National Pilot To Reduce Cancer Waiting Times

ERA
decision support for early referrals

ERA is a key new project aimed at reducing waiting times for cancer patients, driven by software development company *Infer*Med and commissioned by the NHS Information Authority.

The project known as ERA (Early Referrals Application) is the brainchild of Professor John Fox of the Advanced Computation Laboratory of the Imperial Cancer Research Fund (ICRF) and software development company *Infer*Med Limited.

ERA, which took less than 12 months to develop, combines *Infer*Med's AREZZO® decision support engine with formal Department of Health Guidelines. It is being piloted for six months with selected Leicestershire and Hampshire GP's and Clinic Booking staff from the Glenfield Hospital (part of the University Hospitals of Leicestershire NHS Trust)

and Southampton General Hospital (part of the Southampton University Hospitals NHS Trust).

It is expected that patients will be more consistently referred in shorter times from their GPs to local Hospital Oncology Clinics where diagnostic tests are undertaken. Over 30 GPs from five Practices are taking part in the Pilot Project covering both rural and city locations. Waiting times at Hospitals are a hot button with the general public and politicians alike. When there is even the remotest possibility of having cancer, anyone would want to be diagnosed and treated as quickly as possible. ERA

uses technology to speed that process and as a result, care can be administered more quickly.

Steadily increasing amounts of form filling, currently a cause for frustration amongst doctors, will be reduced by the software application from *Infer*Med, as it facilitates quick, on-line, interactive web-based patient referrals. The specially designed disease- specific pro-forma or templates are based on the Referral Guidelines for Suspected Cancer, published in hard copy by the Department of Health in March 2000.

Imperial Cancer Research Fund
Turning science into hope

The Guidelines which currently cover 12 cancer types including breast, lung and bowel are being extended to ultimately cover all cancer types. They are used by GPs around the country who have a patient with suspected cancer.

David Shepherd, GP at the Saffron Group Practice, Leicester commented, *"These on-line Referral Guidelines are great news for GPs as they save time by taking us through a set pro-forma applicable to our patients' signs/symptoms. It all happens while the patient sits in front of you. This thorough pathway of questions and answers gives consistent data to the Hospital Oncology Clinic and frees us up from unnecessary paperwork to allow us to spend more valuable time with face to face patient contact."*

He went on to add, *"Having been involved with the project all the way through and worked with all the various parties, I am sure the Pilot will be a huge success and we will see it roll out across the country and maybe expand the concept to cover other similarly difficult clinical problems."*

David Shepherd.
GP at the Saffron Group Practice, Leicester

The ERA application, based on the decision support engine AREZZO®, offers a web-based interface to the Referral Guidelines, gathering relevant clinical information, in a standard format, in real time, about the patient and their signs/symptoms. It then matches those findings against the appropriate guideline and advises the GP on the appropriateness or otherwise of an urgent referral to the Hospital or Trust. It is simple to use and promotes electronic referrals in primary care.

"ERA supports acute hospitals in streamlining the referral process, harmonising disparate referral mechanisms to provide point of care decision support for General Practitioners, and allows the acute hospitals to modify that decision support to reflect local variation in referral policy," confirmed Andrew Newbigging, Managing Director of *Infer*Med.

Andrew Newbigging,
Managing Director of *Infer*Med

Dr Mick Peake chaired the DoH Working Group which developed the urgent referral guidelines for lung cancer. He is the Lead Clinician for Lung Cancer and Director of the Leicester project at the Glenfield Hospital. He said of the project,

"At Glenfield Hospital, we would like to think that we have been at the forefront of improving care for cancer patients. By using the on-line, interactive Referral Guidelines we will now get more speedy

referrals from the community; streamlined data that we can use for statistical purposes; and most importantly earlier diagnosis for our patients, leading to faster treatment and better outcomes. The concept is simple yet so effective and I hope the Project gets the publicity it deserves, as it will have a great impact on the waiting times of cancer patients."

Dr Mick Peake
Lead Clinician for Lung Cancer and Director of the Leicester project at the Glenfield Hospital

The actual Referral Guidelines and the AREZZO® decision support engine are being held on a server at a major London teaching hospital, the Central Middlesex, and the data will be transmitted using the NHSnet which ensures security and confidentiality of data across the NHS private IT network.

Professor Mike Richards, the National Cancer Director, believes these interactive Referral Guidelines for Cancer will be a catalyst for further development of electronic guidelines. He explains,

"One of the clear messages from General Practitioners to come out of the consultation on the Referral Guidelines for Suspected Cancer

Professor Mike Richards
The National Cancer Director

*was the difficulty of using a large number of pro-formas. In response to this concern we have established four referral pilots to evaluate the use of electronic transmission of referrals for patients with suspected cancer. The pilots have been developed by close co-operation between the NHSIA, Infer*Med *and the GP supplier EMIS. We expect to have the findings of this important piece of work by the end of the year."*

He continues, *"The project has three broad aims. First to assess the potential benefits for GPs of electronic referral processes (as in the ease of making a referral), second, to assess whether the interval between a patient seeing the GP and receiving a hospital appointment can be reduced and third to assess whether the quality of information provided to Trusts is enhanced."*

Simon Old, Head of Direct Care Information Policy at the NHS IPU commented, *"Increasingly various parts of the NHS are becoming linked together via technology and the NHS Information Authority is keen to promote innovations like*

this. It is fair to say that NHS professionals want access to guidelines and knowledge; everyone wants improved health ensuring local services are effective and meet local needs; new services are needed to improve local access for patients by using technology, for instance, to provide quicker referrals using NHSnet for appointment booking, referrals and other clinically related activity – all these are demonstrated in the ERA Project."
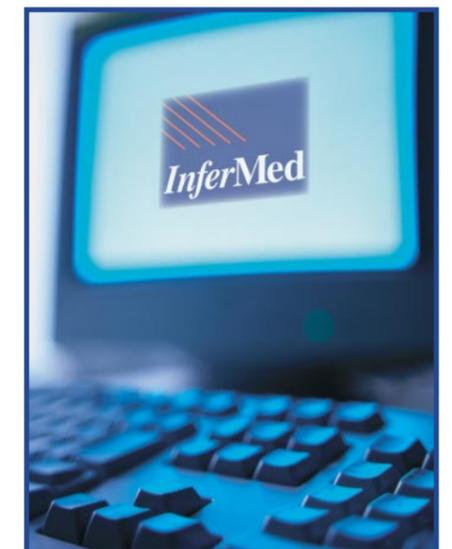
Decision support for early referrals

The Early Referrals Application (ERA) is a web-enabled electronic referrals system. It provides decision support to General Practitioners. The ERA decision support module implements the Department of Health's "Referral Guidelines for Suspected Cancer" whilst customising them to reflect local variations in the referral process. This enables GPs to identify patients with suspected cancer and then send an urgent referral to the nearest appropriate hospital. ERA fulfils a critical step in achieving the two-week standard for cancer referrals.

Using ERA

1. Patient consults General Practitioner

During a consultation, a general practitioner may be concerned a patient could have cancer. To access the ERA decision support system, the GP clicks on a button in the Electronic Patient Record which accesses a centrally located website. When the browser reaches the website, encoded information from the GP's machine automatically transfers the GP and patient details to the ERA server.

2. ERA guidelines displayed to GP

The list of cancer referral guidelines is then displayed to the GP. Guidelines are available for several different cancer types. The GP can also select information about the content of the guidelines and about the cancer type.

3. Clinical information entered into the guidline

When the GP selects a guideline, relevant patient details such as age and gender are automatically inserted into the guideline. The remaining clinical questions are presented as tick boxes that only require the GP to mouse-click on the appropriate responses. Data entry is fast and efficient.

4. Clinical information processed by decision support

The clinical information is then processed by the AREZZO decision support engine, which provides advice about whether and how quickly the patient should be referred.

5. Patient referral is transmitted to hospital clinic

If the GP chooses to make a referral, the ERA web server creates an email, including the GP and patient details, clinical information, referral decision and the rationale for the decision. The email is sent to the referring hospital, directly to the team responsible for processing urgent cancer referrals. Copies of the email are also sent to the general practitioner and to the surgery.

The future

ERA can also be used to provide decision support for non-cancer referrals. New guidelines can easily be added to the ERA decision support module. Please contact InferMed for further details.

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