Closing the Loop

Dr. Sam Patel - Clinical Project Lead
The Challenges

• Care is becoming more complex
• Polypharmacy is becoming the norm
• 40% of serious medication errors are due to transcription\(^1\).

Figure 7  Estimated and projected population aged 85 and over, United Kingdom, 2010 and 2035

Note: The number of people aged 90 and above is projected to more than triple by 2035; the number of people aged 95 and above is projected to more than quadruple; and the number of centenarians is projected to rise from 13,000 in 2010 to 110,000 in 2035, a more than eightfold increase.

Source: Office for National Statistics (2011)
Figure 5: Number of chronic disorders by age group

Note: This figure shows how common it is to have significant long-term conditions in relation to age. Few people (fewer than 30 per cent) do not have at least one condition by the age of 60, and many people will have two or three.

Figure 4 Polypharmacy, Sweden, 2005 to 2008

Source: Hovstadius et al., (2010b)
Figure 3  Multiple drug use, Scotland, 1995 and 2010

Source: Guthrie and Makubate (2012)²

1 © 2013. Re-used with the permission of the Health and Social Care Information Centre. All rights reserved.
Medicines communication

TODAY

**Primary care**
- Medicines and Allergies etc. in electronic systems
- Information available in ECS
- Patient admission into secondary care
- On discharge written/electronic (text) communication of medicines back to GP. **TRANSCRIPTION**
- Variable degree of information regarding any change

**Secondary care**
- Patient admission into secondary care
- Medicines information accessed either via ECS, written or verbal
  - **TRANSCRIPTION** into Kardex/ electronic system (non HEPMA)
- Medicines started/ stopped, continued
- Immediate Discharge letter and prescription with a list of medicines on discharge
Total Number of Primary care prescriptions

Source: ISD
Total Inpatient Discharges - All Boards

Source: ISD
Emergency Admissions - Over 65s

Number of Admissions

Year

Source: ISD
The Current Situation

- Poor processes
- Current electronic solutions reproduce paper solutions
- ‘…Improve the electronic communication between primary and secondary care’
Background
Background
Original remit

- Problem Definition & Current State Mapping
- Early Supplier Engagement
- Establish Clinical Blueprint & Requirement
- Develop set of shareable tools, guidance & standards
- Support for Supplier Engagement around software development
Clinical Engagement

- Surveys
- Workshops
- Communication
- Consultation

Clinical Blueprint
Where are the problems?
Information and Communication

Complete?
- Medicines
- Allergies
- Diagnoses
- Follow up

Content?
- Legibility
- Reasoning
- Dose syntax
- Accurate

Comms?
- Timely
- Format
- Queries
- Computable
Medicines

Primary care
- Manual Meds Rec
- No Import
- Alphabetizing?

ECS
- Format
- Not always complete
- Variable trust

Secondary care
- Incomplete recording
- Reasons for change not easily found
- Outpatients
Technology

**Systems**
- Interoperability
- Capture of information
- Enable communication

**Hardware**
- Useable
- Point of care
- Robust

**Access**
- Sign on
- Available
- Support
TRUST
The clinicians vision

- A single view of medicines
- Up to date at all times
- Patient medication record
- Patient access
- Road map to that vision
Four Pillars

- Information Content
- Information Quality
- Information Context
- Communication
Underpinning principles

- Eliminate transcription wherever possible
- Preserve the integrity of medicines information at every stage
- Do not duplicate tasks
- Make it easy to do the right thing
- Make it hard to do the wrong thing
- Make it easy to sort, filter and search for information
- Enable staff to use systems
- Support staff to carry out processes
- Effective use of different technologies
A MESSAGING STANDARD?
A Clinical Roadmap?

PEOPLE & EDUCATION

SYSTEMS & TECHNOLOGY

DATA & INFORMATION

PROCESSES & PRACTICES
People & education

- Doctors
  - Junior Doctors
  - Senior Doctors
  - Undergraduates

- Data Quality
  - Importance
  - Medicines (Reconciliation)
  - Content

- Boards
  - Encourage... then Mandate
  - Policies (e.g. Points of contact for information)
Processes & Practices

Standard processes
- Medicines management
- Documents
- Practices

Recording Data
- Diagnoses
- Follow up
- Allergies
- Medicines

Access
- To systems
- To Hardware
- To Support

Prepare for Electronic Solutions
- Medicines (Rec)
- Mobile technology

Closing the Loop
Data & Information

Information Quality
- Measure & Improve

Standards
- Drug Dictionary
- Dose Syntax
- High risk medication
- Other data sets
- Governance

Development
- Dose Syntax!
Systems & Technology

- Medicines
  - eReconciliation
  - Import of Data
  - ECS

- Technology
  - Available to Clinicians
  - EDT
  - SSO
  - Data capture

- PMR
  - Infrastructure to enable
  - Pilot
  - Full roll out

- HEPMA
  - Integration with developments
  - Interaction with PMR
  - Enabling technology
FIVE YEARS?
Summary

A growing problem.
Part of the solution is technology based but cannot be entirely delivered by IT
Scope of change includes but extends beyond eHealth with multiple stakeholders
Potential to realise multiple benefits
BUT the main focus is Patient safety
Next Steps

Changes in clinical processes?
Education?
Improve ECS?
Standards and common language?
System development?
In which order?
WHAT DO YOU THINK?
Core Project team

- Dr Sam Patel, Respiratory Consultant, Clinical Project Lead NHSL
- Dr Maureen Byrne General Practice, GP Lead GG&C
- James Cardwell-Moore, Project Manager Capita Health
- Alastair Bishop IT/eHealth GG&C Lead GG&C
- Professor Gerry Mckay, Clinical Pharmacology, Consultant Secondary Care GG&C
- Dr Bill Martin General Practice, GP Lead NHSL
- Owen Walpole Management Trainee, Project Team NHSL
- Jim Little, Project Facilitation Capita Health
‘…Vision is not enough: it must be combined with venture. It is not enough to stare up the steps; we must step up the stairs.’

Vaclav Havel.
Next Steps

Changes in clinical processes?
Education?
Improve ECS?
Standards and common language?
System development?
In which order?

WHAT DO YOU THINK?