaluation.

Phase 3: In-depth case studies

Phase 3 addresses objectives 2, 3, 4, 5, 6 and 7 of the study and will explore the extent to which the concepts of IR identified within the literature and from the stakeholder consultation event are compatible with or relevant to modern health service delivery and the experiences of healthcare staff, patients and their family members. To explore this, up to 126 individual interviews will be undertaken with healthcare staff, patients and their family members on six case study wards within three geographically spread hospitals in England. Nurse shadowing and observations of intentional rounds will be conducted and routinely collected ward outcome data will be retrieved. A bottom-up analysis of costs will also be undertaken. The aim of phase 3 is to observe how IR is implemented 'on the ground', to investigate its contribution to the delivery of patient care as a whole and to explore possible barriers and facilitators to its successful implementation. Phase 3 also aims to explore nursing staff and other clinical and management staff experiences of IR and how it impacts on the way they deliver and manage care. It further aims to explore patients' and their family members' experiences and perceptions of how IR influences their experiences of care. Phase 3 also aims to investigate trends in patient outcomes within the context of the introduction of the intervention and other care improvement initiatives that have been introduced and provide a bottom-up analysis of the costs.

Case study settings

Six case study wards will be purposively selected based upon the findings of the national survey in phase 2 to identify sites where IR has been implemented differently (i.e. maturity of intervention, structure of process etc). Within each of these case study locations, the following data will be collected from two wards (one acute, one care of the elderly):

Individual interviews

On each ward, individual qualitative interviews will be conducted with the ward manager (n=1), ward nursing staff and healthcare assistants (n=5), patients (n=5), family members (n=5) and other stakeholders e.g. doctors, non-nursing managers and therapy staff (n=5). Interviewees will be purposively sampled to attain a range of genders and ethnicities. Healthcare staff will also be purposively sampled to attain a range of professions and grades. Some patients will be recruited without a family member and vice versa so that a mixture of 'single' and 'paired' participants will be involved. The suitability of patients and carers to participate in qualitative interviews will be determined with advice from healthcare professionals working on the ward. Interviews will take place in a private room on the ward (where possible) or at the patient's bedside with the curtains drawn. Paired participants will be interviewed together if they wish. Informed consent will be gained from all participants and all interviews will be audio-recorded unless the interviewee requests otherwise.

Interview schedules will be informed by the findings from phase 1 and specifically designed to elicit detailed reflections on how the different mechanisms and contexts of IR influences the interviewee and others around them. The findings from phase 1 will be discussed with participants who will be asked how they relate, if at all, to their experience. If the findings are not considered relevant the reasons for this will be explored. It is anticipated that key questions for healthcare staff and managers will include:

- What do you feel IR is intended for? What issues is it intended to address?
- How does IR operate in the ward you work on? (How frequent are the rounds? Is this the same for all patients? Who does the rounds? What happens at night? etc)
- What are the positive and negative aspects of IR?

- What are the implications of IR on the quality of patient care?
- How can the benefits of IR be maximised?
- What are the key personal qualities and/or training needs that healthcare staff require in order to deliver IR effectively?
- What kind of interventions/relationships do patients value?
- What are the key issues around IR that require further research and development?

It is anticipated that patients and their family members will not be explicitly aware of the term 'intentional rounding' and if this is the case the term will not be directly used, although we will seek advice from the study advisory group on this. Where the interviewee is unaware of the term, the interviewer will instead talk about 'hourly nursing rounds' or ask about the regular contact that the patient or their family member has with nursing staff. Anticipated key questions for patients and their family members include:

- Have you been seen regularly by a nurse or healthcare assistant during your stay in hospital? How often are you seen? By whom? What happens when they come to see you? etc
- What are the positive and negatives about your experience of this?
- How have these interactions impacted your experiences of care?
- What kind of interactions/relationships with nursing staff do you value?
- Could these interactions be improved and if so, how?

It is anticipated that each interview will last up to an hour. Individual interviews will be transcribed and analysed using framework analysis (Ritchie and Spencer, 1994) to identify themes within the data and to facilitate comparison between case studies. The framework approach is gaining popularity in healthcare research because it can be used to manage qualitative data and undertake analysis systematically, ensuring the analyser maintains an explicit audit trail (Smith and Firth, 2011). This enhances the rigour of the analytical process and encourages a greater confidence in the credibility of the findings (Smith and Firth, 2011).

Non-participant observation and nurse shadowing

Non-participant observation of direct patient care will be carried out on each ward over a period of two to three weeks to observe how IR is implemented 'on the ground'. For each case study site, researchers will produce a detailed description of the ward environment including: nursing shift patterns, staffing information, sickness levels and vacancy rates: factors related to ward ecology,including the layout of the ward and screening of beds; and factors related to how IR was implemented, including how the change in practice was initially introduced, staff preparation and training and ongoing development and sustainability etc. Observational methods will include 'shadowing' nursing staff to explore how they interact with patients and each other in relation to IR. Researchers will observe nursing handovers and describe how decisions are made over who conducts intentional rounds (grade of staff, permanent or temporary staff etc), whether the same person conducts the rounds consistently throughout the course of a shift, whether rounds are conducted as they are intended, how they are recorded and what happens afterwards, Researchers will also observe individual interactions between the patient and nurse during a series of intentional rounds. Quality Patient Care Scales (Qualpacs) will also be completed for five patients in each ward. Qualpacs (Wandelt and Stewart, 1975) is an established instrument for assessing the quality of care a patient receives from a nurse using 68-items across the following areas of care: physical, general, psychosocial, communication and professional implications. The instrument is patient-focused, with observations based on who attends the patient's bedside to provide care and how frequently (Spilsbury et al, 2010). The observer watches the care received by selected patients over a 2-hour period and rates each aspect of this care on a scale of 1 (poorest care) to 5 (best care) (Spilsbury et al, 2010; Norman and Redfern, 1995). Researchers will observe at least 100 individual IR interactions between the patient and nurse and between nurses on each ward using these various methods. In all

observations, the researcher will record the duration of each individual interaction, how often interactions occur, what patients are asked during their interaction and what care is provided. External factors that impact upon the delivery of IR will also be recorded. This will enable us to establish how the intervention fits within the whole nurse experience of the delivery of care and the whole patient experience of receiving care. Observation data will be analysed using descriptive statistics and thematic analysis of ethnographic field notes to identify and describe the mechanisms of IR. The contexts and, where possible, the outcomes associated with the mechanisms will also be identified. Professor Ruth Harris will lead the analysis of interview and observation data in collaboration with Sarah Sims, Ros Levenson, Fiona Ross and a full-time research associate recruited specifically for this study.

Retrieval of routinely collected outcome data

Routinely collected outcome data from the NHS Safety Thermometer (http://www.hscic.gov.uk/thermometer) will be retrieved for each of the case study wards. The NHS Safety Thermometer is "a local improvement tool for measuring, monitoring and analysing patient harms and 'harm free' care" (http://www.hscic.gov.uk/thermometer). Data collected from the NHS Safety Thermometer is available online subject to appropriate permissions but can also be retrieved from the specific case study sites. Quantitative analyses of the NHS Safety Thermometer data will be exploratory and, as per the realist approach, will be specifically tailored to the individual circumstances associated with the implementation of IR on each ward. For example, if IR was introduced on a ward on a set date and had operated without issue ever since, the analyses could compare the NHS Safety Thermometer data from six months prior to the introduction of IR to six months after its' implementation. If, however, IR was introduced on a ward then terminated for a period of time before commencing again, analyses of the NHS Safety Thermometer data could be conducted on a month-by-month basis to explore whether there were any differences in outcomes during these periods. The aim is not to attribute cause and effect but to investigate trends in patient outcomes within the context of the introduction of IR and other care improvement initiatives that have been introduced. Statistical process controls methods such as CUSUM charts will be used and Robert Grant will lead the analysis of this outcome data.

Analysis of costs

An analysis of the costs of IR will be undertaken as part of the realistic evaluation to ensure costs are considered in building our understanding of 'what works, for whom and in what circumstances'. It is intended that the cost analysis will be exploratory and account for the individual circumstances of IR implementation on each case study ward. The pattern and consistency of resource use to undertake IR will be assessed on each ward as there may be day to day variation in completion of IR and grade of staff conducting IR as well as variation between case study wards. A bottom-up approach to costing of IR activity will be employed using data collected in the staff interviews, non-participant observation and shadowing and detailed information about ward context. Resource use data will include:

- Duration of IR – time with individual patients and time for the ward as a whole
- Grade of staff involved in direct contact with patients during IR and in the day to day organisation of IR
- Costs of consumables used in IR e.g. documentation, time sheets/clocks
- Costs to set up IR e.g. time spent by staff to develop operational guidelines and to change practice
- Training costs for staff team at initial set up and ongoing training and development needs.

The overall costs of the development and ongoing implementation on a daily basis will be calculated for each case study ward. This will enable comparison of the costs of different approaches to IR

development and implementation and provide details of how case study sites differ. The possibility of assessing the costs for the proposed mechanisms generated in the realist synthesis and the contexts within which they are situated will be explored. Professor Giampiero Favato will lead this aspect of the evaluation.

Data from the case studies will be subject to both within- and across-case analysis. The six case studies will provide an in-depth realist evaluation of the various contexts, mechanisms and outcomes of IR and will increase understanding of when, how and for whom it has most impact. The researchers will take an iterative approach between and within phases 1, 2 and 3 and may need to return to the literature as new evidence identified in phases 2 and 3 changes the focus and direction of the literature searching, opening up new areas of theory. The interactive and iterative nature of this process will be critical to the success of the evaluation.

Phase 4: Synthesis of findings

Phase 4 addresses objective 8 of the study and involves the accumulative data analysis from phases 1, 2 and 3. Using the realist evaluation framework, the patterns of outcomes produced by IR will be mapped and the researchers will explore whether the hypothesised contexts and mechanisms adequately explained these patterns (Hewitt et al, 2012). Each phase of this study generates data giving different perspectives of IR and this data will be scrutinised for patterns of congruence and discordance to develop an overall evaluation of what aspects of IR work, for whom and in what circumstances. As part of the synthesis process, attendees from the stakeholder consultation event held in phase 1 will be invited to interrogate the findings and consider how they fit with their own knowledge and experience of IR. The synthesised study findings will establish the potential outcomes of the intervention, identify the underlying mechanisms which explain how it produces these effects and highlight the key contextual factors that impact its success or failure. Recommendations can then be made as to how trusts can best target or develop the intervention for particular groups in various settings.

Dissemination and projected outputs

The findings will provide robust information about what good practice of IR looks like, how it is delivered and the factors that facilitate and hinder implementation. It will also shed light on poor or ineffectual practice and the factors that influence this and provide practical evidence for clinical nurses, nursing and trust managers and directors, health service commissioners, healthcare policy makers and nursing educationalists that will have utility across the NHS. This research will provide benefit by enabling trusts to target their effort and resources on supporting good practice (and redirecting resources from aspects of IR that are not useful) and will inform operational guidelines and policies directing the delivery of direct patient care. This in turn is likely to have an impact on staff morale. Identification of the components of IR using realist evaluation will enable organisations to see clearly how the research informs their particular organisational context to enable wider external generalisability. The findings will directly inform nursing practice, improve the quality of patient and carer experience, help shape policy for the CQC of what good IR looks like and advice on the type of data to collect for quality monitoring. We will also capitalise on our collaborative links with the DH Nursing and Care Quality Forum to enable widespread dissemination amongst nursing leaders.

The team will disseminate the findings of this study to a range of stakeholders within a planned programme. We will draw on the networks and expertise of the study advisory group and collaborators to disseminate the research outputs widely and appropriately. Furthermore, we will work with the media offices at Kingston University and St George's, University of London to support our dissemination plan. Key audiences are:

- Patient and carer organisations such as HealthWatch England, Age Concern etc.

- Clinical nursing staff, nursing managers and directors of nursing who have responsibility for the provision of nursing care.
- Managers and directors within healthcare organisations and with responsibility to provide high quality services within budget.
- Health care policy makers, nationally and internationally.

Planned publications, presentations and other materials will include:

- Final and interim reports to the NIHR Health Service and Delivery Research Programme.
- Papers submitted to peer reviewed academic journals, such as Journal of Health Services Research and Policy, Quality and Safety in Health Care and Health Expectations.
- Papers submitted to professional journals such as Health Service Journal, Nursing Times and Nursing Standard.
- Conference presentations at scientific and professional meetings such as the NHS Confederation annual conference.
- Website dissemination and short briefing papers for national and international dissemination targeted for key audiences e.g. health service managers, policy makers and patient and carer organisations.
- Website dissemination and short report to the Chief Nursing Officer and Directors of Nursing of NHS hospitals.
- Preparation of a policy directed dissemination plan, such as policy briefings for frontline staff and for Quality Assurance Agencies such as the CQC and Professional Bodies such as the Nursing and Midwifery Council.

Plan of investigation

A detailed study timetable is provided in table 1. This highlights the scheduling of all key stages in the project, their expected durations, and the timing of key milestones throughout the project including the production of outputs. We have included a preliminary phase in the study before the formal start date where the team will organise contracts, apply for ethics and recruit the research associate. A flow diagram is also provided in figure 2. This illustrates the study design and the flow of participants.

Project management

The project will be based in the Faculty of Health, Social Care and Education at Kingston University and St George's, University of London and involves co-applicants from the Business School at Kingston University and an independent consultant. The study will be led by Ruth Harris (PI), who will provide overall direction and management of the project. Sarah Sims, an experienced researcher, will be employed as project coordinator to manage ethics and R&D approvals, access to case study sites and to support the PI to ensure all project milestones are met. Ros Levenson is an independent researcher and policy consultant who has done preliminary work on IR and will contribute to the national survey design and data collection at case study sites. Fiona Ross and Stephen Gourlay will contribute to the preparation of data collection tools, data collection at case study sites and data analysis. A full-time research associate will also be recruited specifically for the study. The co-applicants will be supported by research collaborators with specific expertise and resources who have contributed to the study design. Robert Grant will lead the analysis of quantitative data from the national survey and patient outcome data in the case studies. Giampiero Favato will lead the analysis of costs in the study. Sally Brearley will chair the study advisory group and contribute to patient and public involvement in the study. As chair of the DH Nursing and Care Quality Forum, Sally is part of a network of senior nursing representatives, which is a valuable resource for the study.

There will be several methods for ensuring close working between the whole research team including co-applicants and collaborators. We will have four formal meetings during the course of the study, which will bring together all members of the project team for in-depth project planning and review. Informal contact will also occur throughout the study via email and Skype, and the whole team will be heavily involved in the key phases of study design, interpretation of results, writing of the report and wider dissemination.

Approval by ethics committee

This study will require approval from an NHS research ethics committee. However, the subject of the study is not considered to be sensitive, therefore the ethical issues associated are minimal. We have included a preliminary phase in the study before the formal start date for Sarah Sims and Ruth Harris to undertake ethical review. Both Sarah and Ruth have substantial experience in research ethics procedures. The stakeholder consultation day, which will include patient and carer representatives, does not require ethical review, therefore, if required, this could be organised before ethical approval has been received, as could the national survey. The individual interviews with healthcare staff, patients and their family members, the observations, nurse shadowing and retrieval of patient outcome data will all require ethical approval. Involvement of participants and all data will be kept confidential.

Patient and public involvement

Patient and public involvement is an integral part of this study and the project team has considerable experience of working with service users in research, for example Fiona Ross has led a programme of research in the field (Morrow et al, 2012) and established a Centre of Public Engagement in the university and most members of the team have experience of working with patients and the public in research (e.g. Sims et al, 2013). Sally Brearley is a collaborator and has wide ranging experience in representing service users' views and has contributed fully to the approach and ideas behind this study. As Chair of the DH Nursing and Care Quality Forum for England, but wearing a service user hat, Sally has access to stakeholder networks that will benefit the research and its reach.

The study will be guided throughout its duration by a multi-stakeholder advisory group consisting of nine NHS senior managers and healthcare professionals and nine patient and carer representatives. The nine patient and carer representatives will be recruited from local voluntary sector organisations and other networks. They will be paid £100 honorarium per meeting (as per Involve guidelines) for their time and contribution and travel expenses will also be covered. The remaining nine advisory group members will be recruited through co-applicants' networks in this field. Several key individuals have already expressed support for the study and will be approached to participate as an advisory group member, including Elaine Inglesby-Burke, Executive Nurse Director at Salford Royal NHS Foundation Trust and Duncan Burton, Director of Nursing and Patient Experience at Kingston Hospital NHS Foundation Trust. The advisory group will meet three times over the duration of the study, coming together at key points in the process and contributing to all aspects of the research, including access and recruitment, design of survey and interview schedules, data analysis and interpretation and dissemination. The group will ensure that the study is grounded in the issues and perspectives of key stakeholders including patients, family carers, clinical staff and NHS managers. Meetings will be chaired by Sally Brearley and arranged at venues, times and dates as convenient as possible for all group members.

Expertise and justification of support required

We are a multidisciplinary group of experienced health and social care researchers and experts in

service user involvement, multi-methods research and realist evaluation. The research team is small and this study builds upon existing collaborations between co-applicants and collaborators, which will facilitate good working relationships and clear expectations. Ruth Harris has expertise in leading complex multi-method studies in the NHS, particularly related to changes in professional practice and interprofessional teamworking (Harris et al, 2013, SDO 08/1810/128). Ruth also has a clinical background in acute nursing and care of older people and was a ward manager in an innovative nursing-led inpatient unit and King's Fund-funded Nursing Development Unit. Sarah Sims is an experienced researcher with expertise in conducting complex multi-method studies in the NHS, project management and service user involvement. Ros Levenson is an independent researcher and policy consultant with expertise in the implementation of IR. Ros recently worked on a project commissioned by the DH Nursing and Care Quality Forum to explore how demonstrator sites have implemented IR. This project found great diversity in how the intervention was implemented across sites, how staff were prepared and trained for it and the extent to which it was or was not seen as a 'tick box' exercise (personal communication with Ros Levenson and Elaine Inglesby-Burke). Ros' expertise in the field of IR and the networks she has in this area are invaluable and will enable the research team to start the study quickly. Stephen Gourlay has expertise in employee engagement and how health service managers use information and evidence in decision-making in change management (Edwards et al, 2013, SDO 08/1808/243). Fiona Ross has experience in research leadership, mentorship and multi-method approaches (e.g. the professional experience of changing governance arrangements) and service user involvement in research (Ross et al, 2009, SDO 08/1618/128). The research team is also supported by research collaborators. Robert Grant is a medical statistician and Senior Research Fellow in Quantitative Methods with considerable expertise in statistics and quantitative research methods. Giampiero Favato is Professor and Head of the Department of Accounting Finance and Informatics at Kingston University and has considerable expertise in economic analysis and evaluation. The research team will also be supported by a study advisory group chaired by Sally Brearley, Fellow in Patient and Public Involvement at Kingston University and St George's University of London and Chair of the DH Nursing and Care Quality Forum for England.

This study will be conducted within two and a half years to enable evidence to be available for use by NHS trusts more quickly and to provide value for money. We have included a preliminary phase in the study before the formal start date where the team will organise contracts, apply for ethical approval and recruit the research associate, which provides further value for money. The research costs have been calculated and provided by the Research Support Office at Kingston University.

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Table 1: Project timetable

	Task	Pre-study Months -3-0			Months 0-6						Months 7-12						Months 13-18						Months 19-24						Months 25-30					
Preliminary work	Contract agreement	X	X	X	X																													
	Staff recruitment	X	X	X	X																													
	Ethics	X	X	X	X	X	X																											
Phase 1	Searches of relevant academic and grey literature				X	X	X	X	X	X																								
	Stakeholder consultation (theory development) event 1									X																								
	Formal co-applicant meeting				X																													
	Multi-stakeholder study advisory group meeting						X																											
	Theory formulation				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
Phase 2	Design national survey				X	X	X																											
	Administer national survey							X	X	X																								
	Submit progress report to HS&DR									X																								
	Analysis of survey results									X	X																							
	Organising access with case study sites										X	X	X	X																				
	Formulation of research materials										X	X	X	X																				
	Preparation of survey report										X																							
	Formal co-applicant meeting										X																							
	Multi-stakeholder study advisory group meeting													X																				
Phase 3	Interviews with staff													X	X	X	X	X	X	X	X													
	Interviews with patients and their family members													X	X	X	X	X	X	X	X													
	Observations of intentional rounds													X	X	X	X	X	X	X	X													
	Nurse shadowing													X	X	X	X	X	X	X	X													
	Retrieval of ward outcome data													X	X	X	X	X	X	X	X													
	Thematic analysis of interview data															X	X	X	X	X	X	X	X	X										
	Thematic analysis of observation data															X	X	X	X	X	X	X	X	X										
	Analysis of ward outcome data and analysis of costs															X	X	X	X	X	X	X	X	X										
	Submit progress report to HS&DR															X																		
	Multi-stakeholder study advisory group meeting																							X										
	Formal co-applicant meeting																								X									
	Submit progress report to HS&DR																					X												
Phase 4	Data synthesis and interpretation																							X	X	X	X	X	X					
	Submit progress report to HS&DR																											X						

	Stakeholder consultation (theory development) event 2																											X						
	Formal co-applicant meeting																											X						
Dissemination	Report writing																											X	X	X	X	X	X	
	Final report to HS&DR																																X	
	Feedback to participants																																X	
	Paper/ briefing paper writing																														X	X	X	
	Conference presentations																																X	

Figure 2: Flow diagram

NB - The researchers will take an iterative approach between and within phases 1, 2 and 3 and may need to return to the literature as new evidence identified in phases 2 and 3 changes the focus and direction of the literature searching, opening up new areas of theory.