Lessons on the Documentation of Pharmaceutical Care from Connecting for Health

Ann Slee
Director of Pharmacy
University Hospital of Birmingham NHS Foundation Trust
ann.slee@uhb.nhs.net

Outline

- What is Connecting for Health / the National Programme for IT?
- What the eP programme discovered/delivered
- What are we missing for pharmacy?
- Way forward.....

Scope of National Programme for IT

- At the outset, the scope of the centrally managed NPfIT was to create:
  - a national electronic infrastructure – a broadband network for all NHS organisations in England (N3) – to deliver electronic prescription (Electronic Prescription Service) and
  - electronic appointment booking services (Choose and Book), and
  - to build a life-long, EHR service through the use of a small range of standard software systems

- Connecting for Health - the organisation formed to support delivery

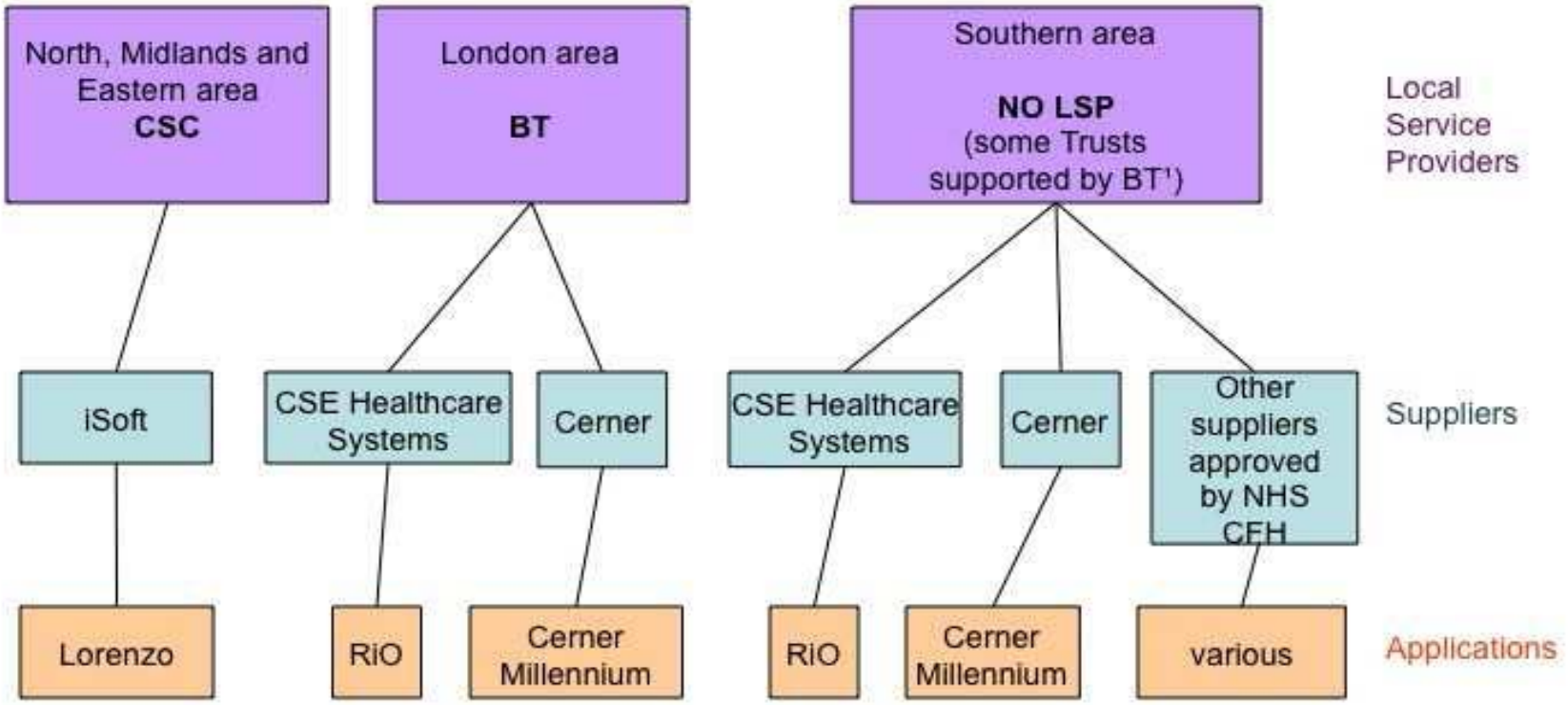
NHS Care Records Service

- NHS CRS strategy was to deploy a few, centrally selected and procured applications
- National connectivity achieved through systems standardisation at regional level
- The applications would enable the creation of detailed, longitudinal EHRs

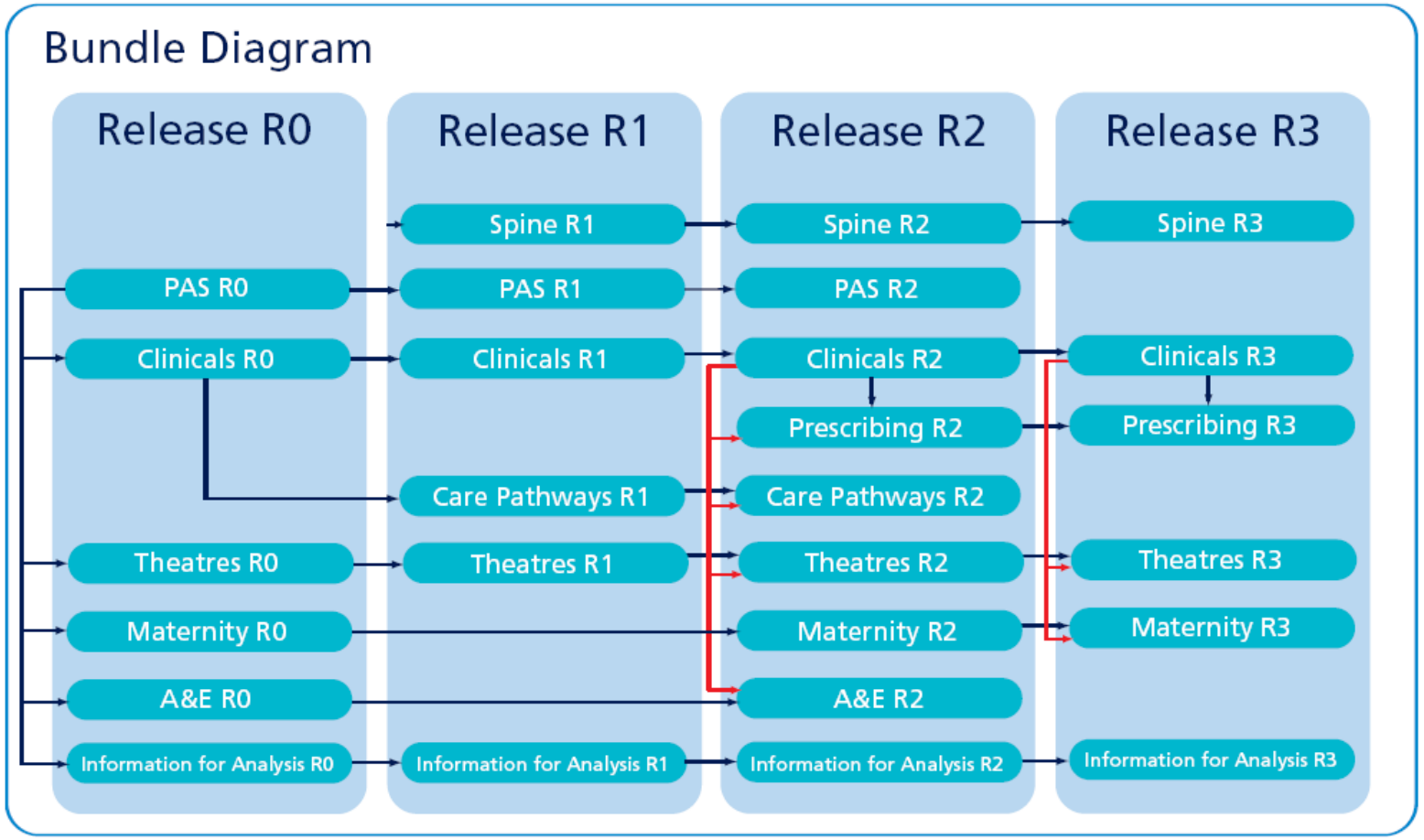
- Every patient would also have an electronic Summary Care Record to hold brief, clinical information - accessible from anywhere at any time of day or night

- Information centrally stored on the NHS Spine, a national database and messaging application
- NHS CRS planned to be the detailed local record together with the summary care record

Delivering detailed electronic health records in secondary care in England



Typical release strategy



The National Programme Diary

1998

- NHS Executive commits to detailed EHRs

2002

- National Programme for IT for England (the Programme) starts
- Richard Granger appointed NHS Information Technology Director

2003/4

- BT awarded contract for the central database and messaging service, the NHS Spine, N3 broadband network
- LSP 10-year contracts awarded:
- CSC - North West and West Midland cluster; BT Capital Care Alliance – London cluster; Fujitsu - Southern cluster; Accenture - North East and Eastern England clusters
- CSC plans to work with subcontracted supplier, iSOFT, to develop a new application, Lorenzo;
- BT and Fujitsu plan to work with subcontracted supplier, IDX Corporation, to implement the application, Carecast

The National Programme Diary

2005

- NHS CFH set up to deliver the Programme
- BT contract re-set 1 for “interim solutions” in London (until Carecast strategic solution becomes available)
- Fujitsu replaces IDX as its supplier and subcontracts instead to Cerner to supply Cerner Millennium in the Southern cluster

2006

- Accenture withdraws as LSP; CSC awarded 9-year contract for Accenture’s former clusters
- BT drops Carecast as a London-wide solution and appoints Cerner as its main subcontractor for acute hospitals in London
- “New Route Map” for London proposals include:
- “best of breed” approach, i.e., three main subcontracted suppliers instead of one – to supply Cerner Millennium for acute Trusts; RiO for community and mental health; and INPS Vision for general practice
- London-wide integration engine, connected to the NHS Spine, proposed to enable London Shared Patient Records

The National Programme Diary

2007

- NLOP introduced (devolved responsibility for local delivery of the Programme from NHS CFH to groupings of Strategic Health Authorities; replaces original 5 clusters with 3 Programme areas - Southern (LSP, Fujitsu), London (LSP, BT) and NME (LSP, CSC)
- BT contract re-set 2 for “best of breed” London solutions

2008

- Fujitsu LSP contract in Southern area terminated, leaving no LSP in Southern area
- BT contract re-set 3 negotiations for New Delivery Model in London (to permit London Trusts – limited – opportunities for local configuration and build of Cerner Millennium); mixing components from originally planned Release Bundles
- Richard Granger, head of NHS CFH, leaves in January; Gordon Hextall, acting head, leaves in April; Christine Connelly and Martin Bellamy appointed to jointly lead NHS CFH

The National Programme Diary

2009

- BT awarded additional contract to take over 8, formerly Fujitsu/Cerner Millennium Trusts, plus 25 Trusts for RiO and 4 additional, acute Trusts in Southern area
- Other Southern Trusts given choice of LSP solution from BT or CSC or from various suppliers in ASCC
- Martin Bellamy, Director of Programmes and Systems Delivery, NHS CFH, resigns
- NHS CFH, headed by Christine Connelly, Chief Information Officer for Health at the DH, is integrated with DH Informatics Directorate
- Parliamentary announcement of contract re-negotiations with BT and CSC/seeking NPfIT cost savings

...today...

2010/11

- May: UK General Election
- New Memorandum of Agreement signed between BT and NHS CFH for reduced number of NHS CRS deployments in London; also negotiations to pare back LSP contract with CSC
- London-wide integration engine plan dropped
- Government review of the Programme confirms that the original, standardised “replace all” approach is to be replaced with a (standards and interoperability-based) “connect all” approach
- NHS IT markets opened up to multiple suppliers
- Outcome of a Department of Health Public Consultation on NHS IT expected in 2011

Local programmes for IT

•The National Programme for IT operates in England and the country is split into three areas, each of which has an LSP.

•London Programme for IT (LPfIT): BT Capital Care Alliance

•North, Midlands and East (NME) Programme for IT (NMEPfIT): Computer Sciences Corporation Alliance (CSCA)

•Southern Programme for IT (SPfIT): BT taking over 8 live Cerner Millennium sites from Fujitsu. ASSC approach for remaining trusts.

•There are 10 SHAs in England and they are represented in the three Programmes for IT.

•SHAs go in 2012.....

Outline

- What is the National Programme for IT?
- What the eP programme discovered/delivered
- What are we missing for pharmacy?
- Way forward.....

ePrescribing:

"…the utilisation of electronic systems to facilitate and enhance the communication of a prescription or medication order, aiding the choice, administration or supply of a medicine through decision support and providing a robust audit trail for the entire medicines use process."

ePrescribing programme aims

- Focus on hospital-based care
- Facilitate and support the delivery of ePrescribing
  - Definitions, standards, content/approach, requirements etc
  - Working with NHS CFH local programmes, system suppliers, NHS trusts…

What does eP cover?

- ePrescribing systems in practical terms should provide:
  - Computerised entry and management of prescriptions, including the administration process (for both inpatient and outpatient prescriptions);
  - Knowledge support, with immediate access to medicines information, e.g. British National Formulary;
  - Decision support, aiding the choice of medicines and additional checking with alerts such as drug interactions;
  - Computerised links between hospital wards/departments and pharmacies;
  - Improvements in existing work processes and communication
  - *A robust audit trail for the entire medicines use process*

ePrescribing work 2006

- Definition of oncology prescribing specification/functionality required
  - identified that contract OBS ‘inadequate’
- Benchmark of existing oncology systems
- Funding for interim solutions 2006
  - 18 cancer networks in progress or implemented
- Clarify Output Based Specification (OBS) requirements for all specialties

Functional specification development

- Clarify OBS requirements
- **May/June2006**
- Clinical engagement workshops involving practising clinicians and professional bodies
  - 13 workshops
  - 472 people attended
  - 115 different organisations represented

Functional specification development

- **Autumn/Winter 2006**
- 100+ responses received
- Specification redrafted

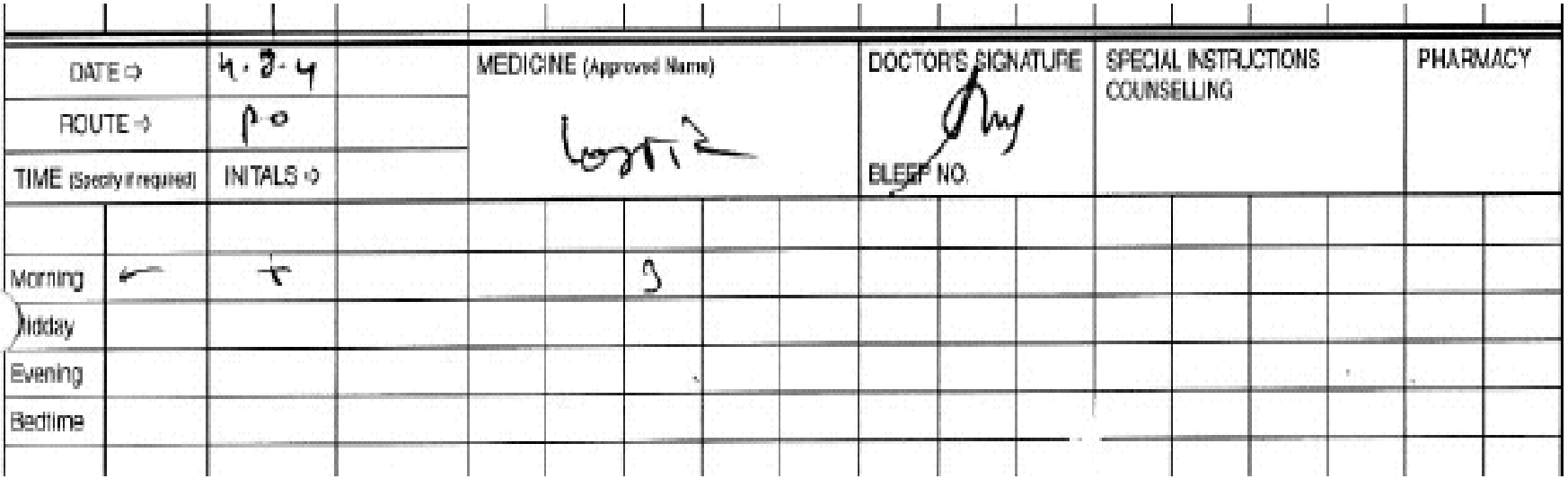
- **Jan 2007**
- Functional specification published
- www.connectingforhealth/eprescribing

What did this work demonstrate?

- eP is complex and challenging to deliver
  - includes 3 types of prescribing plus administration
- Must meet numerous specialty specific requirements
- Requires a culture change to enable implementation
- Key safety challenge

- Easier buy-in if follows other core functionality
  - Pathology, radiology etc

Benefits of eP



DATE ⇨	4·3·4	MEDICINE (Approved Name)	DOCTOR'S SIGNATURE	SPECIAL INSTRUCTIONS COUNSELLING	PHARMACY
ROUTE ⇨	PO				
TIME (Specify if required)	INITALS ⇨		BLEEP NO.		
Morning					
Midday					
Evening					
Bedtime					

Benefits of eP

- **A reduction in the risk of medication errors** -
  - Legible prescriptions;
  - Alerts for e.g. contra-indications, allergic reactions and drug interactions;
  - Guidance for inexperienced prescribers;
  - Access to supporting clinical information e.g. lab results;
  - Reporting on usage patterns, support for clinical audit.
- **Process improvements** -
  - Improved communication between departments and care settings;
  - Reduction in paperwork-related problems, e.g. fewer lost or illegible prescriptions;
  - Clearer, and more complete, audit trails of medication administration;
  - Improved formulary guidance and appropriate reminders within care pathways.

Specialty requirements

- Specification includes common requirements for prescribing, administration and discharge
- Additionally specialty specific requirements defined
- Some examples:
  - **Anaesthetics:** prescribing and administration in one action
  - **Oncology:** highly complex regimens.
  - **Paediatrics:** support for dosing calculations and guidance relating to product to be administered

Speciality Requirements

- ..is pharmacy a specialty?
- No UK standard record agreed for pharmaceutical care documentation
- No UK standard for contributions to patient care agreed
- Many local variations
  - Shrewsbury record
  - Wirral noting system
  - Chester care prioritisation system
  - Wales intervention package
  - ...and more
- US work – ASHP guidance 1993

Outline

- What is the National Programme for IT?
- What the eP programme discovered/delivered
- What are we missing for pharmacy?
- Way forward.....

What will eP mean to pharmacy?

- Automatic or semi-automatic stock control
  - Reduction in transcription / ordering
  - Healthcare Commission: 44% contributions at ward level relate to supply
- Legible prescriptions,
- Verification of prescriptions,
- Medication record availability,

What will eP mean for pharmacy?

- Reminders and alerts including
  - formulary choice at the point of prescribing
  - drug interactions
  - dose range checking
  - drug doubling
- Support for medicines administration
- Noting facilities to support communication between all those caring for the patient....?

What will it mean for pharmacy?

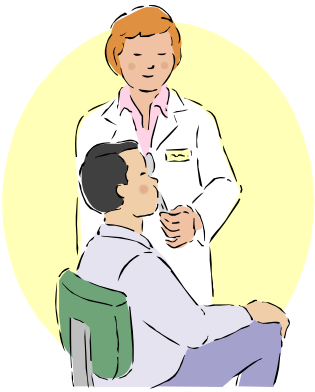
– Will affect current practice
– Could be a threat or an opportunity
– What is pharmacy perceived as doing?

– Which would you want it to be?

Traditional focus

- Identification of supply needs
- Check safety of prescription (e.g. dose, interactions)
- Meet supply needs
- Review changes…. supply
- Supply discharge prescription

New focus?



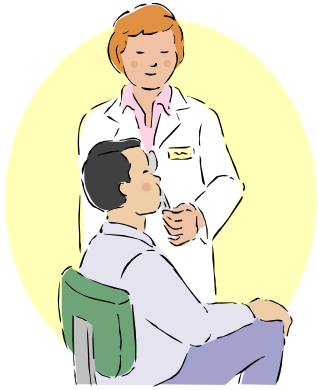
- Patient
  - Healthcare Commission- “comprehensive medication reviews involving patients still not being achieved across the board…”
- Optimisation of medicines use at all stages of care
- Value-added input for and with individual patients

- The Best Medicine, 2007 http://www.cqc.org.uk/_db/_documents/The_Best_Medicine_acute_trust_tagged.pdf

5. Optimisation of medicines on discharge and communication of ongoing pharmaceutical care needs

4. Patient education and Involvement in their treatment plan, and;

Patient



1. Medication review and Optimisation, and;

3. Facilitate ready to administer dosage forms, and;

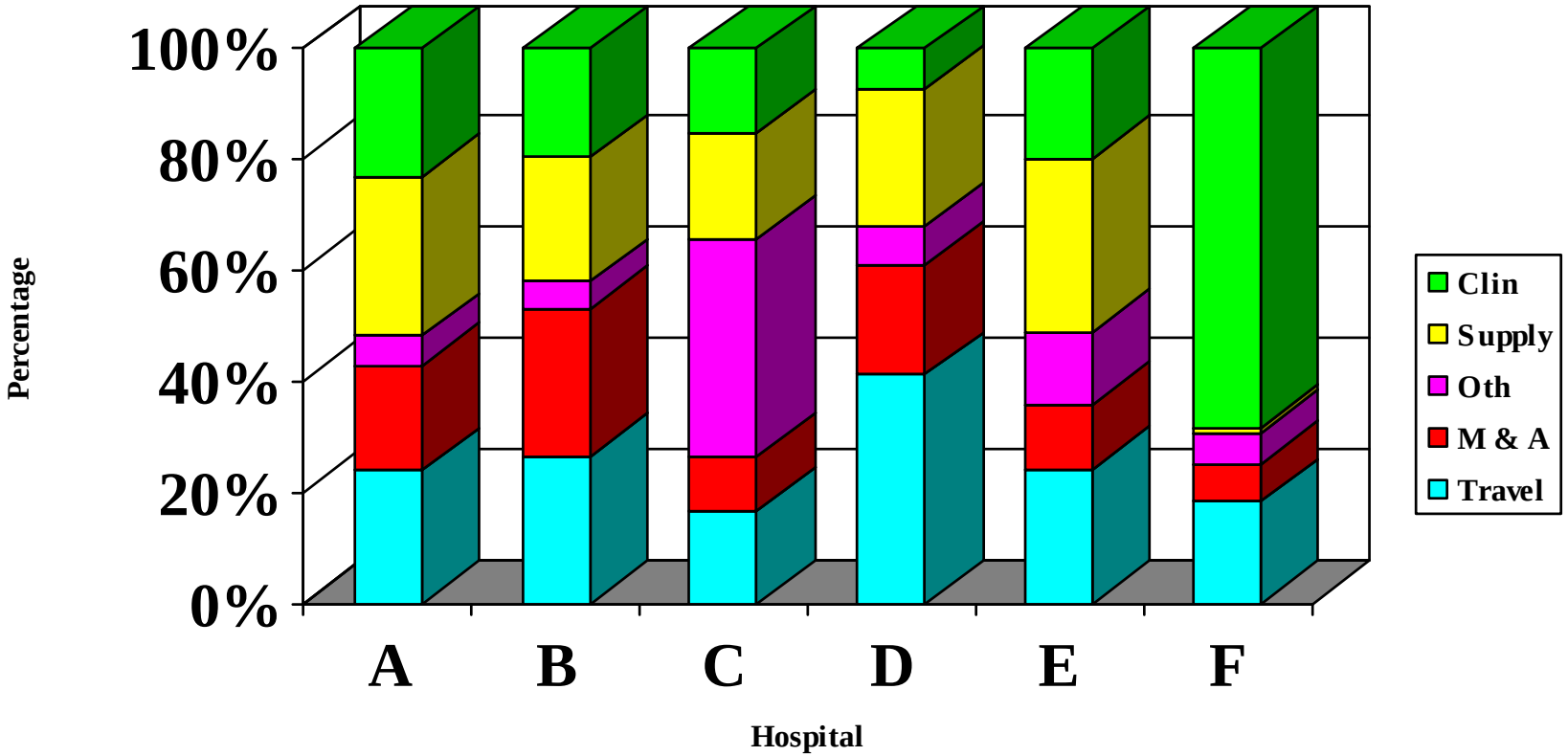
2. Review of patient response and optimisation of treatment charges, and;

Continuous, iterative involvement and input

Support for this role?

- Must record contributions to care
- Share them
- Use for internal and external communication
- Standardised format required
- Structured pharmaceutical care plan/record with incorporated intervention records

Activity analysis of ward pharmacist activities



Abu Zayed L, Farrar KT, Mottram D. PhD Transfer report LJMU 1998

Clinical Pharmacy Support

- Functional specification should contain outline requirements
- UK clinical pharmacy association workshop held to identify core information needs
- Standards relating to these still to be developed
- Information standards for recording information still to be developed

- Outline can be found at www.connectingforhealth.nhs.uk/eprescribing

A challenge for the profession…

- Agreement on the record structure
- What detailed content is required
- Agreement on the parameters

- Needs to be done **now**
- Use time now to develop and understand how role can alter
- Opportunity or threat?

- Slee, A., Farrar, K., Hughes, D. and Ashwell, S. (2007) ‘Electronic prescribing – implications for hospital pharmacy.’ *Hospital Pharmacist* 14, 217-220

Outline

- What is the National Programme for IT?
- What the eP programme discovered/delivered
- What are we missing for pharmacy?
- Way forward.....

...other professions?

- Royal College of Physicians commissioned by CfH to identify care record requirements
- Professional bodies asked to identify requirements
- Royal Pharmaceutical society initiated work to identify needs
- Outline drafted, stakeholder workshops run 2010
- Initial output published 2010

Royal College Guide 2009

- Writing good medical notes is essential but can feel like a chore
- Badly written notes are dangerous for patients and can expose you to litigation
- Do the best for your patient and reduce the risk of things going wrong

- http://www.rcplondon.ac.uk/sites/default/files/protecting-patients-yourself-booklet.pdf

Academy of Royal College Standards

- A clinicians guide to record standards
- Part one – why standardise the content and structure of medical records
- Part two – standards for the structure and content of medical records and communications when patients are admitted to hospital

- http://www.rcplondon.ac.uk/resources/clinical-resources/standards-medical-record-keeping/structure-and-content-medical-notes/de

Summary

- CfH identified an outline framework at best
- It has supported the Royal Colleges in the development of some core standards for record keeping – medically focussed...
- Guidance not constraint
- Record keeping is semantically rich
- ..the delivery of systems and standards still largely remains a dream
- Has the profession woken up to the challenge/opportunity/threat??

Workshop

Integrating and Using Multidisciplinary Records

Developing a structured, standard recording tool for pharmaceutical care….

- No agreed national standards for
  - Whether a record should exist
  - What a pharmaceutical care record should contain assuming it is required
  - How it should be utilised
  - The principles governing its use

Why might we need such a record?

- The cornerstone of pharmacy practice largely remains supply...
- Much clinical work is unseen particularly in relation to the wider healthcare team
- Patients often do not understand our input
- The electronic era offers opportunities to streamline supply
- The electronic era may threaten survival....

Opportunity or Threat?

- Opportunity
  - Medication safety and quality remain poor in many areas – complexity is increasing
  - Can free time to allow increased clinical input and more patient focus
  - Demonstrate input
- Threat
  - IT will sort the safety and quality
  - Revenue is decreasing in real terms
  - Current contribution is poorly understood &/or invisible

UHB

- 1234 beds
  - Regional and national services – large transplant centre, military medicine, liver and renal specialties, oncology centre, 100 crit. care beds etc, etc
- Comprehensive eP across all beds
- Poor pharmacy service
- Documentation of input non-existent
- Service based on supply.....

UHB

- Recent repeat of EQUIP study
  - Baseline to look at input
- Initial standards for documentation in place
- Resistance to documentation
  - Prefer not to be held accountable
  - Risk that may not be right
  - Time
  - Professional anxiety re peer challenge

UHB

- Patient admitted with pneumonia. Rx lithium, furosemide, etc, etc
- Pharmacist recommended 200mg bd
- No record of where this from, no record of challenging furosemide (dose altering daily)
- Patient Li level increased to toxic range two weeks later
- Pharmacist identified potential issue – left note suggesting review
- Patient RIP two weeks later – pneumonia secondary to Li toxicity

Royal College of Physicians

- Clear statement that patient record is the cornerstone of dialogue, decisions and actions taken
- Writing good medical notes is essential but can feel like a chore
- Badly written notes are dangerous for patients and can expose to litigation
- Do the best for your patient and reduce the risk of things going wrong

Pharmaceutical care record...

- Not recognised outside of profession
- No clear guidance as to what should be included
  - Clinical input
  - Interventions
- No standards agreed re content or structure
- No agreement within profession that documentation required

Royal College of Physicians

- The case and vision for patient-focussed records
  - Read and digest Jan 2010 statement
  - vision-statement-jan-2010.pdf

Developing a structured, standard recording tool for pharmaceutical care….

- Outline:
  - Should this be supported?
    - Are there any proviso's that need to outlined?
  - What are the overarching principles that we might assert?
  - Risks with taking this forward?

Summary from Day One

- Developing a structured, standard recording tool for pharmaceutical care....
- ...Insert here
- Should this be supported?
- What are the overarching principles?
- What are the risks?

Developing a structured, standard recording tool for pharmaceutical care….

- What is out there?
- Improving communication between secondary and primary care for CPOD patients - Wales
  - Patient specific medicines use plan created on day of discharge
  - Faxed to community pharmacy
  - Pharmacy follows up within 6 weeks undertaking medicines use review
  - Improved accuracy, knowledge of discharge medicines
  - Further outcome work underway

Developing a structured, standard recording tool for pharmaceutical care….

- Electronic Care Plans – Chester
  - Allows patients to be prioritised for care planning
  - Supports documentation of a care plans
  - Records interventions made
  - Documentation of concordance issues
  - Reduces duplication of effort
  - Makes input visible to all clinical professions
  - Allows for prioritisation of clinical input

Developing a structured, standard recording tool for pharmaceutical care….

- Electronic discharge prescriptions - Wales
  - List of medicines on discharge
  - Information on discontinued, altered, new medicines
  - Clinical summary
  - Information available to primary care on day of discharge
  - Consistent structure supporting interpretation

Developing a structured, standard recording tool for pharmaceutical care….

- Wirral
  - Non-structured notes for pharmacy input and ongoing monitoring
  - Intervention recording
- Shrewsbury
  - Semi-structured notes documenting pharmacy input
  - Information relating to supply
  - Information for discharge
  - Communication to primary care on discharge

Developing a structured, standard recording tool for pharmaceutical care….

- NHS health checks – London
  - Data recorded on age, gender, BP, blood glucose etc
  - Input into QRISK 2 risk engine – 10 year risk estimation for heart disease, stroke, diabetes or kidney disease
  - Information communicated to primary care

Developing a structured, standard recording tool for pharmaceutical care….

- Many different ways and types of information documented
- Pharmaceutical Society moving toward supporting a standard care record – benefits..
  - Standard record structure
  - Improve communication across all branches of the profession
  - Enable data collection to assess service provision, support service development
- Improving patient care....?

Workshop

- Review
  - RPS document
  - CfH specification headline areas for documentation
  - Royal College record keeping documents
  - ASHP guidance 1993

- What else is out there that needs to be referenced?

Workshop

- Principles identified yesterday
  - Further develop these -
  - What would the headline areas be for inclusion in a record
  - Is the information is available elsewhere?
    - Do not reinvent the wheel – reuse and focus elsewhere.
    - We are not trying to reproduce the medical record.....assume it is electronic and available

Workshop

- Take headline areas
- Develop each in more detail outlining
  - Why the information is required
  - What the benefits would be
  - What the information is that should be recorded
  - What the output should look like

Where Now?

- What can we take away and trial?
- How can we measure/feedback collectively
- Where now?