Developing a caseload model to reflect the complexity of district and community nursing

There is a lack of research on models for community healthcare providers to determine optimum caseloads. Here, members of the England Centre for Practice Development describe a data-collection tool to support workforce planning.

Abstract
A study by the England Centre for Practice Development proposes to develop and evaluate an optimum caseload model for district and community nursing, building on two rounds of funded pilot research in the south east of England using the Cassandra Matrix™. It addresses national calls for a strategic capacity-and-demand model to measure and reflect the multidimensional complexity of the community nursing workload, maximising the potential of the workforce to meet the needs of clients with increasingly complex comorbidities and interdependencies. It also addresses the ambitions of the NHS Five Year Forward View to enable planned growth of the workforce for the future.

Keywords
Caseload models, community nursing, district nursing, optimum caseload, workload capacity, work complexity

WHEN PLANNING for local healthcare services, it is important to know how many nurses are needed to provide high quality care. Until now, this has been difficult because the bulk of published work about nursing skill mix, ratios and the effect on patient care has focused on hospital settings – and these findings are not readily transferable to the community context. Currently, many district and community nursing teams have heavy caseloads, poor/inappropriate referral systems, and there are limited methods to enable staff to raise this as a workload concern.

The fact that one quarter of teams refuse referrals is also a cause for concern (Queen’s Nursing Institute (QNI) 2014). Even if this happens only occasionally, the implication is that a large number of patients are not receiving the right care from the right nurse with the right skills in their own homes, which may have an adverse effect on patient outcomes (QNI 2014).

This research is therefore needed because current methods of measuring workload and output in the community context are not robust enough to capture the multidimensional complexity of care, and the variations or differences in rural and urban populations. Models should capture quantitative and qualitative data related to seen and unseen care, and be able to relate to patient outcomes.

Initial work
The England Centre for Practice Development is hosted by the Faculty for Health and Wellbeing at Canterbury Christ Church University and is a vibrant community of transformational researchers, practice developers and workplace facilitators.

The centre has already completed some early work to test a web-based community nursing version of the Cassandra Matrix (Leary 2011, Jackson et al 2015), which is a data collection matrix that plots the context of work against interventions. The tool was piloted in six community healthcare organisations across Kent, Surrey and Sussex with 80 district nurses, general and specialist community nurses from bands 5-7.

Evidence from the pilot work indicated that nurses found it easier to use a computer-based version of Cassandra Matrix because they could
access it any time and anywhere on a mobile device, laptop or iPad. The mobile version meant there was less need to spend time in the office at the end of the working day to input data.

Nurses perceived it as simple and easy to use. They also identified that it was useful to complete when they were visiting patients in their homes because it could be used as a discussion point for person-centred care. Because most community providers are moving to IT-based systems to manage their workloads, the mobile version of Cassandra Matrix is seen as adding value rather than taking value away from interactions with patients.

However, some difficulties were encountered, which included:

- The time it took to recruit study steering group members, although this was resolved as word about the study spread.
- Winter workload pressures negatively affected the sample size.
- One participating organisation experienced IT access issues, which meant fewer nurses were able to participate.

These difficulties will inform the next phase of the research. Results from the study indicate that the Cassandra Matrix can model an accurate picture of the multidimensional complexity of community nursing intervention, context of care, users of care and care left undone.

Next steps
The next phase of research will involve working with six national community healthcare study sites across England. Using a multiple case study evaluation, it will build a predictive optimum caseload model for band 2-8 district and community nurses to support workforce planning centred on patient acuity and skill mix. This stage of research will also provide an economic assessment of the cost of care that is missed or left undone. The study objectives are to:

- Develop a data ontology and associated database, providing a consistent language to describe district and community nursing interventions that can be used to provide reliable and comparable metrics.
- Determine the utility of the Cassandra Matrix in capturing district and community nursing interventions.
- Identify how the model can be used to capture local population needs for district and community nursing.
- Use the data to build an inter-relational model of district and community nursing practice that can be used to determine caseload, activity and develop a predictive model.

- Evaluate the usability of the model in assisting managers and local decision makers in workforce planning.
- Assess the effectiveness of the model in capturing district and community nursing care left undone or missed.
- Explore how the model interrelates district and community nursing caseload activity with other health and social care provision in an integrated whole system.

Our proposal is a unique opportunity to provide new approaches to workforce planning: it draws on the expertise of a well-established research team with considerable experience in workforce development and design, whole-system change community nursing mathematical computational modelling, public patient involvement, economic analysis and evaluation methodology. The next steps of the study will be conducted over two years and are expected to be completed in late 2017. The findings will be shared via national events and conferences, through journal publications, as well as via the web, social media and newsletter briefings of the England Centre for Practice Development.

References

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Conflict of interest
None declared