



Collaborating to Improve Healthcare Outcomes: the introduction of a Clinical Informationist service to Ireland.

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Beaumont Hospital



EAHIL WORKSHOP
2009
Dublin Castle, Ireland
2nd - 5th June 2009

ProQuest



Beaumont Hospital

- Main Teaching Hospital for the Royal College of Surgeons in Ireland
- 791 beds

Patient throughput (2008)

21,775 Inpatient discharges

40,801 Day cases

Funding for the CI Project was provided by CICT on a competitive basis, taking account of the quality and relevance of the research proposal. Funding also from Beaumont Hospital



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ProQuest



Hospitals and Evidence Based Practice

- Hospitals are knowledge intensive organizations
- Evidence Based Medicine
- Clinical questions should be answered on basis of research evidence
- Clinical staff do not take time to review evidence
 - Time consuming
 - Vast amounts of information (40,000 biomedical journals)
 - Databases too complex
 - Retrieval skills are not good





Clinical Librarian / Informationist Concept

- Developed in the 1970s (Dr. Gertrude Lamb)
- Clinical librarians became integrated members of healthcare teams
- To provide access to the knowledge base of medicine at the point of care
- Davidoff & Florence 2002 *Annals of Internal Medicine Editorial*





Clinical Informationist Role

- Helps to bring research from bench to bedside quickly and efficiently.
- Facilitate medical problem-solving and clinical decision making
- Contribute to CME, EBM and research process
- Bring expert knowledge of electronic resources and the Medical Literature to the Clinical Team





Overview of Clinical Informationist Project

- **Introduce the concept of Clinical Informationist to Ireland**
- **Increase effectiveness and value for money of Clinical Teams by providing them with evidence based clinical information**
- **Help decrease hospital costs**
- **To evaluate the potential care and economic benefits of extending the Clinical Informationist model to the rest of the Irish healthcare service.**



Critical Success Factors

- **Appointment of Clinical Informationist**
- **Acceptance of Clinical Informationist by clinical staff**
- **Proactive dialogue, including meetings and follow up requests to ensure maximum uptake of service and response rate**
- **Frequency of requests and use of the service by Team members**
- **Willingness of Team members to provide feedback**
- **Electronic access to the knowledge base of healthcare**
- **Negotiation of Budget sources available to the research project**
- **Identification of appropriate Research Instruments**



Methods of Evaluation

Study is focused primarily on Cystic Fibrosis and secondly on Endocrinology

- 1. Survey of the information seeking habits of Clinical Teams before the Clinical Informationist joins the Team**
- 2. Online self-assessment of the impact of information provided by the Clinical Informationist on a range of outcomes associated with Clinical decision making, Clinical research, Education CME, CPD and the Avoidance of adverse effects**
- 3. Structured interviews with members of the Clinical Teams in the Department of Medicine at Beaumont Hospital after six months and at the end of the year**



Clinical Informationist Role

- **Based in the Department of Medicine in Beaumont Hospital and works with Cystic Fibrosis and Endocrinology services.**
- **Duties:**
 - **conducting literature searches for clinical and research staff**
 - **providing prompt and relevant evidence-based information**
 - **attending multidisciplinary team meetings, ward rounds, clinics and journal clubs etc.**
 - **providing information skills training**



Activity from June-December 2008

Cystic Fibrosis service

- **113 questions were generated (clinical/research/CME/CPD)**
- **Most questions were complex and required comprehensive literature searching e.g.**
 - **What is the incidence of Asperger's Syndrome occurring with Immunodeficiency? Have these co-morbidities ever been documented in the presence of Cystic Fibrosis?**
 - **What guidelines are in place regarding the sequence that Cystic Fibrosis medicine should be taken in?**



Activity from June-December 2008

Further examples of clinical questions:

- Can you find me models for adult Cystic Fibrosis Nursing Care Pathways?
- What is the risk of Thrombosis with Megace (aka Megestrol) in a young female Cystic Fibrosis patient?

Queries have been diverse with requests for:
full text articles / survey instruments /
nursing care plans / protocols / guidelines /
journal impact factors etc.





Uptake of service within Cystic Fibrosis Team

- **All Cystic Fibrosis multidisciplinary team members (i.e. Consultants, Non Consultant Hospital Doctors [NCHDs], Researchers, Nurses, Physiotherapist, Psychologist, Social Worker and Dietician and Students) have availed of the service and many use it regularly**
- **Consultants and Registrars (both Clinical and Research) use the service most often**





Collaboration with Clinical Team

- **Forged excellent relationships with the Cystic Fibrosis Team members**
- **Attended the Ninth National Cystic Fibrosis Meeting in Killarney in January 2009 with the Team members**
- **Regular contact with Clinical Teams is vital to maintaining these relationships**



Endocrinology Service

- Joined Endocrinology in March 2009
- Endocrinology has a very diverse patient load, so joining this Team presented a great learning opportunity
- Many complex queries presented, which require detailed literature searching
- The uptake within this team has been predominantly by Consultants and Registrars and Senior House Officers





Endocrinology Service

Examples of Questions generated by the Endocrinology Team:

- What is the role of GLP-1 injections in the treatment of diabetes in patients with Huntington's Chorea?
- A male patient presents with gustatory sweating after eating (only). The patient doesn't have diabetes and is in 60s/70s age group. This condition is usually related to autonomic neuropathy but the patient also had heart surgery which might be a causal factor, as might a tumour. What conditions other than autonomic neuropathy have been known to cause gustatory sweating?
- Recent and significant clinical trials on Hypertension and Diabetes (there are thousands!)



Ongoing evaluation

- **The service is evaluated largely using online surveys (SurveyMonkey)**
- **These seek to determine the relevance and timeliness of the information provided in addition to the impact of the information upon clinical decision-making and research**
- **Completion rates of evaluation forms has been high, as they are short and convenient to complete**



Qualitative feedback on the service

- **“Information provided was truly time saving”**
- **“Information provided will have an impact on more than 100 patients per year”**
- **“Information provided will help us develop protocols”**
- **“Very important articles will guide future clinical practice”**
- **“Information provided will have a huge impact on the advice given to all Cystic Fibrosis patients in the future”**



Qualitative feedback on the service

- **“Excellent search. I found the result surprising. i.e. not what I expected”**
- **“Excellent thorough search on a very obscure rare topic”**
- **“Excellent information to a specific question. Information search involved telephoning individuals with the knowledge to discuss specifics. Am grateful for the time and innovation taken to answer this question. ”**
- **“Brilliant yet again in an extremely efficient fashion”**

Outcomes from Research involvement



The screenshot displays the PubMed web interface. At the top, the NCBI logo is on the left, and the PubMed logo with the text 'A service of the U.S. National Library of Medicine and the National Institutes of Health' is in the center. The URL 'www.pubmed.gov' is also visible. On the right, a 'My NCBI' section shows a welcome message for 'mauraflynn' with a '[Sign Out]' link.

The main navigation bar includes links for 'All Databases', 'PubMed', 'Nucleotide', 'Protein', 'Genome', 'Structure', 'OMIM', 'PMC', 'Journals', and 'Books'. The search bar contains the text 'PubMed' in the dropdown, 'for Flynn MG[author] AND obsessive compulsive' in the input field, and 'Go' and 'Clear' buttons. To the right of the search bar are links for 'Advanced Search' and 'Save Search'.

Below the search bar, there are buttons for 'Limits', 'Preview/Index', 'History', 'Clipboard', and 'Details'. The 'Display' dropdown is set to 'Citation', 'Show' is set to '20', 'Sort By' is set to 'Relevance', and 'Send to' is set to 'Clipboard'. The 'All: 1' and 'Review: 0' buttons are also present.

The search results section shows a single entry: '1: [Pediatr Pulmonol.](#) 2009 Mar;44(3):300-1.' To the right of this entry is a link for 'Related Articles, Link:'. Below the entry is a 'FULL TEXT AVAILABLE ONLINE' badge from 'WILEY InterScience'. The title of the article is 'Obsessive-compulsive disorder: good for cystic fibrosis (CF)?'. The authors are listed as 'Chotirmall SH, Flynn MG, Kernekamp C, McElvaney NG.' Below the authors, the 'Publication Types:' section lists 'Letter'. The PMID is '19206183 [PubMed - in process]'. At the bottom of the results section, there are dropdown menus for 'Display' (set to 'Citation'), 'Show' (set to '20'), 'Sort By' (set to 'Relevance'), and 'Send to' (set to 'Clipboard').

On the left side of the page, there is a sidebar with links for 'About Entrez', 'Text Version', 'Entrez PubMed', 'Overview', 'Help | FAQ', 'Tutorials', 'New/Noteworthy', 'E-Utilities', 'PubMed Services', 'Journals Database', 'MeSH Database', 'Single Citation', 'Matcher', 'Batch Citation', 'Matcher', 'Clinical Queries', 'Special Queries', 'LinkOut', and 'My NCBI'.



Health Information: a national Health Information strategy (2004)

“high quality care requires the availability and use of evidence tailored to the needs of health professionals at the point of decision making”



Thank you

- **We would like to extend our thanks to Professor McElvaney and the Cystic Fibrosis team and Dr. Diarmuid Smith and the Endocrinology team for their enthusiasm and warm welcome**
- **We would also like to express our sincere gratitude to Kate Kelly and the staff of the RCSI libraries for their continued support**
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