EAHP ACADEMY SEMINAR
30 Sept - 1 Oct 2016, Bucharest
From Medicines Reconciliation to Medicines Optimisation

Issues to consider linked with medicines review on the ward (UK)
- Patients’ Own Drugs
- Missed Doses
- Anticoagulants
- Medication Safety Officer role

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Development & Governance
NBT Medication Safety Officer (MSO) (UK)

Exceptional healthcare, personally delivered
Disclosure Statement

"Conflict of interest: nothing to disclose"
Learning Objectives

Participants should be able to:

- Transfer principles of the use of Patients’ Own Drugs
- Understand how to measure and highlight the issue of Missed Doses
- Understand how to measure and Reducing Harm from Anticoagulants
- Understand the role of the Medication Safety Officer (in England) and what principles can be transferred for local use in improving reporting of and reducing harm from incidences
SUMMARY QUESTIONS:

Linked with the learning Objectives for today:

- Missed Doses impact on the outcome of Medicines Reconciliation and Medication review. True or false?

- Patients Own Drugs (in the UK) are a useful source for aiding Medicines Reconciliation and Medication review. True or false?

- The incidence of high INRs do not impact on Medication review. True or false?
Who are we?
NBT – North Bristol
Patient Safety: Medicines Management work stream

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North Bristol NHS Trust (NBT)  
All of our work started on:

- Acute Teaching Trust: 2 sites
- 1087 beds
- 53 wards
- 9100 staff

- Southwest Quality and Patient Safety Improvement programme: 2009–2013

End of May 2014: New Hospital:

- Now approx. 850 beds and 27 ward areas
Quality Improvement Methodology

- Ongoing measurement
- Tests of change

Worksheet for Testing Change –

Aim: (Overall goal you would like to reach)

Every goal will require multiple smaller tests of change

<table>
<thead>
<tr>
<th>Describe your first (or next) test of change</th>
<th>Person Responsible</th>
<th>When to be done</th>
<th>Where to be done</th>
</tr>
</thead>
</table>

Plan

List the tasks needed to set up this test of change

<table>
<thead>
<tr>
<th>Person Responsible</th>
<th>When to be done</th>
<th>Where to be done</th>
</tr>
</thead>
</table>

Do

Predict what will happen when the test is carried out

<table>
<thead>
<tr>
<th>Measures to determine if prediction succeeds</th>
</tr>
</thead>
</table>

Study

Describe the measured results and how they compared to the predictions

Act

Describe what actually happened when you ran the test

Describe what modifications to the plan will be made for the next cycle from what you learned
Patients Own Drugs (PODs)—key drivers:

PODs are the medicines that a patient has been taking before admission to hospital—and can include Rx medicines, herbal, Over-the-counter etc.

- “Duthie report” (1988)
- “A Spoonful of Sugar” (2001)
- “Improving the use of medicines for better outcomes and reduced waste: An Action Plan” (2012)
Patients Own Drugs – actions:

- **Phase 1**: 1992–1996: Pharmacy based:
- **Phase 2**: 1997–2000: Ward based:
- **Phase 3**: 2001–2004: Medicines Management: trials:
- **Phase 4**: 2005–2014: MM: service spread

MM Technicians are trained in all aspects of the process:

- Patients/Carers interviewed about PODs and “PODs at home”
- Depending on the estimated LOS - PODs are used on ward and in TTA
- All patients have bedside lockers – links with self-administration

**Impact on Medicines review:**
- Accurate info. on administration for prescribing
- Medicines available – reduced missed doses
Patient’s Own Drugs – run chart:

Patients Own Drugs Savings – North Bristol NHS Trust
April 1992 – March 2014

- 2005 – Acceptance of Business case
- 2008 – POD screening introduced
- 2007 – Introduction of database and targets

Phase 1: 1992 – 1996 – POD: Pharmacy processed (SMH only)
Phase 2: 1997 – 2000 – POD: Ward processed (SMH only)
Phase 4: 2005 – present time – MM: service spread (SMH + FR)

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North Bristol NHS Trust
Patient’s Own Drugs – savings:

Patient Own Drugs Savings – North Bristol NHS Trust
Apr 1992 – Mar 2014
Total Savings - £4,800,859

92/93 – 05/06 £359,408
06/07 £390,536
07/08 £421,074
08/09 £598,050
09/10 £592,280
10/11 £705,902
11/12 £730,551
12/13 £598,030
13/14 £405,026
Patients Own Drugs – Poster:

**PATIENT’S OWN DRUGS ARE IMPORTANT**

We need them in hospital

To Improve Patient Safety by:
1) Preventing delays in therapy
2) Preventing missed doses
3) Preventing errors in the medication history
4) Understanding compliance issues
5) Avoiding wasting valuable NHS resources

Why?

All Drugs Prescribed by the GP:
1) Tablets, Capsules and Liquids
2) Creams and Ointments
3) Eye and Ear Drops
4) Inhalers and Nebules
5) Insulin pens and cartridges
6) Over the counter medication from the Pharmacy

What?

For example:

Contact
North Bristol NHS Trust
Bristol Royal Infirmary:
Developed by: A. Sweeney + J Hamer
Date: 30th April 2010
Updated: March 2016

Tel: 0117 4142303
Tel: 0117 928 2053
Approved by: J Smith + K Gibb
Review date: April 2011
Review date: March 2019

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Missed Doses – Definition:

“Missed Doses” are medication errors that occur when a medicine is not given to a patient when prescribed. They may cause harm to patients, lead to increased morbidity/mortality and inflate healthcare costs.

Causes: a result of errors during the supply, prescribing, dispensing or administration of medicines in hospitals and in patients’ home.

Impact on Medicines review:
- To consider impact when reviewing prescribing
Missed Doses – key drivers:

- NPSA/NICE: Medicines Reconciliation guidance (2007)
- Medication Safety Thermometer (2013)
- Medicines Optimisation Dashboard (2014)
Missed Doses – actions:

Phase 1 (Pre 2014 “MOVE”):
  - A training package and Laminated posters
  - An e-audit tool
  - Ward handover sheets
  - Pink missed dose order slip/orange leaflet
  - Focus group discussion

Phase 2 (Post “MOVE”):
  - Missed Doses Dashboard
  - Admissions Medical Unit (AMU) audit
  - Medication Safety Alert poster
Missed Doses
Medication Safety Alert poster

“Missed Doses” are one of the highest reasons for an incident report at NBT - and are medication errors which cause harm to patients.

Learning points:

- **On Admission / or when Prescribing:**
  - Ensure Patients Own Drugs are used as part of the Medicines Reconciliation process. **DO NOT** send home.
  - **Doctors** - Highlight changes to prescription charts to nursing staff

- **On Transfer**
  - Ensure Patients Own Drugs and any Pharmacy supplies are transferred with the patient
  - **Check avaiability of all drugs on the new ward**
    - Check Pharmacy endorsements on prescription chart
    - Check stock list / drug cupboards / POD chute
  - **Nurses** - report all missed doses on handover and follow up

- **Administration**
  - If not available document code 6 on chart and obtain drug
  - Once sourced, administer ASAP if safe to do so
  - After giving drug – sign to avoid drug being given twice

- **How to source a drug**
  - Check “Unable to find medication” posters – on all wards
  - Bleep your ward Medicines Management Technician / Pharmacist
  - Order on a green Pharmacy item request slip
  - If out of hours - contact the CSM

- **Monitoring “Missed Doses”**
  - Report all incidents on eAIMS safeguard
  - Pharmacy - monitor Missed Doses daily
  - Nurses – ward data collection

**For Action by:** All medical staff, nursing and pharmacy staff

Alison Mundell, Clinical Team Manager
Julie Haime, Senior Pharmacy Technician Medicines Management
Dr Jarrod Richards, Consultant, Care of the Elderly
Sarah Dodd, Deputy Director of Nursing
Anne Smith, Principal Pharmacist and NBT Medication Safety Officer

Version 1
Issued: 17th April 2015
Missed Doses – run chart:

Percentage of patients with one or more missed doses across North Bristol NHS Trust

- Phase 1: February 2010 – July 2010
- Phase 2: August 2010 – April 2011
- Phase 3: May 2011 – September 2011
- Phase 4: October 2011 – October 2013
- Phase 5: October 2013 – now

May 2014 Moved into Brunel Building
Warfarin – key drivers:

Warfarin is a high risk medicine. Patients with INR>6 are at exponentially increasing risk of bleeding.

Drivers include:

• NPSA alert (2007) “Actions that make anticoagulation safer”.
• SPI2 set a target of reducing harm from anticoagulants by monitoring INRs>6.

Impact on Medicines review:

- Accurate info. on administration for prescribing
- Potential drug interactions
Warfarin – actions:

- **Re-design the warfarin administration chart:**
  - highlighting co-prescribing of interacting medication
  - adding prescribing hints
  - removing 10mg doses from low loading regimen
  - updating management of high INRs and bleeding

- Development of the mini-RCA tool

- Medical and nursing electronic learning packages

- Medication Safety Alert
Warfarin – run chart:

Number and incidence of inpatients with warfarin INR ≥6

- Blue bars: Inpatients having INR tests for Warfarin
- Red line: Inpatient warfarin INR greater than 6
- Line: Incidence of inpatients with warfarin INR ≥6
Warfarin – origin of INR >6:

- Hospital: 55
- Community: 37
- Hospital not investigated: 56
Warfarin – causes:

![Bar chart showing reasons for investigated hospital warfarin INR > 6]

- Interacting medication prescribed
- Incorrect loading dose guide used
- Loading dose guidelines not followed
- INR not checked on admission
- Warfarin not prescribed appropriately
- Other
Role of MSO – National scene: England

NPSA (National Patient Safety Agency) - now NHS Improvement

National Alerts –

- 2001 – 2013: ... 40 alerts/ signals
- 2014 – 7 alerts  2015 – 7 alerts

Actions -

- Three-stage alerting system - new “Patient Safety Alerts” (PSA’s):
  - Stage 1: - Warning – action required in approx. 1 month
  - Stage 2: - Resources – action required in approx. 3 months
  - Stage 3: - Directive – action required in approx. 6 months

Regional Networks – “steal shamelessly !!”

Impact on Medicines review: high risk drugs

e.g. fatalities from missed desmopressin
NHS – Medication Safety

Medication safety in the NHS

At the heart of future NHS challenges, 20% of people over 70 years old take five or more medicines. With an ageing population and multiple chronic medical conditions, these numbers will just keep increasing.

600,000 non-elective hospital admissions are due to medicines, 70% of which are preventable.

1 billion prescriptions are issued every year in primary care.

5 classes of medicine account for most admissions:
- NSAIDs
- Antiplatelets
- Anticoagulants
- Diuretics
- Antihypertensives

Prescribing errors:
- 50 million

Dispensing errors:
- 400,000
- 33 million

Per year in the average acute hospital:

- 2.5 million doses of medicines administered
- 1/2 million inpatient prescriptions
- 2500 preventable deaths
- 97,000 patients admitted to all acute hospitals suffer from harm due to medicines

97% of medication errors reported to the NHS result in no or low patient harm.
NHS – Medication Safety

Medicines Optimisation: Helping patients to make the most of medicines
Good practice guidance for healthcare professionals in England
May 2013

Endorsed by

Principle 3
Ensure medicines use is as safe as possible

All centred around measurement/metrics and outcomes

Aligned measurement
medicines optimisation

Patient-centered approach

Make medicines optimisation part of routine practice

Evidence based choice of medicines

Aim to understand the patient’s experience

Improved patient outcomes
<table>
<thead>
<tr>
<th>Organisation</th>
<th>count</th>
<th>count aggregate</th>
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<tr>
<td>Grand Total</td>
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</table>
1. gather evidence of a local learning culture
2. incrementally improve reporting and learning
3. implement better, safer medication practice locally and nationally
4. work together as discrete groups on common topics
5. be the formal conduit between NHS England Patient Safety and practice for medication safety issues
Article 107a(5) of Directive 2001/83/EC outlines the key responsibilities of national competent authorities (MHRA) in relation to the reporting of ADRs associated with medication error:

- Member States shall ensure that reports of suspected adverse reactions arising from an error associated with the use of a medicinal product that are brought to their attention are made available to the Eudravigilance database and to any authorities, bodies, organisations and/or institutions, responsible for patient safety within that Member State. They shall also ensure that the authorities responsible for medicinal products within that Member State are informed of any suspected adverse reactions brought to the attention of any other authority within that Member State. These reports shall be appropriately identified in the forms referred to in Article 25 of Regulation (EC) No 726/2004.
Role of MSO – NBT actions:

**Medication Safety Subgroup**
- Nurse / Doctor / Patient / Risk manager / MSO

**Incidents reports**
- Numbers of reports causing harm : Total number of reports

**Actions – internal alerts / SOPs / safety work streams**
- Work through Medicines Governance Group

**RCAs – pharmacy input**
- For all serious incidents – externally reported
How are we sharing?

Presentations and Workshops

- European Association of Hospital Pharmacists (EAHP) Academy Seminar Zagreb (September 2015)
- EAHP Congress, Hamburg (March 2015)
- West of England Academic Health Science Network Annual Conference (October 2014)
Achievements UK Awards: Shortlisted

- “HSJ Value Awards” (2016)
- “I love my Pharmacist”!! (2015)
- Pharmaceutical Care Awards (2015)
- HSJ Awards (2014)
- HQIP Awards (2014)
- LEAN Healthcare Academy Awards (2014)
- HSJ Patient Safety Award (2013)
- APTUK Awards (2014) - Winner
- Clinical Pharmacy Congress (2014) Winner
Key Learning points

- SPI2 - support from experts/peers - improvement methodology; “learn from others”; “share success” and “steal shamelessly”!!

- Continuous Measurement is ESSENTIAL
  
  “In God we Trust – all others bring data!”

- “Buy-in” of staff // start with enthusiasts // leave laggards.

- Tempting to spread too quickly. Plan, continue to embed and gain support as the project evolves.
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Linked with the learning Objectives for today:

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Thank you - Any Questions?
Jane.smith@nbt.nhs.uk