Chronic disease care and IT in general practice

Chronic disease care should take place in general practice, but we need to build on existing IT structures to progress this, writes Frank Hill

AS GPs, WE ARE AWARE that the management of chronic diseases is taking more of our time and resources with every passing year. Chronic disease management and the care of the elderly are the challenges for medicine in the next century. A change in the way we manage chronic disease is needed because:

• The population is ageing – individuals often have multiple chronic diseases for many years
• The burden in general practice is increasing – chronic diseases impact on over 80% of GP consultations
• The burden in hospitals is increasing – chronic diseases account for over 60% of bed days
• Research has shown that chronic diseases are often managed sub-optimally (both in primary and secondary care?)
• Research has shown that chronic disease management programmes can markedly improve outcomes and costs.

The Department of Health and Children Framework for Chronic Disease 2008 states that US research has shown that for some conditions, chronic disease management programmes can achieve 50% reduction in unplanned admissions, 50% reduction in bed days and 95% patient and carer satisfaction ratings.

The Framework for Chronic Disease 2008 also highlighted the needs to achieve the following goals in managing chronic diseases:

• Focus on prevention
• Develop structured/planned care
• Use information systems and registers to plan and evaluate care
• Provide guidelines and clinical decision systems
• Integrate care across boundaries
• Provide care in appropriate setting
• Multidisciplinary teams
• Strengthen self-care.

Achieving each of these items is largely dependent on providing the correct IT infrastructure. The majority of the software packages used in general practice are capable of achieving these goals within their current framework. However, the small further developments required to achieve these goals in the near future is prevented by the lack of HSE understanding of existing IT capacity in general practice, agreed standards and structures for disease care and information sharing, and resources.

National Information Technology projects in general practice

General practice has been computerised for 20 years. Software is used on a daily basis in most practices, the majority of which are paperless, but interactions with the HSE have had varied levels of success. As we have learned from the national economic problems, if we are to make progress we must learn from the past and not cling to failed or outdated concepts to satisfy our own vested interests. The following are some of the main national IT projects that have had an impact on general practice in the past 10 years.

Heartwatch

This programme, designed to target secondary prevention of cardiovascular disease in general practice, commenced in 2002, with the first patients recruited in 2003. The programme initially provided software to GPs, which was separate from the patients’ electronic record and which required double entry of data. Despite this, GPs achieved remarkably high quality data collection. The programme was a success clinically, with substantial improvements in reducing the levels of the three main risk factors (smoking, cholesterol and blood pressure), and important improvements in the prescribing of secondary preventive therapies.

The ICGP website states that much has been learned in respect of clinical management, implementation, change management, ICT and information feedback to general practice. Let’s hope this means that systems requiring double entry will never be required again, but surprisingly,
the Heartwatch report does not refer to the ICT infrastructure at all.

**Lab messaging**

Lab messaging has been available throughout much of Ireland for many years. This usually takes the format of a structured message, where each item in a message generated in the lab is coded. This data can be imported in coded format directly to the patient’s file in the practice. The coded data is distributed to general practices through a middleware platform of which several exist, but all labs will be moving to the Healthlink platform in the near future. This system is successful because it:

- Reduces GP workload reviewing and filing lab results
- Reduces workload for laboratory staff
- Improves turnaround time for lab results to general practice
- Improves the coding of lab data in the patient file making this information much easier to retrieve and share.

**Asthma Society/ICGP**

The Asthma Society/ICGP study on implementing the GINA Asthma Guidelines in 2009 used a web-based interface, which created an online guideline-based electronic patient record for managing asthmatic patients. This required the GP to log onto the web and manually enter the patient details. The programme was well received by healthcare professionals, with 93.7% agreeing that it improved patient care and 90.6% agreeing that it helped the decision-making process. However, only one-third are willing to continue to use it, though 80% agreed that they would use a modified version if it was integrated to the patient’s electronic medical record. The increased workload of a stand-alone system requiring double entry is clearly a huge barrier for clinicians.

**Web-based patient referral platforms**

Several platforms for patient referral from general practice have been developed by individual hospitals. Some have gone national, such as Neurolink. These have received a very lukewarm reception from general practice, as they create significant extra workload with double entry of data, as well as being prone to the vagaries of the internet connections in many parts of the country. Neurolink does have plans to integrate the referral to the GP software programmes.

**National Cancer Referral Programme**

The National Cancer Control Programme (NCCP), ICGP and Healthlink are working on electronic cancer referral forms. There are two phases to this project.

In the first phase, Healthlink is using the agreed NCCP cancer referral forms as templates for the electronic cancer referral form. The electronic form on the Healthlink site is based exactly on the paper form. The electronic referral form goes directly to the relevant cancer team, who will respond within five working days. The patient will be seen within the usual time guidelines. The biggest drawback to this system is the increased administrative workload for GPs. However, it does promise:

- Secure transmission of confidential patient data
- An automatic receipt to the GP confirming that the message has been sent successfully
- A response to the electronic cancer referral within five working days.
Chronic disease care: enrolment of patients and relevant data coding

Table 1

<table>
<thead>
<tr>
<th>Practice computer use</th>
<th>No. (%)</th>
</tr>
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<tbody>
<tr>
<td>To issue repeat prescriptions</td>
<td>229 (87)</td>
</tr>
<tr>
<td>To maintain a register/list of all patients</td>
<td>227 (87)</td>
</tr>
<tr>
<td>To issue acute prescriptions other than in consultations</td>
<td>215 (82)</td>
</tr>
<tr>
<td>To issue acute prescriptions in consultations</td>
<td>215 (82)</td>
</tr>
<tr>
<td>To maintain continuation records of consultations</td>
<td>211 (81)</td>
</tr>
<tr>
<td>To store reports from hospital laboratories</td>
<td>211 (81)</td>
</tr>
</tbody>
</table>

In the second phase, the NCCP has agreed with the four ICGP accredited software companies to build a number of national cancer referral forms into their GP Practice Software Management Software Systems. It is only when this is achieved that the system will become useful for GPs because it will greatly improve ease of form completion for GPs, streamline the cancer referral process and provide relevant information quickly, and reduce workload on data input for hospitals and practices. It will also ensure that all relevant data is coded and thus is easily audited, and that the IT infrastructure is future-safe.

Having lived through the various developments mentioned above, there is a widespread sentiment in general practice that the future lies in not reinventing the wheel, ie. we can use the software that is currently available but enhance the ability of the systems to communicate. Structured messaging using coded items that can be automatically imported to the patient electronic record is also important, as is the integration of the various referral forms to GP software, so that double entry is never required.

General practice computerisation

General practice is by far the most advanced area of the HSE in terms of computerisation. The National Diabetes Register Programme 2009 review of computerisation in general practice found that 92% of GP practices had a computer system. The most common system in use was Health One, followed by Socrates and GP Dynamic. Forty-two percent reported having a diabetes module on their computer system. Just under half of the practices reported to be paperless practices.

Table 1 shows that over 80% of GPs are using their computer for all the common activities in general practice, including consultation notes. The speed with which GP software adapted to Healthlink and other softwares providing lab results electronically and adapted to the electronic cancer referrals programme shows the capacity and flexibility of these systems.

The recent Health One diabetes audit 2009 shows the capacity of GP software systems to extract clinical data for sharing with other primary or secondary team members. This study in 23 GP practices in Ireland showed that:
• An automated analysis of GP healthcare records is possible
• The data extracted is of high quality
• The data can be exported in a format that is easily shared with other healthcare professionals using a system such as Healthlink
• This cohort of GPs in Ireland is providing diabetes care equivalent to Irish and UK diabetes programmes.

National GPIT Group

This group, representing the HSE and ICGP, believes: ‘chronic disease modules should be integrated into the patient’s existing electronic medical record to minimise unnecessary increased workload. They should also facilitate recording of structured (and ideally coded) data, which can be shared electronically with the information systems of other healthcare professionals. Stand alone web-based systems will not work.’

The future

What the software must do

• Improve the consultation
• Data retrieval and presentation
• Data input
• Structured care
• Incorporate guidelines
• Incorporate patient self-management plans
• Reduce workload/avoid double entry
• Facilitate and encourage register and recall
• Aid communication – PCT, hospital, lab, PCRS, etc.
• Facilitate audit with minimal workload for clinical staff.

What the HSE must do

The HSE must realise that imposing a top-down solution is not going to work in the foreseeable future and that increasing the capacity of proven existing IT systems and their ability to share data should be its current priority. To achieve this in the context of chronic care, the HSE must:
• Confirm their position that the majority of chronic disease care does and should occur in primary care
• Recognise the relatively advanced standards of IT in general practice and seek to build on this rather than incurring the costs and workload of building a parallel or competing system
• Understand that data recorded must primarily facilitate clinical care
• Facilitate data sharing – Structured messaging, Healthlink, HL7 and XML
• Set standards for chronic disease (datasets, care paths, integrated care protocols, etc.)
• Provide resources for chronic disease care and IT.

The GMS context

Despite the fact that chronic disease impacts on 80% of GP consultations, the current GMS contract is for acute services only. The lack of resources and incentives has prevented this from becoming more developed and structured. Unfortunately, we have seen three consecutive cuts in funding for general practice in the past two years. The only expense which can readily be cut is staff hours and salaries. The resultant loss of staff hours and morale make it difficult to see how general practice can actively participate in the reconfiguration and chronic disease programmes.

I believe that GPs have the will and the vision to continue to be the main providers of chronic disease care and that appropriate IT developments can facilitate this. Let’s hope that any future programme that promotes primary care and general practice as the solution to chronic disease care realises that you cannot provide more services with fewer resources.

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