Hospital Medicines

The materiality of medicines: a dive into medicines in practice

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Overview

• Theoretical starting point: a focus on drugs
• Methods and data
• Initial themes
  (a summary in the form of a mind map)
• Implications:
  for research, policy and
  information systems practice
• Reflections
Propositions on digital drugs

1. digitalisation is changing the **materiality** of the drug
2. digitalisation is changing the **value** of the drug
3. digitalisation is changing the **assemblages** that occur around and involving the drug
4. the drug is (or becoming, or returning to be?) an ‘**incomplete product**’; the drug is (or is becoming) entangled with the digital, as a ‘**digital hybrid**’
Methods

• Exploratory, qualitative research design
• Broad scope, ‘following the drug’ (rather than specific activities)
• Data collected with interviews, observations (incl. users ‘think aloud’ and ‘walkthroughs’) hospital documents
• Analysis – thematic, focused on ‘digital drugs’
Scope of data collection

- Electronic prescribing
- Mobile apps as reminders for patients
- Decision support
- Electronic discharge summaries
- Data - for patient care, audits, procurement, ...
The data

<table>
<thead>
<tr>
<th>Interviews</th>
<th>37 recorded /transcribed:</th>
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<tbody>
<tr>
<td></td>
<td>22 from pharmacy (including logistics/supply),</td>
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<td>11 nursing, 4 medical roles, 2 patients</td>
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<tr>
<td></td>
<td>+ many more unrecorded conversations</td>
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<table>
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<tr>
<th>Observations</th>
<th>~72 hours of data collection</th>
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<td>over ~103h ‘in the field’</td>
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<td>Incl. shadowing of a training session of ePrescribing with a doctor</td>
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| Documents           | Prescribing charts, online drug formulary, |
|---------------------|‘posters’ in work and clinical areas |

People I spoke with: ward pharmacists and technicians, dispensing technicians and support workers, pharmacists, IT roles in pharmacy, pharmacy staff responsible for contracting, procurement, inventory and warehouse management, staff nurses, ward clerks, specialist nurses, sisters, matrons, junior doctors, a registrar, consultants, and patients.
An initial map of themes

DIVING

INTO HOSPITAL MEDICINES IN PRACTICE
Medicines are material objects. They occupy space and occupy several time dimensions. They are assembled and disassembled. A time of effect is necessary to be in the right place at the right time. Medicines are digital 'objects' associated with algorithms coding possible effects. They have active ingredients, and digital traces have value. Medicines leave digital traces that have value. Poisons and therapies are associated with patient safety.

Material – Digital 'misfit'

Digital traces have value

Digital traces have value

A beginning
Some initial thoughts, for future research

IMPLICATIONS
Health IT: From the task to the object

- TASKS: e-prescribing, e-transmission, e-administration...
- MEDICINES: tablets, IVs, antibiotics, ...
- Opportunity for ‘medicines-centred systems’
- A digital-medicines infrastructure
- Why delivering digital drugs systems is difficult and time consuming

A change in scope and objectives for evaluation of Information Systems?
A personal reflection

I discovered a uniqueness in hospital drugs; complex active objects rich of tensions/contradictions; with multiple time dimensions; requiring rich assembling work; a world made of exceptions.

I experienced a difficulty of conveying my wonder, especially to practitioners. Perhaps because ‘it’s obvious’. Or maybe because I stress difference and they are worried about standardisation and consistency. And budgets.
ACKNOWLEDGEMENTS

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