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The role of informatics in continuing professional development and quality improvement in primary care.

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Full Text

The General Practice consultation is a busy and sometime stressful environment, within which the computer is playing an increasing role. Given these realities, the consultation is hardly the time or place during which a physician can learn about new ways of managing a patient's problems,[1],[2] from the computer. It is true that computers help in rapid retrieval of information and make automation possible saving time required for scheduling appointments and for doing repetitive work such as repeat prescriptions. However, when used for prevention and patient education, they generally tend to lengthen the consultation. They help prevent prescribing errors but as yet, there is no evidence that they promote physician learning.[3]

Literature about physician learning from the Internet is limited, but there is sufficient information available regarding what does and does not work in continuing professional education.[4] Didactic education is not effective.[5] Guidelines are more likely implemented when they form a part of professional education, quality improvement, and personal development programmes.[6] Learning activities that enhance participant activity and provide the opportunity to practise skills are more likely to be effective.[7] Complex educational interventions provide the best way to integrate knowledge into practice.[8]

The challenge for virtual learning is not to replicate the mistakes of terrestrial didactic education, but to find formats that result in improved outcome for patients. However, as yet, no one has spelt out a core scientific theory

as to how informatics can improve quality in primary care.

What help is available exists within a number of associations for primary care informatics.[9],[10],[11],[12] These organisation collaborate with each other and within the International Medical Informatics Association (IMIA). The latter has at least defined a core syllabus for medical informatics.[13]

A study was carried out to investigate the role of informatics in continuing professional development (CPD) and improvement of quality family practice from three standpoints:

1. Could collaboration or cooperation between the national professional and academic bodies across Europe add value to existing efforts?
2. Are specialists in primary care informatics required for quality improvement?
3. To define the characteristics of an effective general practice on-line resource.

Although there has been a considerable amount of work looking at the quality of Internet information[13],[14] there is as yet no established model of the ideal web-resource, or role for the informatician in CPD and improvement of quality in primary care.

:: **Methods**



All the European national bodies of general practice were informed about the workshop by the Royal College of General Practitioners (RCGP), UK. A questionnaire was used to capture delegates' views prior to the workshop.[15] It contained statements with which the respondent could completely agree, agree, neither agree nor disagree, disagree, or strongly disagree. There were opportunities after each question to add free text comments. The questionnaires were analysed for the significance of the responses using SPSS (Statistical Package for Social Sciences) Version 6.1, using the Npar X2 test.[16]

The main part of the workshop was three small-group sessions covering the three issues listed in the introduction. The outputs of these groups were collected on flip chart and the facilitators wrote more detailed notes and conducted a group debrief.

:: **Results**



Results from the questionnaires

23 delegates came from eight different EU countries. Two were from Australia. Fifteen completed the questionnaire prior to the session and four others returned them by fax or post after the meeting, a response rate of 83% (19/23). The largest group from a single country was four.

Eleven had postgraduate qualifications in general practice. Three had formal qualifications in informatics. The results from the main body of the questionnaire are set out in [Table:1].

The questionnaire shows significant support for involving specialists in informatics in the production of on-line software for CPD in family medicine, for having a Primary Care Informatics specialist group in all national family

medicine colleges.

Some of the salient remarks in this regard are reproduced here:

"I believe that there is a clear role for primary care informatics specialists who have a detailed specific knowledge of primary care. But they should not carry out their work in isolation. There needs to be discussion and agreement with other healthcare areas to establish a joined method of working"

"A new discipline that needs to develop an academic base"

An effective search engine is seen as an essential resource for all CPD programmes in family medicine and quality improvement of programs. Google (<http://www.google.com>) and the NeLH-PC directory (<http://nelhpc.sghms.ac.uk>) were listed as examples of good practice.

Thirteen of the eighteen respondents agreed that evidence based medicine (EBM) should be the basis for all internet sites providing CPD for family physicians. The overwhelming majority saw EBM as the key knowledge for specialist in family medicine, but the responses were qualified:

"We miss the point if we adhere strictly to EBM."

"General Practice is also an Art"

"Depends on subject matter, Yes, where it is available, but a lot of what we do in general practice is not evidence-based"

Many respondents rejected the notion that only measures of outcomes in care should be used to evaluate the effectiveness of Family Medicine CPD.

Results from the workshop discussion

The view of the group was that web-resources should be contributing more towards changing clinical practice and raising standards. The role of primary care informatics was endorsed, as in the questionnaire.

The following website quality issues were identified:

- * Passwords and registration requirements are a constraint and need to be avoided.
- * Speed of access is critical - this includes download speed, searching time and connection time (at home and at workplace)
- * Although access needs to be speedy, medical information must be kept confidential.
- * Opportunities for networking between individuals (i.e. via e-mail or discussion group) need to be tested.
- * Searching on the Internet remains problematic, the issues are:
 - o What search terms to use
 - o How to avoid information overload, there is just so much material available.
 - o None of the search tools used are ideal.

* Nobody was aware of a decision support system that had got it right.

o It is only possible to retrieve information in-consultation, i.e. to look up something that the user knew was there; e.g. using a drug dictionary.

o Learning, new ways of managing problems and changing established ways of working is not feasible in the stress of the consultation; protected time is needed outside.

Other issues that were raised, included:

* Australia has well-advanced on-line resources providing guidance for family doctors.[17],[18]

* The National Service Frameworks in the UK¹⁹ provide a useful model of how to create a nationwide focus on improvement of quality.

* Political pressures, and time constraints were otherwise considered the barriers to progress.

* Improvement of quality is hampered by the "daily bureaucracy" of the different health systems.

:: Discussion



The group concluded that primary care informatics is a key enabler of quality improvement; and that there is need for specialists in primary care informatics to take the lead in experimental work that will result in the development of effective on-line CPD material.

However, a sample drawn from a workshop gathering on this issue will have inherent bias. The results highlighted these individuals' difficulties in searching and finding the right information without being overloaded. The development and dissemination of knowledge management strategies^[21] will be a core task for the primary care informatician.

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References

- 1 Sullivan F, Gardner M, van Rijsbergen K. An information retrieval service to support clinical decision-making at the point of care. *Br J Gen Pract* 1999;49:1003-7.
- 2 Eccles M, McColl E, Steen N, Rousseau N, Grimshaw J, Parkin D, et al. Effect of computerised evidence based guidelines on management of asthma and angina in adults in primary care: cluster randomised controlled trial. *BMJ* 2002;325:941.
- 3 Mitchell E, Sullivan F. A descriptive feast but an evaluative famine: systematic review of published articles on primary care computing during 1980-97. *BMJ* 2001;322:279-82.

- 4 Wyatt JC. Clinical Knowledge and Practice in the Information Age. London: RSM; 2001.
- 5 Thomson O'Brien MA, Freemantle N, Oxman AD, Wolf F, Davis DA, Herrin J. Continuing education meetings and workshops: effects on professional practice and health care outcomes. *Cochrane Database Syst Rev* 2001;2:CD003030.
- 6 Eccles M, Grimshaw J. Clinical Guidelines. From conception to use. Abingdon: Radcliffe Medical Press; 2000.
- 7 Davis D, O'Brien MA, Freemantle N, Wolf FM, Mazmanian P, Taylor-Vaisey A. Impact of formal continuing medical education: do conferences, workshops, rounds, and other traditional continuing education activities change physician behavior or health care outcomes? *JAMA* 1999;282:867-74.
- 8 Davis D. Clinical practice guidelines and the translation of knowledge: the science of continuing medical education. *CMAJ* 2000;163:1278-9.
- 9 International Medical Informatics Association. IMIA. Working Group No 5. Primary Care. URL: <http://www.imia.org/> [Accessed on 20th June 2003].
- 10 World Organisation of Family Doctors WONCA. Informatics Working Group. URL: http://www.globalfamilydoctor.com/aboutWonca/working_groups/index.htm [Accessed on 20th June 2003].
- 11 American Informatics Association AMIA. Primary Care Informatics Working Group. URL: <http://www.amia.org/working/pci/main.html> [Accessed on 20th June 2003].
- 12 European Federation for Medical Informatics (EFMI) Primary Care Working Group. URL: <http://www.efmi.org> [Accessed on 20th June 2003].
- 13 International Medical Informatics Association, Working Group 1: Health and Medical Informatics Education. Recommendations of the International Medical Informatics Association (IMIA) on Education in Health and Medical Informatics. *Methods Inf Med* 2000;39:267-77. Down loadable from IMIA web site. URL: <http://www.imia.org/wg1/rec.pdf> [Accessed on 20th June 2003].
- 14 Eysenbach G, Powell J, Kuss O, Sa ER. Empirical studies assessing the quality of health information for consumers on the world wide web: a systematic review. *JAMA* 2002;287:2691-700.
- 15 Eysenbach G. An ontology of quality initiatives and a model for decentralized, collaborative quality management on the (semantic) World-Wide-Web. *J Med Internet Res* 2001;3:E34.
- 16 Questionnaire: How can family medicine organisations work together to develop internet based resources for supporting continuing professional development (CPD) and quality improvement. This can be down loaded from, URL: <http://www.gpinformatics.org/meetings.htm> [Accessed on 20th June 2003].
- 17 Norusis M. SPSS 6.1 Guide to Data Analysis. New Jersey: Prentice Hall; 1999.
- 18 National Preventive and Community Medicine Committee. The Green Book: Guidelines for Preventive Activities in General Practice. Royal Australian College of General Practitioners (RACGP.) URL: <http://www.racgp.org.au/folder.asp?id=605> [Accessed on 20th June 2003].
- 19 National Preventive and Community Medicine Committee. The Green Book: Putting Prevention into Practice. Royal Australian College of General Practitioners (RACGP.) URL: <http://www.racgp.org.au/folder.asp?id=301> [Accessed on 20th June 2003].
- 20 The National Service Frameworks. Department of Health. URL: <http://www.doh.gov.uk/nsf/nsfhome.htm> [Accessed on 20th June 2003].
- 21 de Lusignan S, Pritchard K, Chan T. A knowledge-management model for clinical practice. *J Postgrad Med* 2002;48:297-303.

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