Health Services and Delivery Research Programme

NHS National Institute for Health Research

Commissioning Brief
14/194 - Measuring nursing input, workload, activity and care
Closing date: 18 Dec 2014 (two stage – outline to full)

1. Remit of this call: main topic areas identified

This call focuses on methods to develop and test more reliable measures of inputs, activity and quality of nursing care in relation to the NHS context. Recent public and policy concern about poor patient care, including the Francis inquiry into Mid Staffordshire NHS Trust, has highlighted the importance of good nursing care. Debate has centred on staffing levels, prompting a call for national guidelines on acceptable nurse to patient ratios. However, recent NICE guidelines in July 2014 found no evidence to support definitive recommendations for safe nurse staffing levels. Despite consistent indications of an association between nurse staffing levels and high-level outcomes such as patient death, causality is hard to show. Most evidence comes from outside the UK and there is poor agreement on how staffing inputs are measured. Many studies also aggregate nursing inputs across an organisation, not taking into account variation between wards or teams in staffing levels and local context.

There are also problems in measuring nursing activity, at some levels, reflecting profound uncertainties about what nurses do and how this relates to other kinds of care. While tasks and processes can be identified, responding to patients with different needs can be hard to capture. Many research studies have pointed to the impact of differences in casemix and acuity of patients on nursing demands. For instance, a patient at the end of life may require frequent observation, pain relief and support to the family. But this is not always easy to adjust for, given the lack of standardised or accepted tools and measures. Studies show that wards with general groupings of patients, such as care for the elderly or surgical wards, have substantial variation in casemix and care needs. There are no easy single measures of workload or nursing demand and recent NICE guidelines highlighted the lack of research on the effectiveness of tools to determine nursing staff requirements.

The problems in measuring activity are intensified when attempting to assess the quality of nursing care. Recent attention has focused on clinical endpoints where nursing care should make a difference, such as pressure ulcers or falls, but there are also other dimensions to consider, such as patient experience and the compassion or quality of nurse/patient interactions. Positive measures of quality are rarely used, studies instead relying on adverse events or measures of `care left undone'.

Recent attention on nurse staffing and the evidence reviews to support central guidelines have identified certain areas where more research is needed. In particular, there are important research gaps in the measurement and modelling of nurse staffing and effectiveness of current tools. Studies commissioned under this call should produce outputs of immediate practical use to the NHS, for instance in more accurate predictions of workload demands and nurse rostering. This work is also a crucial foundation for further research which attempts to provide more definitive findings on safe staffing levels and the impact of nursing on patient care.

This call relates to the whole nursing workforce, but not midwifery, which has a different and distinct evidence base. It covers nurse staffing in all clinical settings, including community, primary and mental health care, as well as integrated care activity. Most research to date has been focused on the acute sector and existing tools and measures may need adaptation for different settings.

Four particular areas have been identified as priority areas of research need. Whilst applicants may want to address more than one area in their proposals, and this is acceptable, these are the only topics in remit of this call:

i. Measuring nursing input

Existing studies are hampered by lack of consistency in how nurse staffing inputs are recorded. This includes differences in skillmix, including mix of registered and support staff but also grademix, seniority, education and specialist roles. Other kinds of information can be important – such as the proportion of bank or agency staff. Nursing input is often measured in nurse staffing care hours and staff to patient ratios, but this can be difficult to define if caseload is shared between units, wards or teams. More work is needed to model different forms of measuring nursing inputs, taking account of skillmix and other factors, to provide reliable and comparable metrics. There is currently no gold standard for measuring nurse staffing and modelling and work is needed to test and develop tools in this area. This is an important pre-condition for economic analyses and impact studies.

ii. Reviewing and validating tools to measure nursing activity and workload

It is difficult to measure what nurses do. There are a range of tasks associated with direct patient care – from routine observations and drug administration to wound care and catheterisation – but also responding to patient needs for other kinds of care and information. Acuity and dependency of patients can vary, as well as casemix (not always interchangeable) and this is not always adequately captured in existing measures of nurse workload. The evidence review to recent NICE guidance noted the lack of consistency in how researchers defined `nursing intensity'. Apart from patient care, there are important activities from ward rounds or multidisciplinary team meetings to supervision, management and paperwork. Recent NICE guidance did not review the effectiveness of tools to measure nurse workload, patient acuity and dependency. At present, there are different tools in use, but primary and secondary research is needed to review the evidence of effectiveness and provide validated best fit tools for managers and local decision-makers. This includes more research to develop standard approaches to risk adjustment and identifying activities which require intense nurse resourcing and how these might feature in workload metrics. As well as comparing tools in acute settings, work is needed to review and adapt for other settings, including primary, mental health and community care.

iii. Measuring quality and safety of nursing care

Different attempts have been made to measure the quality of nursing care. These include a focus on adverse events or clinical endpoints where good nursing care is likely to make a difference. A recent review has noted that some process measures of care, like errors in giving medication, may be more reliable than other indicators like falls and pressure ulcers where the contribution of nursing care may be only part of the story. There is also an interesting use of nurse reports of care left undone or `missed care', although these are self-reported and there may be scope for developing more robust measurement in this area. In supporting evidence to recent NICE guidelines on nurse staffing, the lack of positive measures of nursing quality was noted. Other reviews have noted the focus on safety and identified the need to test and develop a more rounded set of indicators to measure effectiveness and compassion of nursing care. Qualitative research may also be helpful here on how different factors (including positive practice environments) contribute to high quality, safe nursing care and what matters to patients.

iv Making use of nurse staffing data in NHS organisations

NHS managers need information to deploy nurses effectively. At present, we know very little about the different approaches to workforce planning, what systems and tools are in use and how they work. This includes more dynamic modelling methods to respond to variation in workload across clinical areas and demand for more flexible workforce. In addition to these staff management requirements, research could also look at local responses to recent requirements to make available nurse staffing information at ward level. This could include studies to explore how organisations are managing this and the ways in which staff help patients to interpret and make sense of these complex data.

2. Purpose of call

Concerns about safe levels of nurse staffing have intensified following recent high-profile reviews into failings in patient care from the Francis Inquiry to the Keogh review. National guidelines are being developed for nurse staffing levels in different clinical settings, starting with general acute care. However, recommended safe staffing levels could not be identified in the absence of UK-centred high quality, reliable information on staffing, activity, quality and outcomes. Research is needed to test and develop reliable measures of nursing care. More responsibility is placed on local managers and decision-makers to identify appropriate levels and type of nurse staffing for their local context. In order to do this, they need robust tools and measures to decide how best to deploy staff to meet the needs of patients.

3. Notes to Applicants

The NIHR Health Services and Delivery Research (HS&DR) programme aims to produce rigorous and relevant evidence on the quality, access and organisation of health services, including costs and outcomes in order to improve health and health services. It is focused on research to support decisions by frontline managers and clinical leaders on the appropriateness, quality and cost-effectiveness of care.

The NIHR HS&DR programme is funded by the NIHR, with contributions from NISCHR in Wales, the HSC R&D Division, Public Health Agency in Northern Ireland, and case by case contributions from the CSO in Scotland.

The programme operates two funding streams; researcher-led and commissioned. Researchers in England, Wales and Northern Ireland are eligible to apply for funding from either workstream under this programme. Researchers in Scotland may apply to the researcher-led workstream but are not eligible to respond to the commissioned workstream and should contact the CSO to discuss funding opportunities for healthcare delivery-type research

4. Application process and timetable

This call for proposals should be read alongside further supporting information and general guidance from the HS&DR programme on applications.

Should you have any questions or require any further clarification please refer to the NETSCC FAQs at HS&DR programme - FAQs, if the answer to your question cannot be found please email your query to hsdrinfo@soton.ac.uk with the title for the call for proposals as the email header. Applicants should be aware that while every effort will be made to respond to enquiries in a timely fashion, **these should be received at least two weeks before the call closing date.**
The process of commissioning will be in **two stages** and applicants should submit **outline proposals** via the HS&DR website by **1pm** on **18 December 2014**. All proposals will initially be checked for remit and competitiveness[1]. No late proposals will be considered. No paper-based only submissions will be considered.

Applicants will be notified of the outcome of their outline application in Mar 2015.

Shortlisted applicants will be invited to submit a full proposal via the HS&DR website (a link will be sent to shortlisted applicants). Applicants will be notified of the outcome of their full proposal application in Aug 2015. Please note that these dates may be subject to change.

5. Transparency agenda

In line with the government's transparency agenda, any contract resulting from this tender may be published in its entirety to the general public. Further information on the transparency agenda is at:
http://transparency.number10.gov.uk/
http://www.contractsfinder.businesslink.gov.uk/

[1] '***Non-Competitive***' means that a proposal is not of a *sufficiently high* standard to be taken forward for further assessment in comparison with other proposals received and funded by the HS&DR programme because it has little or no realistic prospect of funding. This may be because of scientific quality, cost, scale/duration, or the makeup of the project team