



eTools for Medicine: Drug Databases and the PDA

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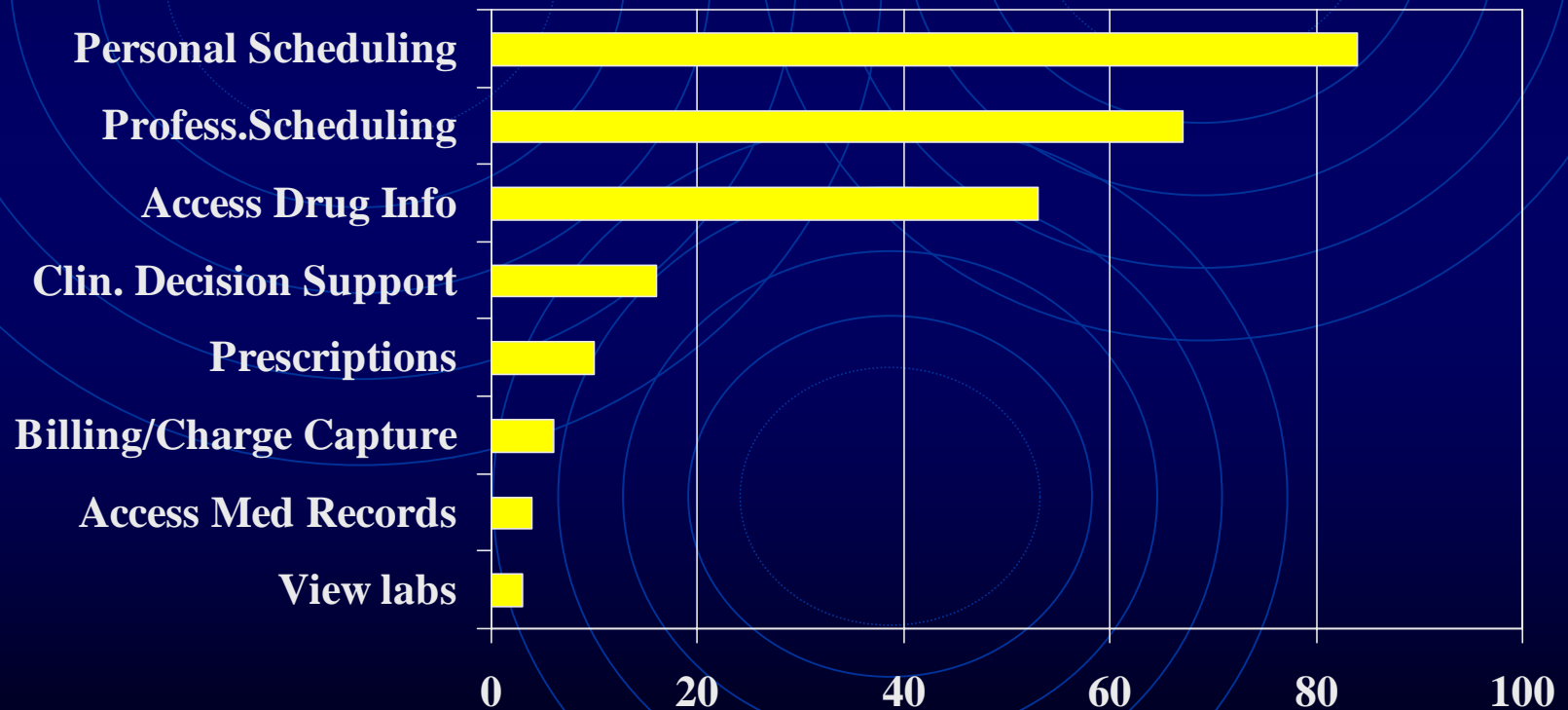
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Handhelds Primary Use

- Current PDA activities/functions reported by MDs who owned PDAs



2001 Deloitte Research telephone survey of 1,200 US MDs

Medication Errors

- Kanjanarat P et al (U/Florida). Nature of preventable adverse drug events. Am J Hosp Pharm 2003; 60: 1750-9
- Review of 10 studies published 1994-2001
- Keyed on preventable ADEs rather than all ADEs
- Median frequency of pADE = 1.8%
 - Median preventability rate of hospital ADEs = 35.2%
- Most common source of error: Prescribing (56%)
 - Most often associated with dosing errors (22%) and inappropriate choice of drug (17%)
 - Most common drugs: cardiovascular, psychoactive and CNS agents

Drug Information and Formulary

- Ideal Characteristics:
 - Convenient
 - Up-to-date
 - Inexpensive

Formulary Information: Conventional Approaches

- Printed Card or Booklet
 - PRO: Easily accessible
 - CON: Difficult and costly to update, disseminate
- On-line or PC-based
 - PRO: Less expensive, continually updated
 - CON: Computer access may be limited

PDA Drug Info Software: Choices

- ePocrates
- LexiComp
- Mobile Micromedex
- Mosby's Drugs
- PDR
- Tarascon's Pharmacopoeia
- A to Z Drug facts

PDA Drug Info Software: Content

- Dosing/Routes
- Length of Treatment
- Adverse Effects
- Contra-indications
- Drug-Drug Interactions
- Mode of action
- Pricing

Evaluation of PDA Drug Info Software

- Enders SJ et al (St Louis U), Pharmacotherapy 2002; 22 (8): 1036-1040
- Evaluated 9 software systems
 - Utilized PDA with Palm OS
- Tested against 56 questions developed by authors
- Tested for:
 - Breadth: Could it answer the question?
 - Clinical Dependability: Was it factually correct?
 - Ease of Use: Time and the number of screens to locate answer or determine it was not provided

PDA Drug Software

	Breadth (%)	Factual (%)	Time (sec)	Screens(#)
LexiComp Platinum	75	100	17	4.2
Tarascon	57	91	15	3.3
MosbyDrugs	50	84	18	4.6
ePocrates	41	91	14	3.6
Davis's	37.5	80	12	3.0
PDR (2001)	37.5	86	29	8.5
Phys Drug Handb'k	36	95	20	6.3
A to Z	34	79	18	3.7
Mobile	32	67	15	3.6
Micromedex				

Evaluation of PDA Drug Info Systems

- Clausen KA et al (Nova U), Am J Health System Pharm 2004; 61: 1015-24
- Evaluated 10 databases
 - Both Palm and Pocket PC platforms
- Tested on 146 questions in 14 weighted categories
 - Questions and weighting developed by authors and 6-person (pharmacist) external review
- Evaluated for scope, completeness and ease of use

PDA Drug Software

	Total scope points	Completeness points	Ave. links required	Overall score
Lexi-Comp Platinum	110	282	2	132.9
Tarascon	96	255	2.35	113.8
ePocrates Pro	99	238	2.14	113.2
Mobile Micromedex	85	221	3.32	90.5
Pocket PDR (2003)	71	167	2.03	76.6
A to Z Drugs	59	157	1.98	66.1

PDA Drug Info Databases: Things to Look For

- Is this the most current version?
- Is it complete?
 - i.e. brand and generic names, adult and pedi dosing, mechanism of action, indications and contraindications, precautions, interactions, pregnancy info, cost
- Are updates provided? How frequently?
- Does the database provide references?
- Is it flexible? Can you enter your own notations?
- Does it include Canadian drug brand names?
- Is it simple enough that you will use it?

PDA Drug Info Software

	Source	Updates	Cost	Site(www)
A to Z	A to Z	Monthly	\$49.95	Skyscape.com
DrDrugs	Davis's	Quarterly	\$49.95	Skyscape.com
ePocrates	ePocrates	Daily	Free/ \$59.99	Epocrates.com
Lexi-Drugs	LexiComp	Weekly	\$75	Lexi.com
Micromedex	Micromedex	monthly	Free/ \$74.95	Micromedex.com
Pocket PDR	PDR	Quarterly	\$59.95	Franklin.com
Tarascon	Tarascon	Daily	\$27.50	Tarascon.com