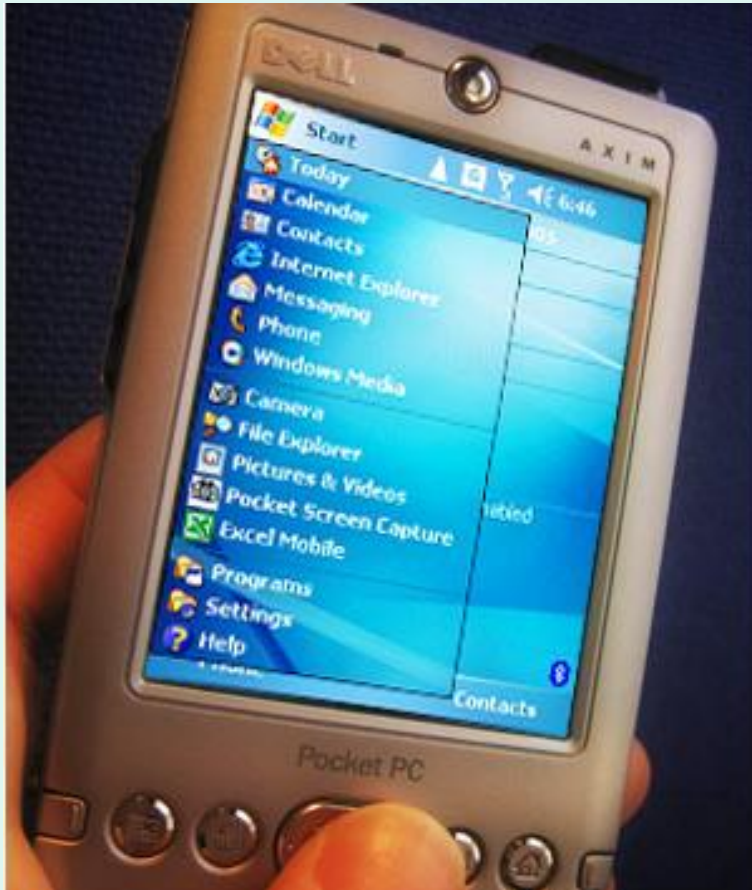


Pharm-Assist: Using Personal Digital Assistants (PDAs) To Assist In Pharmacy Decisions

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and Linda Ward

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Trust and University of Leicester



- Features of a PDA
 - Personal organiser/diary
 - Address book
 - Notepad
 - Clock
 - Email ?
- 2006 Systematic Review younger doctors more likely to use PDAs

- Doctors using PDAs for these functions
- But have potential for clinical decision making, drug and patient information use
- UHL have done previous studies with doctors using PDAs for clinical decision making and drug information
- Following on from this, a trial with Pharmacists to evaluate the effectiveness of PDAs to assist Pharmacy decisions

Pharm-ASSIST



- Does using a PDA loaded with drug information increase the number of interventions made by a Pharmacist on the medical wards?

Primary Outcome

- To assess how often a Pharmacist on the medical wards before and after the availability of a PDA uses resources to check, alter, or amend drug charts for patients and for what reasons:
 - Checking doses / frequency or duration and safety.
 - Checking guidelines
 - Checking appropriateness of treatment for patients
 - Checking details of unfamiliar diagnoses
 - Researching evidence for treatment
- Today we will be presenting results from the first part of this study, when the pharmacists were using pc and paper based sources, with some preliminary observations from the second PDA based phase.

Secondary outcomes

- Reported times taken to use a PDA in relation to primary outcome
- Reasons for interventions
- Reported ease of use of PDA as reference tool on the wards

Design




- An evaluative before and after audit to assess a PDA reference tool – Dr Companion. There was a 28 day period of data collection without the use of the PDAs
- Followed by a 14 day lead-in period to become used to the functionality of the resources
- A further 28 day period in which the resources were evaluated in the Pharmacy department at University Hospitals of Leicester NHS Trust.


Methods


- Before and after evaluation to assess the impact of PDA clinical reference tool – Dr Companion compared to usual practice
- Participants: 11 Pharmacists working on the medical wards at UHL
- Not statistically significant – power calculation showed 33 participants required to detect difference of 20% in the number of interventions


Dr Companion


**Dr Companion**
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Dr. Companion
Dr Companion is a mobile medical tool for medical professionals.
Dr Companion is a compilation of medical reference literature in digital form ready to bring and use anywhere. It is always available in your pocket to answer questions or maybe just to read in on something you don't have fresh in mind.



Dr Companion is a multi-platform product making it possible to use on almost any type of computer, PDA or smartphone. Currently supported platforms include:

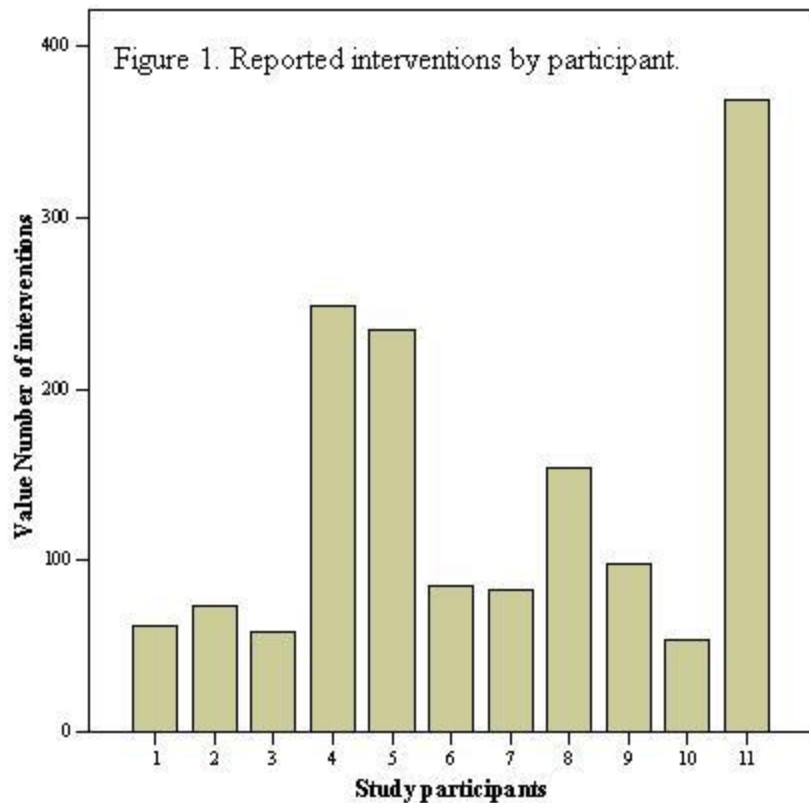
- Suite of substantially UK evidence-based and authorised pharmacological information
- Plug & play
- Multi-platform

Study period and methodology

- April to August 2007
- Data collection
 - Multiple choice
 - Time recording
 - Free text responses
 - Informal discussions

Initial Results

- Data not normally distributed but has a median number of interventions of 85 per Pharmacist (IQR 172)



Initial Results

- Safety and efficacy are the two most often cited reasons for intervention

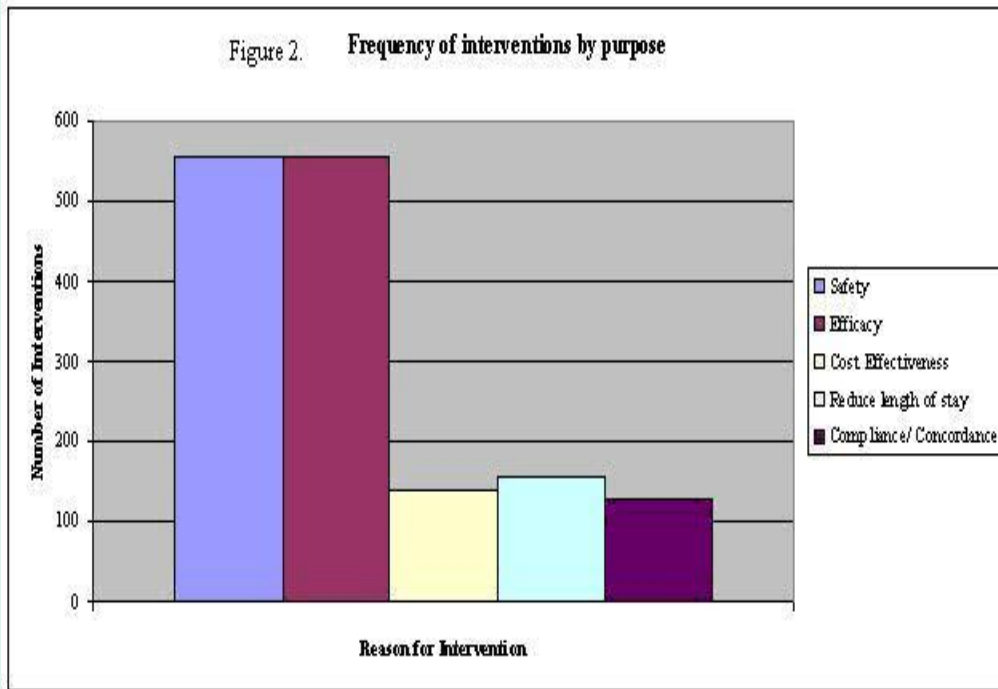


Figure 4. Amount of time spent by pharmacists using resources

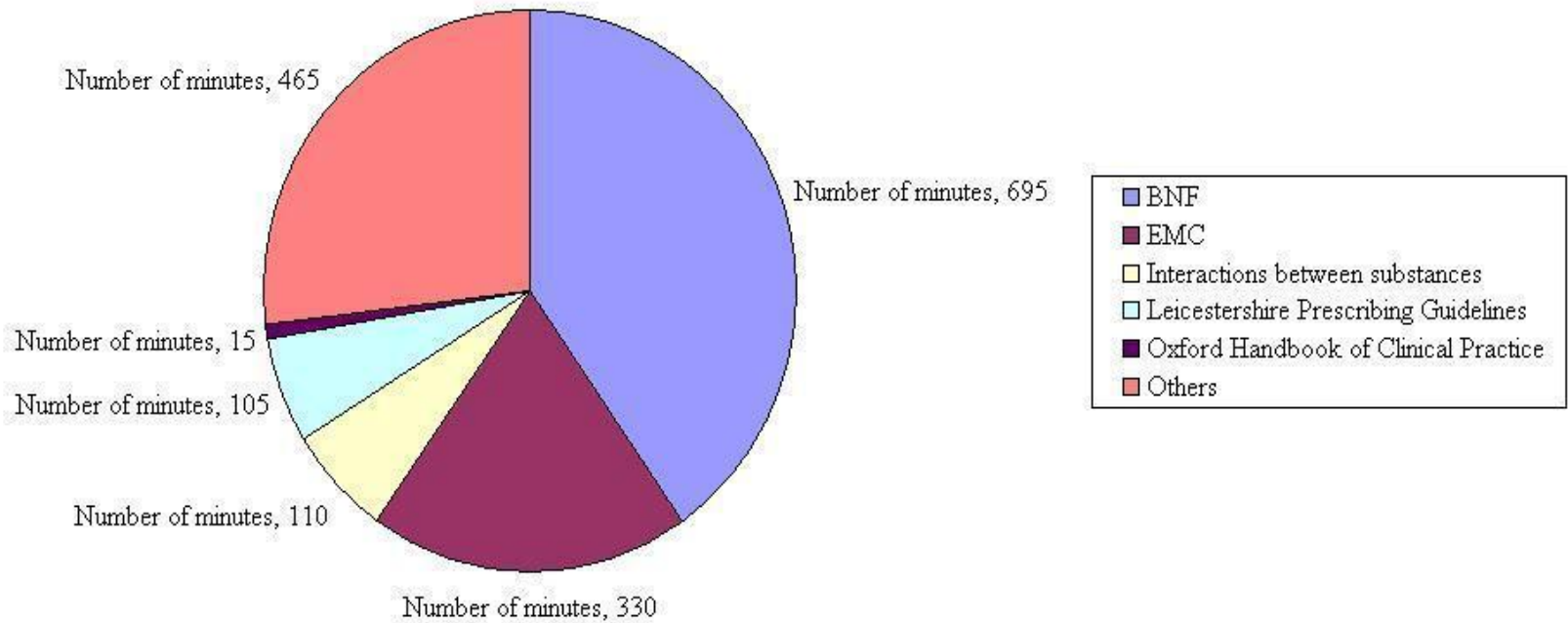
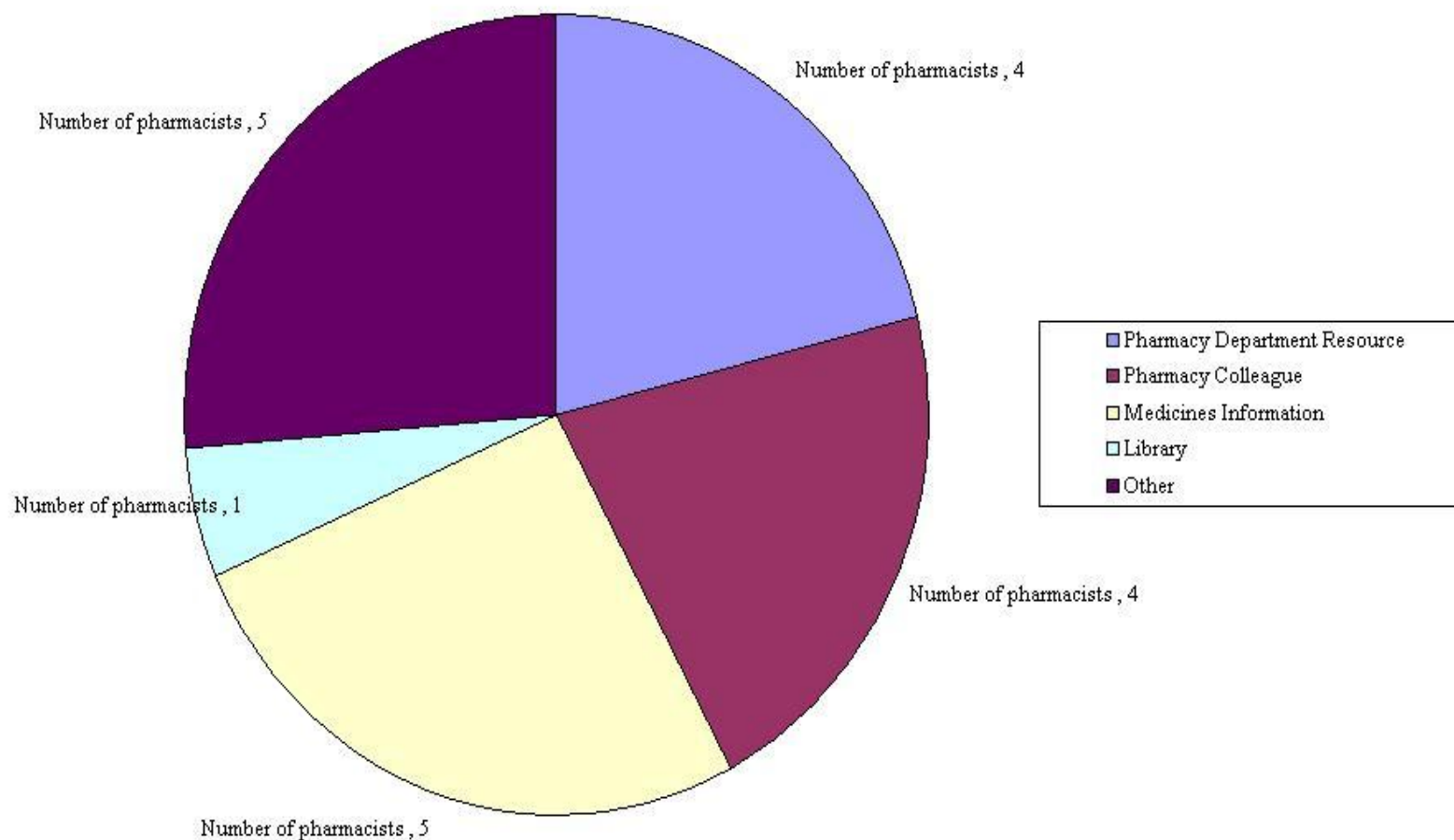


Figure 5. Information Sources used by pharmacists to support practice



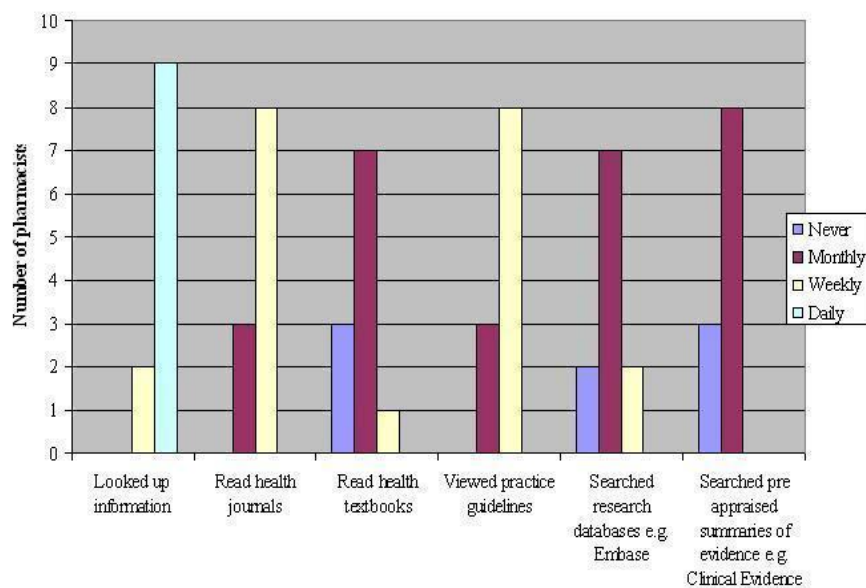
“Other” Information Source	Time Taken Accessing This Resource
ADIS Insight	5
Colleague	20
Drug / Medical Company	30
IDIS Search	10
In House Dispensing Tablet Booklet	40
IV Monographs	15
JAC Computer System	10
Mansley Guidelines	10
Medicines Information	20
Medcines Org	5
Micro Approval List	10
Microbiology	5
Micromedex	50
MTIMI Full Search	5
National Electronic Library of Medicine	5
Palliative Care Formulae/ Website	35
PPI Guidelines	5
Renal Handbook	5
RPSGB	10
UHL Documents including Guidelines	75

Initial Results

- Free text response showed that of the “other” resources used by Pharmacists, the most popular was the UHL Document Management System, which includes clinical guidelines for the Trust

Initial Results

Figure 6. Pharmacists' information finding activities



- Shows that on a daily basis, pharmacists were looking for information, but not frequently from health textbooks, journals, databases or pre-appraised summaries

Discussion

- Limited number of participants
- Response rate limited by workload
- Start date for study delayed for upload of new BNF (53).
- Some issues with age of hardware
- Instability of software due to speedy release of new version

Discussion

- Design collection tool – if study was to be repeated, would need amending to take into account Pharmacists' use of resources previously unaware of
- Pharmacists would have liked more local guidelines on the PDA – Dr Companion had added these in previous trials, but time issues prevented this

Conclusions

- Pharmacists make a large number of interventions using a variety of resources
- In-house resources are popular as well as nationally provided and authorised information.

Second Phase Results

- Sadly because of the delays in this trial we only have some second phase questionnaires back as yet
- Preliminary findings show a preference for paper or PC based reference materials. This could be for a number of reasons:
 - Habit
 - New format takes time to get used to
 - Actually have good access to paper and PC – so don't need PDA
 - PDA BNF format same as Web one – tricky to use
 - PDA doesn't have resources they want on it yet – trust based information such as IV and drug policies
- Some pharmacists in the trial felt that the PDA resources might have been more helpful for junior pharmacists who need to refer to sources more often

Questions?

