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Checks and Cheques: Implementing a Population Health and Recall System to improve coverage of Patients with Diabetes in a Rural General Practice

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Abstract

Identification of all diabetic patients in the population is essential if diabetic care is to be effective in achieving the targets of the St Vincent Declaration\textsuperscript{1}. The challenge therefore is to establish population based monitoring and control systems by means of state of the art technology in order to achieve quality assurance in the provision of care for patients with diabetes.\textsuperscript{2,3} Disease management receives extensive international support as the most appropriate approach to organising and delivering healthcare for chronic conditions like diabetes.\textsuperscript{4} This approach is achieved through a combination of guidelines for practice, patient education, consultations and follow up using a planned team approach and a strong focus on continuous quality improvement using information technology.\textsuperscript{5,6} The current software (Medical Director) could not easily meet these requirements which led us to adopt a trial of Ferret. In designing this project we used change management\textsuperscript{7} and the plan, do, study, act cycle\textsuperscript{8} illustrated in Diagram 1.

The Project Objectives.

- Establish a pre-implementation baseline audit of care for the diabetic population
- Establish the baseline uptake rate of claims for Diabetes Annual Cycle of Care Service Incentive Payment (SIP) under the Practice Incentive Payment (PIP)
- Assess whether a population health and recall tool was an improvement over the paper-based diabetes monitoring and auditing system.
- Assess the value of Project Ferret for increasing clinical coverage of the diabetic population
- Review Project Ferret Reporting features as a tool for improving the quality of diabetic care

Project Methodology

A Memorandum of Understanding was seen as crucial to the success of the collaboration and the following role definitions were established.

1. Greater Green Triangle UDRH - Collaborate with Pen Computer Systems on a project plan and take responsibility for the scientific evaluation.

2. Cambourne Medical Clinic – Provision of the trial site and the client data

3. Otway Division of General Practice – Established the roles of the personnel for the implementation and take responsibility for the alignment of the trial with the PIP Scheme and Division objectives

4. Pen Computing Systems – Provide Software installation and configuration, on-line support services for the duration of the trial, and training of medical and support staff in the use of the Project Ferret system.
The first activity was to set up the technical infrastructure and software installation using online technologies from Pen Computer Systems and the collaborative support of the Cambourne Practice Manager. This activity included the extraction of demographic data from the Cambourne patient information system (Medical Director) and its import into a separate database in a stand-alone Ferret system on the clinic Windows NT network. This was all achieved without the need for “on-site” support from PCS.

The second major activity was to translate the Otway Division of GP and Cambourne diabetes management strategy into the Project Ferret system. To effectively manage the diabetic population requires the establishment of a series of care plans in Project Ferret to cover the various co-morbidities associated with Diabetes such as Hypertension or Renal Failure. The establishment of these care plans needed to accommodate a Ferret Process (Intervention) to record SIP payments in the Diabetes Care Plan. This was to ensure that optimal diabetes care delivery would be matched by appropriate payments to the practice under the guidelines for the PIP program and to avoid due payments being missed. A tangible outcome of the project will be a measure of the SIP payments that have been made. This activity was achieved with an on-site clinical trainer from PCS and by subsequent teleconferences and discussion.

The Diabetes Care Plan that is activated by the Diagnosis of Type 1 or Type 2 Diabetes. For the purposes of this trial it generates a payment through a Multidisciplinary Care Plan - a part of the Medicare Enhanced Primary Care Program. It will provide further funding support for the trial for those clients where collaborative planning of care with other health professionals is deemed suitable and practical.

The third activity, which has just begun, is the assignment of the diagnoses to the clients and the transcription of past clinical results into the Ferret database for key indicators of diabetes management. In an ideal world this would be achieved by data extraction from a well-populated clinical database but for the purposes of the trial and for completeness, the data will be collected from paper records and from the clinical system used in the practice.

Baseline data such as HBA1c, lipid levels, and BP's from the previous year will be extracted from written and computer based records and entered into Ferret. This information together with the record of external referrals such as retinal checks will be collated with the dates of any Service Incentive Payments (SIP) for the diabetic cycle of care that have already been claimed. It will be easier not only to ensure comprehensive care for the diabetic patient but also that the GP is remunerated correctly.

Once the register of diabetic patients is established subsequent results will need to be entered to keep the database up to date. This should be a simple administrative task allowing Ferret to maintain accurate recall lists.

The Management of patients with diabetes.

1. To support the systematic and opportunistic delivery of diabetes care the Project Ferret Recall Plan displays, in graphical form, all of the due, and upcoming care requirements for the patient. Ferret uses RED to denote overdue activity PINK to denote upcoming, GREEN to denote completed activities and BLUE to indicate that an activity is in progress. An example of this last is when a test has been ordered but the results have yet to be received and recorded. The Recall Plan view that is used for both viewing completeness of coverage and for entry of results is shown in diagram II.
2. There are several tools in Ferret that will be used to support the proactive delivery of care to the trial population. These include:

- A Population Research Tool, which is used to identify groups of target interest to the practice eg.
  - Clients with elevated HbA1c's (see diagram III)
  - Clients overdue for foot checks
  - Clients with Hypertension and Diabetes

- A Work list generator to establish the outstanding work load for the diabetic cases

- A Reporting System that can indicate:
  - Prevalence of Diabetes and Co-morbidities
  - Audit of clinical outcomes against standards in the guidelines
  - Intervention Activity
  - Test Results for selected tests and clients
  - Diabetics that have not attended the clinic in a nominated period

The value of these tools and the work processes flowing from their use will be examined in the trial.

Discussion.

Diabetes management is at unacceptably low levels. A recent survey of Australian GPs identified the barriers to the effective delivery of chronic disease management. These included the lack of a systematic approach to such care, conflicting interests between the GP as a clinician and as a businessman and lack of suitable software to make tracking patients simple. Additional factors may include the lack of appropriate recall tools in general practice, the challenge posed by incomplete health records, the mobility of patients, and the funding arrangements that support chronic disease management.

This important trial is in its early stages. This project using Ferret software may well show a way to deliver the "checks" leading to improved clinical outcomes for the patient, and the "cheques" for the GP leading to increased motivation to provide systematic care for diabetes.

Pen Computer Systems Pty Ltd are the developers of the trial software. (Project Ferret). No other conflict of interest.

References
5. Hunter D. Disease Management, has it a future? BMJ; 2000:320;530
6. Dunbar J, Macgregor S. J Managed Care;1997;1;68-72
8. Berwick D. A primer on leading the improvement of systems. BMJ;1996;312;619-622
Diagram 1

The Cycle of Disease Management

- Epidemiology
- Prevention
- Pathology
- Treatment
- Patients issues

Plan the Project (PLAN)

- set goals and targets
- develop concrete proposal for changing clinical practice, identify obstacles to change
- design implementation & evaluation, linking interventions to obstacles to change
- assess financial & human resources
- obtain financial & human resources

Formal Evaluation, Monitoring and Reflection. (STUDY)

Evaluate, monitor and reflect at all stages to ensure flexible and dynamic

3. Prepare Patients and Implement the Programme

- assess knowledge, skills and attitudes required to change behaviour and self manage
- provide support to change behaviour and self manage

2. Prepare Practitioners

- training in behaviour counselling
- training in team working
- training in communication skills
- role definitions and responsibilities to be clarified
Diagram II: Project Ferret Healthchart

Diagram III: Ferret Report for HbA1C Coverage

Charts the percentage of eligible clients in the selected population who have had at least one of the chosen processes in the specified period.