Mobile Technologies Workshop 16 August 2011

Mobile Point-of-Care (MPOC) Tools
Definition: Point of Care

• Any location where patient care is provided, including, e.g., the bedside, radiology suite, emergency room, clinic, or ambulance
Definition: POC tools

• **Wide**
  – All technologies supporting clinicians’ decision-making at the point of care
    • Clinical Decision Support System
    • Patient Management/Monitoring/Testing
    • EPR

• **Narrow**
  – Patient-side access to the evidence base through appraised/digested information sources
DiCenso et al, 2009

Examples of resources:

- Computerized decision support systems
- Evidence-based clinical practice guidelines
- Evidence-based textbooks
- DARE; health-evidence.ca
- Evidence-based abstraction journals
- Systematic reviews (e.g., Cochrane Library)
- Evidence-based abstraction journals
- Original articles published in journals
Usefulness of medical information = (R) Relevance x (V) Validity

POC Information Tools:  
- Increased R (physician-led)  
- Increased V (evidence-based)  
- Less W (bedside access; format)

Shared features of POC Tools

- Authoritative syntheses of evidence
- Background questions (who, what, when, where, why, how)
- Ease of consultation at the bedside
- Regular updates
- Multi-platform/format
- Extras (e.g. patient info; drug calculators, CE credits)
Point-of-Care Summary Products: A-Z list - 1

1. AccessMedicine (McGraw-Hill)
2. ACP PIER (American College of Physicians)
3. BestBETs (Emergency Dept. Manchester Royal Infirmary)
4. BMJ Best Practice (BMJ Publishers)
5. BMJ Point of Care (USA only)
7. Clinical Evidence (BMJ Publishers)
8. Clinical Knowledge Summaries (NHS)
9. Clinical Knowledge Summaries Mobile version (CKS Mobile)
10. Clinical Xpert Navigator (Thomson Reuters)
11. Diseasedex General Medicine (Thomson Reuters)
12. Dynamed (EBSCOhost)
13. eMedicine (WebMD Health Professional Network)
14. eTG Complete (Therapeutic Guidelines LTD)
15. EBM Guidelines (Wiley-Blackwell)
17. First Consult (Elsevier)
18. 5-minute Clinical Consult (McGraw-Hill)
19. Harrison’s Practice: Answers on Demand (McGraw-Hill)
20. Healthgate
Point-of-Care Summary Products: A-Z list - II

21. Info-Retriever/InfoPOEMS (see Essential Evidence Plus)
22. Lexi-Comp (Lexi)
23. Map of Medicine
24. Medical Evidence Matters (ProQuest)
25. Merck Manuals Online Medical Library (Merck & Co)
26. Natural Medicines Comprehensive Database
27. Natural Standard
28. Nursing Reference Center (EBSCO)
29. PEPID
31. Royal Marsden Hospital Manual of Clinical Nursing Procedures
32. STAT!Ref
33. STAT!Ref Point of Care Info (POCi) Primary Care Edition
34. Thomson Reuter MicroMedex 2.0 (Thomson Reuter)
35. UpToDate (Wolters-Kluwer Health)
36. Wave Medical: International EM Pro (Emergency Doctors)
37. Wave Medical: International Primary Pro (General Practitioners)
38. Wave Medical: International RN Pro (Registered Nurses)
39. Zynx Evidence (Zynx Health)
Choosing POC Tools

- Mushrooming product range
- Contents
  - Scope: volume, breadth, depth; inclusion criteria; extra features
  - Editorial policies
- Format
- Target audience
- Costs
- User preferences
Evaluation categories

- Breadth
- Depth
- Drug information
- Individual author listed
- Peer Review
- Updating
- Keyword
- Browse
- Drug search
- Disclosure/bias
- Ease of navigation
- Type of question answered
- Ease of reading
- Grading the evidence
- Summary of evidence
- Bibliography at the end
- Links to PubMed/Athens
- PDA applications
- EMR integration

Trumble et al, 2006
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**Trumble et al 2006**
EBP point of care summary scores and ranks *(Banzi et al 2010)*

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## POC summaries - key points

| Implications for practice | • No POC product stands out clearly.  
|                          | • Choice of POC is likely to depend on user preferences – personal weight given to different ranking.  
|                          | • Users are not likely to use a point-of-care database if it is not easy to use or does not yield answers to their questions. |
| Implications for policy   | • POC databases can facilitate effective patient care decision-making by providing information in an easily retrieved, peer-assessed and pre-digested format.  
|                          | • Adoption recommended:  
|                          |   - Involve users  
|                          |   - Assess IT infrastructure and support  
|                          |   - Consider cost/benefits |

Chan and Stieda, 2011
ACCESS - Any time, any place, immediate access to people (including awareness of their availability); instant access to business information; real time information sharing (collaboration); real time communication (collaboration).

INSIGHT - The availability of "interpreted" information using reports, dashboards, business data, locational data, and communications; using this information to make faster and smarter decisions, and deliver better service.

CONVENIENCE - Always on, always connected, always "in hand"; form factors appropriate for the task at hand or user preferences.
**ACCESS** - Any time, any place, access to EMR records for viewing and entering real time patient data; easy access to data, images, test results; access to colleagues for real time communications, information sharing, collaboration, and consultation.

**INSIGHT** - The availability of “interpreted” information using clinical documentation, test results, image data, locational data, and communications; using this information for more efficient collaboration, communicating more effectively with patients, and making faster, more accurate judgements and decisions.

**CONVENIENCE** - Always on, always connected, always "in hand"; form factors appropriate for the task at hand. This convenience reduces time spent "managing" records, improves data capture, reduces errors, and enables health care providers to have higher quality interactions with patients.
Mobile Point of Care

Linking people, process and technology

MPOC = SUM of the parts, not any technology ingredient in isolation

Margelis, 2010
Going mobile

- Unstoppable tide
- Readiness to adopt
- Improving interfaces
- Range of products
- Functionalities

http://www.mobilehealthwatch.com
http://www.healthcaregoesmobile.com/
Healthcare Efficiency
Through Technology Expo
Enabling better patient outcomes

Tuesday 4 October 2011 | Olympia 2, London
www.hettexpo.co.uk

REGISTER NOW for FREE ENTRY
Going MPOC

• Benefits
  – True bedside access
  – Facilitates EBHC
  – Impact on decisions
  – Patient safety
  – Educational tool
  – Satisfy/empower staff
  – Cost savings?

• Challenges
  – Size/Interface
  – Hindrance
  – Reliability
  – Security
  – Infection
  – Training
  – IT support
  – Wireless infrastructure
  – Which model?
  – How much?
  – Who pays (manages)?
Planning for mobility throughout the HC organisation

- Security
- Confidential data
- Security policies
- Encryption
- Password access

- Platform
- Organisational strategy
- Holistic
- One set of management tools
### Contents

1. **Usability**
   - Mobile screen
   - Data entry
   - Battery life
   - Contents

2. **Network**
   - Bandwidth
   - Coverage
   - Integration
   - Hardware

3. **Ethics**
   - Privacy
   - Trust
   - Equity
   - Responsibility of errors

4. **Management**
   - Data protection & security
   - Authentication & authorization
   - Costs, Return on investment
   - Change management & user training

**Key Points**

- **Right Hardware**
- **Right Software**
- **Connectivity (robust network design)**
- **Integrated Solution (needs to fit with other systems)**
- **Workflow Transformation (people need to use it)**
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Epsom and St Helier University Hospitals NHS Trust
References


