GS1 Healthcare Provider Advisory Council (HPAC) Webinar Implementation in a hospital pharmacy in Belgium

GS1 Global Office
8 May 2014
HPAC Case Study Webinars

• This is the FOURTH Webinar;
  “The missing link in patient safety”
• It will be recorded!
• Webinars will take place monthly
# HPAC Case Study Webinars

<table>
<thead>
<tr>
<th>Date</th>
<th>Speaker</th>
<th>Webinar theme</th>
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<tr>
<td>12 June 2014</td>
<td>Michael Innes &amp; Kirk Metzger Kaiser Permanente</td>
<td>Achieving supply chain efficiencies, delivery of patient care and product utilisation. HPAC Award Winning Case Study</td>
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<tr>
<td>10 July 2014</td>
<td>HTG representative</td>
<td>HTG Update</td>
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Details here: [http://www.gs1.org/healthcare/hpac_webinars](http://www.gs1.org/healthcare/hpac_webinars)
The missing link in patient safety

Thomas De Rijdt

Webinar 08-05-2014
Who’s talking?

• Thomas De Rijdt, PharmD
• Vice-president of B.A.H.P.
  – Belgian association of hospital pharmacists
• Boardmember of V.Z.A.
  – Flemish association of hospital pharmacists
• Assistant-head of pharmacy UZ Leuven
When something happens …

• Who’s afraid to go to the hospital?
• Why are you afraid?

Nothing can go wrong, we don’t make mistakes!

Until 1999
To err is human ...

- Report Institute of Medicine: “To Err is Human” (1999)
  - 44,000 – 88,000 deaths/year by medical errors
  - Extrapolation for Belgium (11 million inhabitants):
    - 1000 deaths / year (<150 medication errors)
    - € 2,500,000 / year for 700 bed hospital
  - Avoidable ADE in 2 % of the admissions
Real life ...

• Oops, wrong room

• Benzo’s are good, much benzo’s are better

• Prune concentrate ?

• Marcoumar 1,5 !
Distribution of medication errors

- CPOE: 34%
- Scanning: 62%
- Pharmacy: 4%
From prescribing to C.P.O.E.
Decision support for prescribers
**Medicatie**

<table>
<thead>
<tr>
<th>Medicatie</th>
<th>Toed.</th>
<th>ma 28-04</th>
<th>di 29-04</th>
<th>wo 30-04</th>
<th>do 01-05</th>
<th>vr 02-05</th>
<th>za 03-05</th>
<th>zo 04-05</th>
<th>ma 05-05</th>
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<tbody>
<tr>
<td>NATRIC HDR ORIDE 0.9% (FL INF 50 ML)</td>
<td>IV Inf</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1 infus</td>
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<tr>
<td>NATRIC HDR ORIDE 0.9% (FL INF 100 ML)</td>
<td>IV Inf</td>
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<td></td>
<td></td>
<td>1 infus</td>
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<tr>
<td>NEULASTA MN (SPUNT 6 MS)</td>
<td>SC</td>
<td></td>
<td></td>
<td></td>
<td>1 stuk</td>
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<tr>
<td>PERIO AID MONOPOREL (FL 600 ML 0.72%)</td>
<td>OROMUC</td>
<td>4*10 ml</td>
<td>4*10 ml</td>
<td>4*10 ml</td>
<td>4*10 ml</td>
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<tr>
<td>MAALUX ANTACID (ZAARJE 4.3 ML)</td>
<td>PO</td>
<td>3*1 zakje</td>
<td>3*1 zakje</td>
<td>3*1 zakje</td>
<td>3*1 zakje</td>
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<tr>
<td>PANTOMED (TABL 20 MS)</td>
<td>PO</td>
<td>20 mg</td>
<td>20 mg</td>
<td>20 mg</td>
<td>20 mg</td>
<td>20 mg</td>
<td>20 mg</td>
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<tr>
<td>ALOXI (FL INF 250 MGCS/5 ML)</td>
<td>IV Bolus</td>
<td>250 µg</td>
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<tr>
<td>LAXOBERON (FL 15 ML)</td>
<td>PO</td>
<td>10 drup</td>
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<td>FORLAX (ZAARJE 10 G)</td>
<td>PO</td>
<td>1 zakje</td>
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<td>MOVICOL (ZAARJE NEUTRAAL 13.79 G)</td>
<td>PO</td>
<td>2*1 zakje</td>
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<td>2*1 zakje</td>
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<td>1 zakje</td>
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<td>1 zakje</td>
<td>1 zakje</td>
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<tr>
<td>LASIX (AMP INF 20 MG/2 ML)</td>
<td>IV Bolus</td>
<td>40 mg</td>
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<tr>
<td>DAFALGAN (TABL FORTE BRUS 1 G)</td>
<td>PO</td>
<td>4*1 g</td>
<td>4*1 g</td>
<td>4*1 g</td>
<td>4*1 g</td>
<td>4*1 g</td>
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<tr>
<td>HALDOL (FL DRP P O. 2 MG/ML 16 ML)</td>
<td>PO</td>
<td>4*5 drup</td>
<td>4*5 drup</td>
<td>4*5 drup</td>
<td>4*5 drup</td>
<td>4*5 drup</td>
<td>4*5 drup</td>
<td>4*5 drup</td>
<td>4*5 drup</td>
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<tr>
<td>ZYPREXA (TABL 5 MG)</td>
<td>PO</td>
<td>25 mg</td>
<td>25 mg</td>
<td>25 mg</td>
<td>25 mg</td>
<td>25 mg</td>
<td>25 mg</td>
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<tr>
<td>TEMESTA (TABL EXPRIENT 1 MG)</td>
<td>PO</td>
<td>3*1 mg</td>
<td>3*1 mg</td>
<td>2*1 mg (1/3)</td>
<td>1 mg + 3*1 mg</td>
<td>3*1 mg</td>
<td>3*1 mg</td>
<td>3*1 mg</td>
<td>3*1 mg</td>
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</tbody>
</table>

**Chemo schema:**

- **ETOPOSIDE (CYTO) - 209 mg**
- **GLUCOSE 5% (FL INF) - 250 ml**
- **CISPLATINE (CYTO) - 80 mg**
- **NATRIC HDR ORIDE 0.9% (FL INF) - 600 ml**
- **DIAGHESIUMILLAAT (AMP 5 GR/10 ML = 24.56 MGQ) - 5 g**
- **GLUCOSE 5% + NAACL 0.9% (FL INF) - 7 l**
- **IFOSAMIDE (CYTO) - 1400 mg**
- **MESNA (COMED) - 1254 mg**
- **MESNA (COMED) - 1254 mg**
- **GLUCION 18% (FL INF)**
- **MANNITOL 15% (FL INF)**
- **GLUCOSE 5% + NAACL 0.9% (FL INF)**

**Chemo schema:**

- **ETOPOSIDE 100mg/m² IFSOFAMIDE 2000mg/m² CISPLATINE 30mg/m² (GEEN LIMIET OP 2mg i/m i/m i/m i/m i/m i/m i/m i/m i/m i/m)**
You’re not a number ...
Bedside scanning ...

- The final checkpoint!
- Requirements
  - Fully deployed CPOE
  - Hardware and software
  - Barcode on every single dose
- UZ Leuven
  - First blood and antineoplastic drugs
  - All medication
    - 14,000,000 doses / year
    - > 95% of all doses is scanable
Packaging ...
Single dose, barcode ...

- Single Dose versus Unit Dose versus Nominative dose
... hard to get!

• How to get 14,000,000 doses ready?
  – Repacking in the pharmacy
    • Legally seen as compounding
    • GMP in cleanroom
    • Time consuming
    • 4 blistering machines
  – Outsourcing
    • Legally possible
    • GMP in cleanroom
    • Expensive for small batches
With a little help … ?

- Pharmaceutical industry
  - Delivery in single dose barcoded packages?
  - Willingness but …
    - Global management does not see the advantage
    - Blistering lines are European or global
    - Different registration, different artwork
    - Need for a standard or legal obligation
    - Costs and difference between markets

- Policy makers
  - Provide a standard and a flexible framework for registration, artwork, information on primary package, …
Is this how we like our meds ... ?
While daily live is not having this “medical” problems...
These are the meds we need in appropriate care giving ...
These are the meds we need in appropriate care giving ...
SD/BC ... the future?

- It started yesterday
- Already in tendering

- Also for implants and medical devices
  – UDI-barcode
Why SD/BC by company?
(Single Dose / BarCode)

- GMP production facility
- Optimal storage conditions (primary)
- Minimal cost (just do it once, big batches)
- Liability
- Protection against counterfeiting
- Supply chain management (all packaging levels)
- Added value in drug selection (P&T committee, track and trace, …)
Step by step

• Step 1: Identification
  – Unique identifier
    • Used in translation tables (1 on n relation)
    • Link to databases (measures, photo’s, leaflets, …)

• Step 2: Traceability
  – Batch / serial
  – Expiration date
  → Already feasible for non-blister ?!
BSS in practice ...

Dispensing and ordering
Reconstitution
Administration
BSS in practice

• Module dispensing and ordering
BSS in practice

• Module pharmacy: Dispensing
BSS in practice

- Module reconstitution
  - Barcode verification of every ingredient
  - Reconstituted medication gets barcode
BSS in practice

• Module administration
How does it work?
Does it work?

- **YES it works!**
  - Wrong patient
  - Wrong product
  - Wrong dose
  - Wrong time of administration
  - Wrong timeline cytotoxics
  - Double medication or dose
  - Contraindications and allergies for (standing) orders
  - Different patient incident reports (FONA)
  - Follow up use of decision support CPOE
Questions?
Level-below-the-each standard

- GS1 Standards update: “Level Below the Each”
- Provides clear and consistent guidance on how to identify medicines to the single unit level

- For more information: http://www.gs1.org/1/newslib/detail.php/new-standard-to-address-missing-link-in-hospital-supply-chain-processes/?nid=1486
Join HPAC?

- **Find out more:** [http://www.gs1.org/healthcare/hpac](http://www.gs1.org/healthcare/hpac)
- **Community Room:** [http://community.gs1.org/apps/org/workgroup/gs1hpac/](http://community.gs1.org/apps/org/workgroup/gs1hpac/)
- **Publications:**
- **Healthcare Provider Awards…** [http://www.gs1.org/healthcare/hpac](http://www.gs1.org/healthcare/hpac)
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