The Cassandra Project - Building a Sustainable Workload Activity Model for Future Community and District Nursing Workforce Capacity Planning

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Acknowledging the team

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Key: DCN- District & Community Nurses
GCN – General Community Nurses
Presentation will cover

• 2 year mixed methods study to evaluate the impact of a community nursing workload activity tool to underpin decisions about safe staffing levels.
• Funded by NHSE and HEE regional level
• Phase 1 Published BJCN March 2015
Setting the Scene- Background
Background – The DCN Workforce Issues

- NHS Five Year Forward View
- Shift away from hospital care
- Care close to or in the home
- New models of care delivery
- Flexible high quality innovative workforce
- More District and Community Nurses needed
- Different skill set
Reality - Declining DCN Numbers

- DCN reduction from 13,000 to 7,500 in 10 yrs
- Over 4 years GCNs >by over 3,300- 2,000 are district nurses- 28% decrease
- 45% over the age of 45 approaching retirement
- Downgrading 1,545 band 7 and 1,317 band 8 nurses
- Regional variations-East of England >903 DCNs >twice national average

Source: (HSCIC, 2014)
Understanding the role- clear as mud

• Poor understanding of DCN roles
• Wide variation in numbers of roles and bandings
• Lack of consensus around definitions used to describe activities –
  (1) service (what is being done, how frequently it involves contact with clients)
  (2) population served (and its density)
• Further compounded by variation in how ‘caseloads’ are defined
• Size and skill mix of staffing levels determined historically based on custom around patient caseload
Case Load Issues

- Large number of older people, with complex multi-morbidities, polypharmacy and myriad of psychosocial needs
- Higher levels of dependency - 70% of the health service budget and time to manage
- Heavy caseloads - workload inconsistently distributed
- Poor/inappropriate referrals
- Inability to state when capacity has been reached
- Contact time varies across the country – not evidence based
- 25 clients per caseload - varying acuity
- Not possible to respond to variations in workload by redistributing nursing time to where it is most needed
Workforce Models -False Assumptions about (Community) Nursing

• We can rely on historical patterns to predict the future requirements

• Nursing is application of a simple linear task based physical skill set occupying time (Leary 2011, 2015, Jackson et al 2015)

• Most current IT systems e.g. RIO, System One are diary based linear tools

• Linear methods do not capture complex work well (De Leon 1993; Raiborn 2004)

• Measuring workload based on counting patient contacts alone does not clearly demonstrate the full workload of nurses—bulk of work “unseen” (QNI 2014)
Missed Care Defined

Required patient care that is omitted (either in part or in whole) or delayed’ in response to ‘multiple demands and inadequate resources’.

(Kalisch et al (2009: 1510)

• Negative consequences for patient outcomes
Conclusion

• Need new capacity and demand tools to measure and reflect the complexity of workload and output, maximising the potential of the existing workforce to enable planned growth
The Cassandra Project Objectives

1. Adapt the Cassandra Matrix® workload activity tool (Leary 2011) specifically for the community nursing context with DCNs
2. Pilot across 6 community organisations across Kent, Surrey and Sussex DCNs (bands 5-7)
3. Undertake a utility evaluation of the tool to provide proof of concept as a model to predict and plan for optimum community nursing caseload activity within a whole system.
4. Aggregate the data sets to identify patterns that might impact on caseload management including identification of care left undone
Our Assumptions

- The participants are experts in what they do and understand their own "real world" situation.
- The work that practitioners do is likely to be complex and not a linear series of tasks.
- There is an element of case management at different levels of complexity i.e. from peer support workers to case managing advanced practice nurses. This work is congruent with other long term conditions management.
- Caseload does not equal workload.
Methodology

- Emancipatory Practice Development (ePD)
- Informed by critical realism to understand real world issues
- Formative implementation and process evaluation
- Strengthen or improve the tool being evaluated
  - examine the delivery of the tool
  - quality of its implementation
  - assessment of the organizational context, personnel procedures, inputs, processes and outputs
  - alternative delivery procedures
  - tool fidelity
Methods

• Cassandra Matrix ® Workload Activity Tool (adapted) (Leary 2011)

• Pre and post workload activity survey to capture what difference it made to their self awareness of their role and contribution to care delivery.

• Process evaluation workshops with stakeholder organisations

• BOS survey pre and post workload activity using CCCIs framework (Guba and Lincoln 1989)
What does the Cassandra Tool do?

- Web based tool used in ‘real time’ as practitioners carry out their daily work using computers, phones or tablets to input their activity.
- Intervention, context, time, people, care left undone/activity left undone.
- Six main categories of intervention:
  1. Case management
  2. Clinical admin
  3. Non-clinical admin
  4. Physical
  5. Psychological
  6. Social
What does the tool look like?
Input data for each care episode

Welcome to Cassandra for community teams. This is a specialist data collection tool used as part of a study looking at the complexity and workload of specialist practice. You can download the instructions Here.

At the end of the day please tell us how much unpaid overtime you have worked.

Date: 22 August 2014

Is this data entry for: Please select

Where/how did this take place? Please select

How many hours did you work today? Include any unpaid overtime or worked through lunch breaks 0
Findings

• Approx. 11,000 points of data
• 7,629 interventions collected in 58 regularly used categories
• Issues with collection (not enough for a “big data” study) but shows complexity of care
• 112 examples of care left undone
76% of care delivered in the home
24% in other areas
Spread across the intervention spectrum (2x context)
Areas highlighted with less input?

- Continence management
- Falls assessment/prevention
- Advanced care planning
- Safeguarding
- Social needs assessment

- Cannot generalise as you need big data to do this
- Tool does capture care missed/left undone so economic cost may be applied
Why is this different?

• Models a complex system
• Relies on understanding relationships not just tasks that occupy time
• This includes modelling “negative space” ie work left undone
• Is more sensitive than averages
• Can be used to construct optimum caseload “blackbox”
• Is iterative, takes longer and requires large amounts of data to look for patterns
Mathematical Modelling Applied to Nursing

Garbage data → Great model → Garbage results → Poor decisions

Great data → Garbage model → Garbage results → Poor decisions

Great data → Great model → Great results → INSIGHT!

Leary and Jackson 2015 in press
Modelling is about building a representative “whole system” rather than trying to measure bits
What pilot sites said about its utility

• *It shows what we are actually doing*

• *We had really enthusiastic motivated nurses who could see how they could use the tool to support their workload planning*

• *It is a good tool to use because it provides nurses with the systematic evidence needs to raise awareness of the impact that nurses are having at the front line as well as providing data that evidences skill mix and workforce development issues*
Limitations

• Project timescale
• Winter pressures
• Gaining consistent membership of steering group and pilot sites from the start
• IT issues in one site- champions, web support
Next Steps

• Develop data ontology for community nursing
• Data collection allowing for pattern recognition through NIHR bid
• Optimum caseload calculations using stochastic methods
• Detailed analysis of workforce resourcing patterns and gap analysis
• Economic impact assessment through Burdett Trust programme at RCN
• NICE Safer Staffing guidelines
Other developments

- Sophia workload activity tool for community mental health teams
- Career Competence Framework ready to test (bands 5-8)- QNI

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<th>Purpose 2</th>
<th>Purpose 3</th>
<th>Purpose 4</th>
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<td>Provides and assures first class (Holistic</td>
<td>Provides and assures safe care close to home</td>
<td>Provides effective care close to home at the</td>
<td>Contributes to establishing an effective</td>
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<td>person and family centred care) compassionate</td>
<td>monitoring and evaluating safe practice</td>
<td>individual, service and organisational level</td>
<td>workplace culture that sustains first class</td>
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<td>relationships, teamwork, leadership, active</td>
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- CPD Impact Tool (Health Education England)- 4 theories of transformation
Key References


Thank you!

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@ECPD3
#WePracticeDevelopers

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