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

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Abstract

A study by the England Centre for Practice Development (ECPD) proposes to develop and evaluate an optimum caseload model for district and community nursing (DCN) building on two rounds of funded pilot research in the South East of England

using the Cassandra Matrix [TM]. It addresses national calls for a strategic capacity and demand model to measure and reflect the multidimensional complexity of community nursing workload, maximising the potential of the workforce to meet the needs of clients with increasingly complex comorbidities and interdependencies, and addressing the ambitions of the NHS Five Year Forwards View to enable planned growth of the workforce for the future.

Introduction

When planning for local health services, it is important to know how many nurses are needed to provide quality care. However, up to now this has been difficult because the bulk of published work about nursing skill mix, ratios and impact 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 (DCN) teams have heavy caseloads, poor/inappropriate referrals, and an inability to state when capacity has been reached. The fact that a quarter of teams refuse referrals is also a cause for concern (QNI 2014). Even if this only happens occasionally, the implication is that a large number of patients (on a national scale) are not receiving the right care from the right nurse with the right skills in their own homes which may impact adversely on patient outcomes (QNI 2014). This research is therefore needed current methods of measuring workload and output in the community context are not robust enough to capture the multidimensional complexity of care and variations or differences in rural and urban populations. Models should capture both quantitative and qualitative data related to seen and unseen care and be able to relate to impact on patient outcomes.

The Initial Work

At the England Centre for Practice Development we have already completed some early work to test a web based community nursing version of the Cassandra Matrix [TM] (Leary 2011; Jackson et al 2015) by piloting it in 6 community health care 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 [TM] because they could access it anytime, anywhere on a mobile device, laptop or i-pad which provided more flexibility and less reliance on having to add time to the end of the working day back at the office inputting data. They perceived it as being simple and easy to use reducing their administrative workload. They also identified that it was useful to complete when they were visiting patients in their homes as a discussion point for person centred care tailored to the individual patient's needs. As the majority of community providers are moving to IT based systems to manage workload the mobile version of Cassandra Matrix [TM] is seen as value added rather than value taken away from the interactions with patients.

There were some difficulties encountered, which included: i) the time it took to recruit study Steering Group members, although this was resolved as word of the study spread, ii) winter workload pressures negatively affected the sample size, iii) one the participating organisations experienced IT access issues, which meant less nurses were able to participate. These difficulties will inform the next phase of the research.

Results from the study indicate that Cassandra Matrix [TM] can model an accurate picture of the multidimensional complexity of community nursing intervention, context of care, users of care and care left undone.

The Next Steps

Working with 6 national community health care study sites across England, the next phase of research will undertake a multiple case study evaluation to build a predictive optimum caseload model for band 2-8 district and community nurses to support workforce planning around patient acuity and skill mix, and provide an economic assessment of the cost of care that is missed or left undone. Study objectives are:

1. To develop a data ontology and associated database that provides consistent language for describing district and community nursing (DCN) interventions that can be used to provide reliable and comparable metrics.

2. To determine the utility of the Cassandra Matrix ^{TM} in capturing district and community nursing interventions.

3. To identify how the model can be used to capture local population needs for district and community nursing.

4. To use the data collected 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.

5. To evaluate the usability of the model in assisting managers and local decision-makers in workforce planning.

6. To assess the effectiveness of the model in capturing district and community nursing care left undone or missed.

7. To explore how the model interrelates district and community nursing caseload activity with other health and social care provision in an integrated whole system.

There are minimal published UK workforce modelling projects that have attempted to simulate optimum case load in a community setting. Whilst others are developing computer based tools, these are either being developed by commercial firms as a product capturing linear data for sale to the NHS, or are unable to model the complexity of nursing work. Our proposal is a unique opportunity to provide new approaches to workforce planning drawing 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 2 years and are due for completion in late 2017. The findings will be shared via national events and conferences, through journal publications, and ECPD web, social media and newsletter briefings, so please connect with us on Twitter, YouTube and Facebook to keep up to date as the study it unfolds:

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