Using formative evaluation to inform the Electronic Prescription Service (EPS) Implementation in Primary Care, England

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The Electronic Prescription Service (EPS)

- Government e-health agenda and part of National Programme for Information Technology (NPfIT) since 2002, overseer by Connecting for Health (CfH).

- EPS2 is a system that allows prescribers to write and send electronic prescriptions to nominated pharmacies.

- EPS2 can be integrated with EHR but can also be operated as a stand alone programme.

- EPS2 is proposed to benefit:
  - Prescribers, Dispensers and Patients
The EPS evaluation project

- Project team is a consortium of three universities (Funded by National Institute for Health Research)
  - Led by School of Pharmacy, University of London (Professor Barber, PI)
  - Division of Primary Care, and School of Pharmacy, University of Nottingham (Professors Avery & Elliott, CIs)
  - London School of Economics Innovation Group (Dr Cornford, CI)

- The evaluation project’s task is to assess the proposed benefits of EPS2 for stakeholders.

The EPS evaluation project

Divided into four deliverables or Work Packages (WPs) of baseline and post-baseline comparative studies

- WP1 – investigates content and labelling errors of dispensed prescriptions
- WP2 - surveys patient experiences
- WP3 – explores the 'impact' of the service on work practice from both general practice and community pharmacy perspectives
- WP4 – investigates stakeholder view and perceptions of the service

In this presentation, we focus on the qualitative work on WP3 in community pharmacies.
WP3 in community pharmacies

• **Aim**
  • This work is part of WP3 and aimed to investigate changes in work practice and their bearing on quality of service and safety.

• **Key Objectives:**
  • Study of:
    • Workflows in order to map main areas of activities and how the EPS2 might impact on these.
    • Prescription journeys in order to determine the main processes involved in the dispensing of prescriptions.
    • Work culture in order to determine how the EPS2 might change current cultures.
    • The identification of current potential sources of risk for safety that could be improved by the new system.
Data and analysis

**Baseline data:**
- Visit to 8 community pharmacies produced
  - Over 80 hours of non-participant observations and shadowing.
  - Minimum of 10hrs per site over two days.
  - Observations were written-up into case reports that followed themes in the research objectives. Each case report is about 3500 words.
  - 12 interviews with pharmacists and dispensers. Interview duration ranges from 10-30 minutes.

**Analysis:**
- Thematic analysis.
- Commonalties and variations in work practice on:
  - Workload prioritisation
  - Prescription journeys
  - Peripheral activities and time gaps
  - Spatiality
  - Electronic engagement
  - Distribution of terminals
  - Potential sources of risks
Key findings – work organisation

- Pharmacists planned to dispense from printed electronic prescriptions (tokens), NOT from computer screens, to enable them to prioritise and organise work better, and to retain current safety practices.

EPS2 prescriptions will be printed, prioritised, and dispensed similarly to how manual scripts (FP10s) are dispensed.
  - Pharmacy professionals will have paper to check items against.
  - Repeat patients will have a paper to take away with the dispensed medicine.

- Printing and dispensing from tokens could increase time taken to dispense in addition to other costs.
Manual FP10 & EPS2 token

Manual FP10

EPS2 token
Key findings – workflow & workload

- Pharmacies offer a variety of services (e.g. walk-ins, repeat management, collection from surgeries on behalf patients, cassettes for care homes etc...) amounting to high workloads which EPS2 can help streamline.

- In current practice, there is interference in the workflow when staff jostled for dispensing terminals while undertaking the various services.

- Under EPS2, there needs to a balance of dispensing terminals in relation to staff to minimise the amount of logging in and out with smartcards, even if dispensing from screen is not encouraged.

- To prevent unnecessary interferences in the work process
- To prevent system crashing
Constructivism?

• **Constructivism** – generating knowledge from experiences and ideas.

• **The social construction of technology** (Pinch & Bijker, 1984): the co-construction of technology, the appropriation of technology through formative feedback.

• **Our approach**: We provided a platform where community pharmacists as a social group demonstrated how EPS2 might be appropriated to suit their current practice of dispensing safely.

• **Informing Implementer stakeholders**
  
  • Stakeholder reports of preliminary findings sent to CfH and participating PCTs: Informatics departments, Benefit realisation team, Research governance teams of NHS PCTs

  The idea of dispensing from tokens is now supported by implementers through the provision of specialised paper and subsidies for toner.
Conclusion

- The EPS2 has a potential to streamline pharmacy work, and by:
  - Observing intended users at work, and
  - Providing platform for intended users to air their views from experience,
  - The team was able to use knowledge gained from preliminary findings to provide formative feedback to implementer stakeholders,
  - Which informed the implementation process.
Thank you for listening


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