

D3: DELIVERING DIGITAL DRUGS

www.digital-drugs.org

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

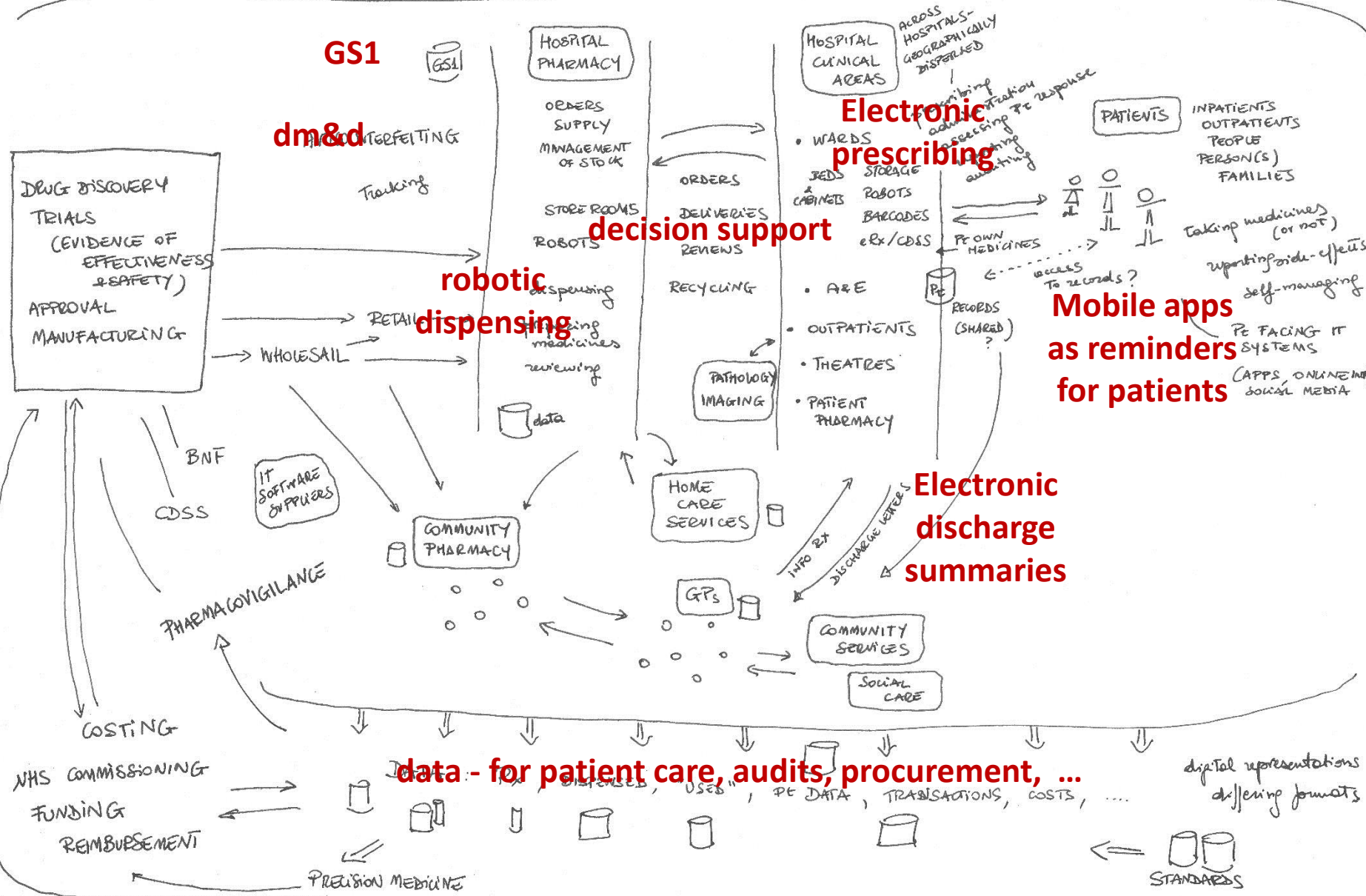
- Exploratory, qualitative research design
- Broad scope, 'following the drug'
(rather than specific activities)
- Data collected with interviews, observations
(incl. users 'think aloud' and 'walkthroughs')
hospital documents
- Analysis – thematic, focused on 'digital drugs'



Scope of data collection

DRUG REGULATION & NHS INFRASTRUCTURE & GOVERNANCE

D³



The data

Interviews **37 recorded /transcribed :**
22 from pharmacy (including logistics/supply),
11 nursing, 4 medical roles, 2 patients
+ many more unrecorded conversations

Observations **~72 hours of data collection**
over **~103h** 'in the field'
Incl. shadowing of a training session of
ePrescribing with a doctor

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



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Material - Digital
'misfit'

Medicines are
digital 'objects'

Medicines are
material objects

Have monetary
value

Associated with
algorithms –
coding of possible
effects

They leave digital traces

Digital traces have value

With active
ingredients

Poisons / Therapies

Occupy space

Several time
dimensions

Patient safety

Assembled
and
disassembled

Time of effect

Time to be in the
right place at the
right time



Some initial thoughts, for future research

IMPLICATIONS



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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

Digitalization of medicines: artefact, architecture and time

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Digitalization: "The encoding of analogue information into a digital format and the possible migration of the

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electronic prescribing in Finnish hospitals [2]. These papers each address a significant safety and quality issue. The risks to patient safety posed by these systems, their implementation and use, are further explored in a third associated paper published elsewhere [4].


Workarounds were found to be either "informal" or "formalised" practices, the former

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



A personal reflection

wonder

/ˈwʌndə/ 

noun

noun: wonder

1. a feeling of amazement and admiration, caused by something beautiful, remarkable, or unfamiliar.

- 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.



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