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

Carrie Jackson

Director England Centre for Practice Development

Acknowledging the team

Professor Alison Leary, Chair Healthcare and Workforce Modelling, LSBU

Prof Kim Manley CBE, Chair Practice Development and Innovation, ECPD

Dr Toni Wright, Principal Research Fellow

Anne Martin, Research Fellow

Tricia Leadbetter, Research Fellow

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

Source: (HSCIC, 2014)
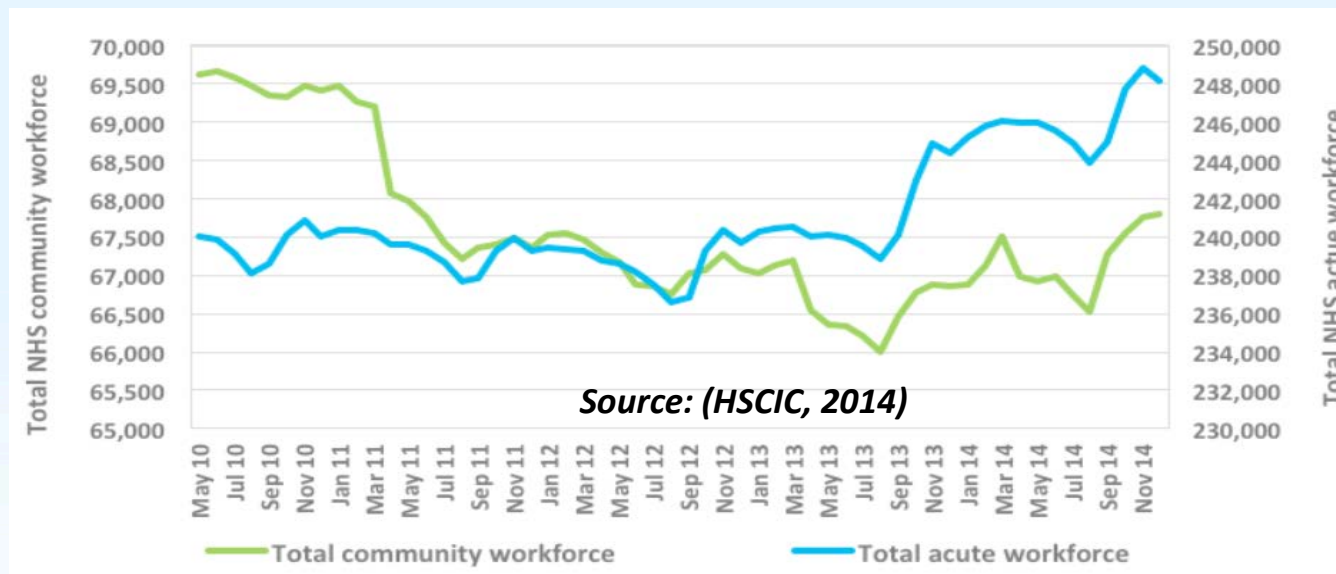
- DCN reduction from 13,000 to 7,500 in 10 yrs
- Over 4 years GCNs >by over 3,300- 2,000 are district nurses- 28% decrease
- 45% over the age of 45 approaching retirement
- Downgrading 1,545 band 7 and 1,317 band 8 nurses
- Regional variations-East of England >903 DCNs >twice national average

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**
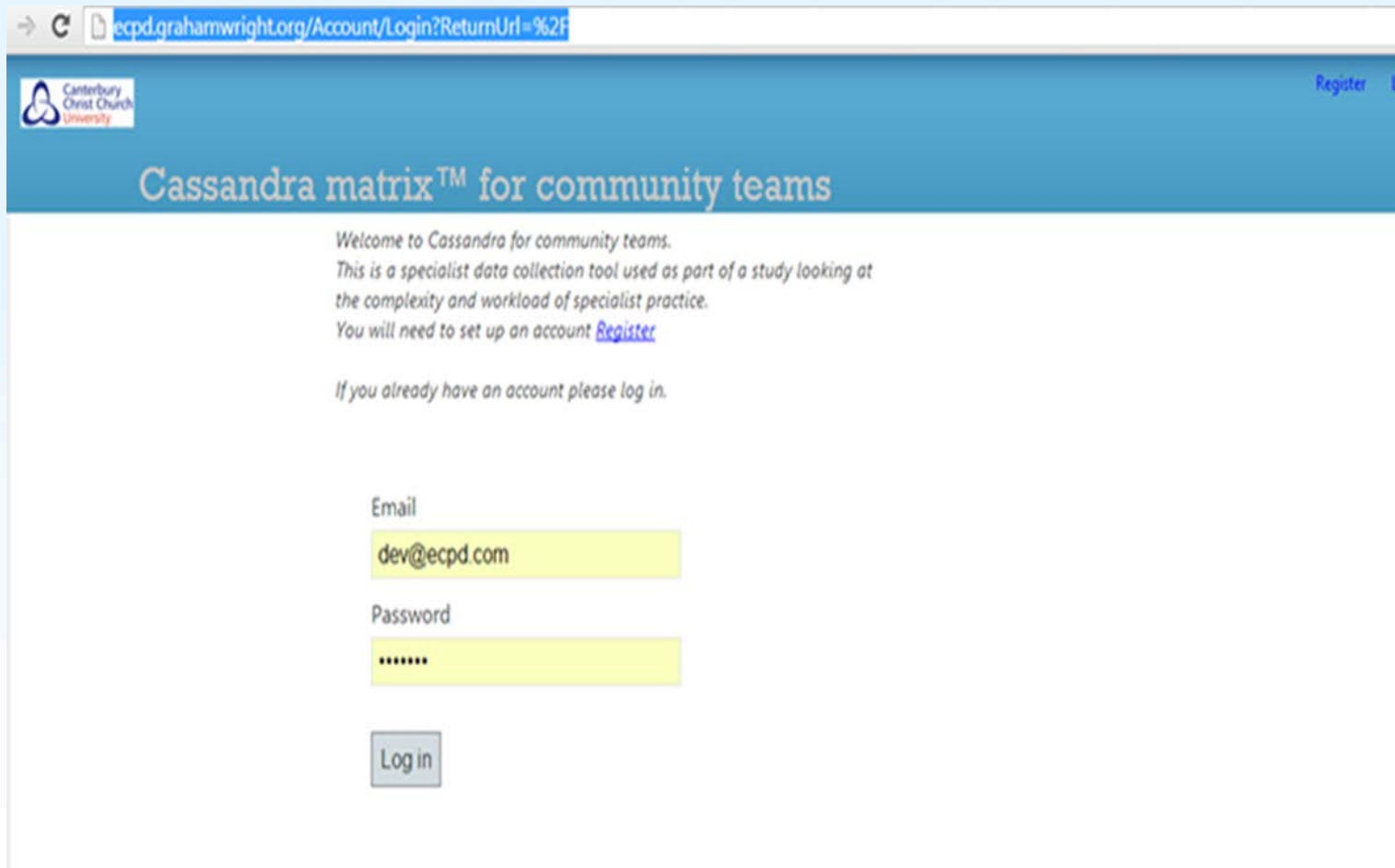 - **alternative delivery** procedures
  - tool **fidelity**

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

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

Intervention by Location

Legend:
- Day centre
- Drop in clinic
- GP/Primary care clinic
- Home visit (first)
- Home visit (subsequent)
- Hospital Inpatient
- MDT meeting/case conference
- Nursing/Care home/Hospice
- One stop shop/Charity
- Telephone planned call
- Telephone/Email response work
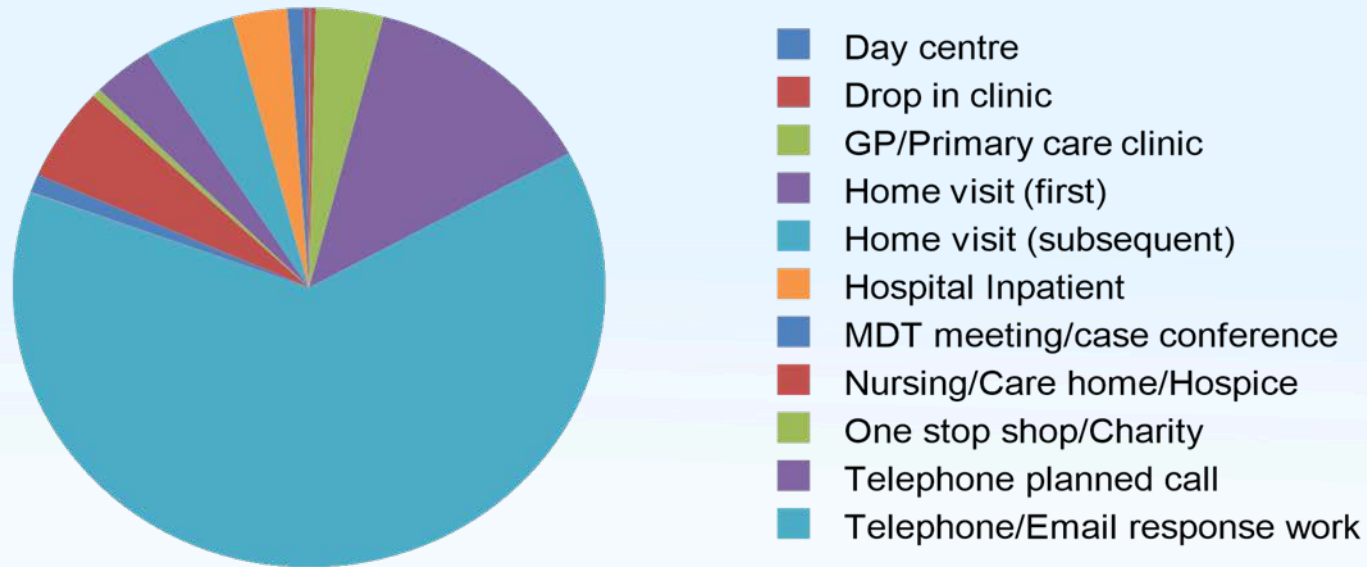
➢ 76 % of care delivered in the home
➢ 24% in other areas

Spread across the intervention spectrum (2x context)
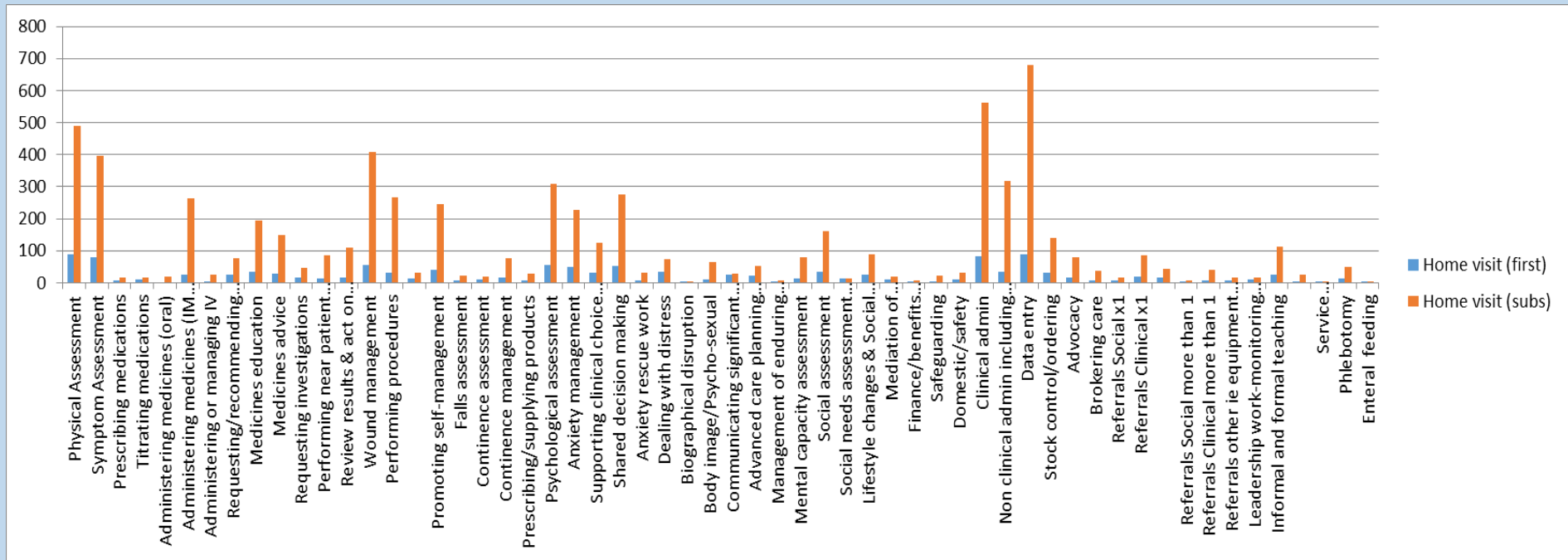
Areas highlighted with less input?

- **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!
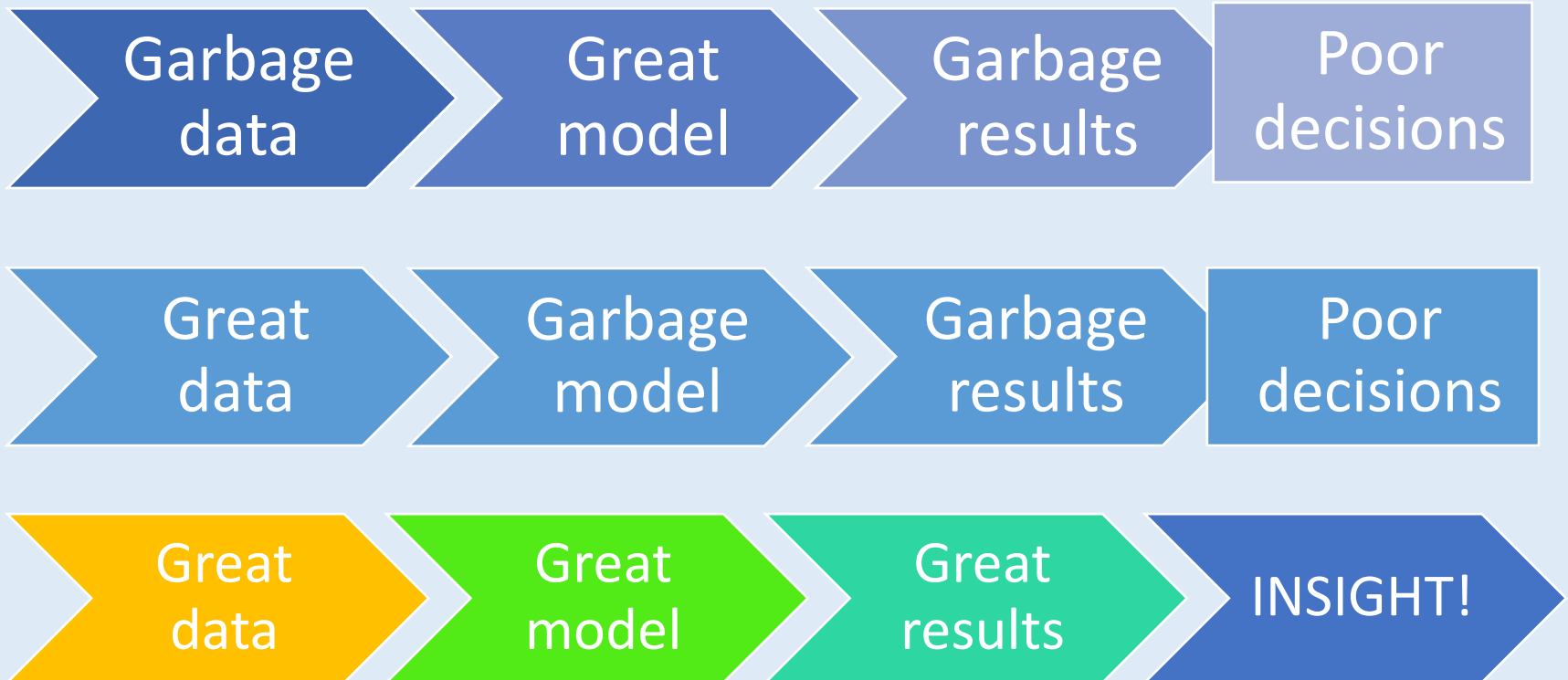
Modelling is about building a representative "whole system" rather than trying to measure bits

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

Purpose 1	Purpose 2	Purpose 3	Purpose 4
Provides and assures first class (Holistic **person and family centred care**) compassionate care close to home evaluating and researching the service user's/stakeholder's experience	Provides and assures **safe care** close to home monitoring and evaluating safe practice	Provides **effective care** close to home at the individual, service and organisational level using evidence based approaches and resources appropriate to achieving optimal patient outcomes	Contributes to establishing an **effective workplace culture** that sustains first class safe and effective care close to home through relationships, teamwork, leadership, active learning, development, improvement and innovation

- CPD Impact Tool (Health Education England)- 4 theories of transformation

Key References

- Jackson, C. et al. (2015) 'Making the complexity of community nursing visible: the Cassandra project'. *British Journal of Community Nursing*, March, 20 (3), 126-133.

- Leary. A. (2011) 'Proving your worth: Alison Leary has tips on how nurse specialists can demonstrate added value'. *Nursing Standard*. 25 (31).

- Leary, A. et al. (2014) 'The work left undone. Understanding the challenge of providing holistic lung cancer nursing care in the UK'. *European Journal of Oncology Nursing*. 18. 23-28.

Thank you!

@ECPDCarolyn

@ECPD3

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- http://www.canterbury.ac.uk/health-and wellbeing/england-centre-for-practice-development/england-centre-for-practice-development.aspx

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Carolyn.Jackson@canterbury.ac.uk