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Integrated GP and allied health care for patients with type 2 diabetes

Background
Integrated general practitioner and allied health chronic disease management (CDM) has been supported by Australian Government Medicare initiatives since 2005. Practical ways of implementing CDM have been slow to develop.

Methods
An integrated CDM program for patients with type 2 diabetes was piloted in 2006 by Central Northern Adelaide Health Service (South Australia), in conjunction with four divisions of general practice. Health providers included GPs, practice nurses, credentialed diabetes educators, dieticians and podiatrists. Eligible patients with Medicare approved Team Care Arrangements (TCAs) received allied health care for the Medicare Plus rebate only. This article reports on GP and staff perspectives of the processes, and the effectiveness and sustainability of the pilot.

Results
Chronic disease management improved with integrated health care, reflected by appropriate allied health referrals and better quality TCAs, interprofessional communication, and patient satisfaction.

Discussion
There are benefits for interested GPs, their staff, co-located allied health providers and diabetic patients if integrated multidisciplinary care is provided in the manner of this Enhanced Primary Care CDM model.

In November 2005, Medicare introduced new chronic disease management (CDM) guidelines[1] recommending the effectiveness of integrated general practitioner and allied health (AH) care. The Enhanced Primary Care (EPC) initiative underpinning the CDM guidelines allowed access for eligible patients to five Medicare rebated (Medicare Plus) AH consultations per calendar year. Eligible patients required a Medicare approved Team Care Arrangement (TCA).

Type 2 diabetes is a significant chronic disease in Australia. Diabetes Australia estimate that – unless a concerted effort is made on individual and societal levels to decrease risks – by 2010, there will be 1.8 million Australians suffering from diabetes. The estimated future cost to the Australian health system is enormous, reaching $1.2 billion annually.[2] Risk factors for type 2 diabetes include poor nutrition, overweight, excessive alcohol intake, smoking and a sedentary lifestyle.[3,4] There is no known cure for type 2 diabetes, although integrated care by GPs, practice nurses, credentialed diabetes educators (CDEs), dieticians and podiatrists is believed to minimise disease effects.[3–5]

A pilot project integrating GP care with AH services was funded by Central Northern Adelaide Health Service, South Australia (CNAHS) in 2006, supported by four local divisions of general practice. On the assumption that integrated primary health care was best practice to manage type 2 diabetes, the pilot promoted AH services provided within (or close to) GPs' rooms, funded under the Medicare Plus model.[6–10] The objectives of the pilot were to:

- provide type 2 diabetics in the CNAHS region with greater immediate access to no cost AH services than previously available
- establish whether integrated health care for type 2 diabetics was viable under the Medicare Plus model

Table 1. Interview questions for GPs and their staff

- How long has the practice been participating?
- Was it made clear to the practice at the beginning what the program entailed?
- Has the program implementation been well structured and clear?
- How could this be improved in the future?
- What are the benefits of the AHSGP program to the practice?
- Have you felt that you have been supported to provide good quality care?
- What are the benefits of the AHSGP program to the patient?
- Have you felt that patients have benefited from the program?
- What impact do you think the program has had on GP and PN understanding of managing type 2 diabetes?
- Are the GPs willing to participate?
- On average, how much time does it take for administration staff to organise patients, paperwork for the AHSGP program per week?
- How much time does it take for GPs to organise paperwork such as TCAs, 721/723 for the AHSGP program?
- Have there been any organisational issues that have made it difficult for you or the GPs to accomplish tasks?
- How is it going practically with respect to having AH staff work out of doctors' rooms, getting on with different staff, and providing access to patient notes?
- Is payment occurring?
- Have you had the opportunity to discuss care plans with the AH staff?
- Any other comments?

- estimate whether such care significantly influenced patient self management, and
- determine whether the pilot program could be sustainable.

Before the pilot, access to AH services was restricted for many diabetics in the CNAHS region because of the high cost of private services and limited availability of local publicly funded AH services.

Funding was provided to participating general practices and AH providers to underwrite the costs of pilot participation. For GPs this covered additional receptionist duties (eg. making appointments, collating paperwork), AH providers' use of the internet, and room rental. For AH providers, it covered travel costs and 'topped up' the Medicare Plus benefit so there was no net loss (making the remuneration comparable with that received in private practice for similar length consultations). Allied health providers agreed to provide 40 minute initial consultations with 20 minute follow up consultations for the Medicare Plus rebate only.

Ethics approval was provided by the Human Research Ethics Committees of the University of South Australia.

Methods

The pilot period lasted approximately 8 months (April to December 2006) with a concurrent and independent evaluation which focused on processes, stakeholder uptake and satisfaction. The evaluation period precluded objective measurement of change in patient health status.

Twenty purposively selected general practices in the CNAHS region were invited to participate. Participating practices espoused a desire to integrate AH with GP care, had broadband internet access, sufficient type 2 diabetic patients to ensure viable participation and at least one practice nurse to assist in integrating care. It was a CNAHS contractual requirement that participating GPs and their staff would participate in telephone interviews with the evaluators (*Table 1*).[11,12] At least two interviews were sought with each participant throughout the pilot.

Allied health services were provided by Diabetes SA (a nongovernment organisation) by four CDEs, a private group with seven dieticians, and three volunteer private podiatrists. The dieticians and CDEs were co-located in the GPs' practices on alternating weeks for 3.5 hour sessions. Podiatrists provided the equivalent of one session per fortnight from their own rooms as their mobility was restricted by nonportable equipment. Allied health providers were not charged to use the GPs' facilities. Once GPs completed a GP Management Plan (GPMP) and a TCA (Medicare items 721, 723), type 2 diabetics were eligible to receive up to five AH consultations. General practitioners determined how many consultations and to which AH provider(s). *Figure 1* describes patient enrolment processes.

Results

Participants

Seventeen general practices participated in the pilot, involving an estimated 74 GPs. Ethically it was not possible for the evaluators to determine how many GPs actually contributed any patients to the pilot or whether they contributed patients consistently over the 8 months. Overall 588 patients were enrolled, consuming 1158 AH consultations. *Table 2* reports the number of patients who attended the different combinations of AH services.

Unfortunately, only eight GPs, seven practice nurses and eight practice managers agreed to be interviewed. The evaluators were frustrated when contacting the other GPs, who did not keep interview

appointments, refused to take or return calls or confirm whether they were actually participating in the pilot. Divisions of general practice representatives on the pilot steering committee were at a loss to explain this. Reasons proposed were that in larger practices GPs may have felt little obligation to contribute to a program about which they had little ownership, or that CNAHS financial participation fees may not have flowed on to individual GPs. Moreover, GPs may already have established AH networks for CDM, and thus had no need of the pilot services. Whatever the reasons, the evaluators remained unsure as to whether the nonconsenting GPs and their staff felt similarly about the pilot as the consenting interviewees.

The interview respondents came from a range of settings (solo practices to large multidoctor establishments), and all provided at least two interviews during the pilot. The interview responses from GPs and practice staff were remarkably consistent, with the same answers being provided after approximately 50% of interviews at each time period.

Program commencement interviews

Interviewees reported initial confusion regarding roles, activities, timeframes and responsibilities, mainly related to the different GP and AH assessment, referral and management systems. There was variable understanding by GPs and practice staff about Medicare referral processes to AH, and AH provider roles in CDM. They were also concerned whether service integration could occur respectfully and without overlap. There was initial frustration with high rates of return by Medicare, of poorly completed GP EPC paperwork (Medicare items 721, 723), which resulted in cancellation or delay of booked AH appointments. The ethics and practicality of access by AH providers to electronic GP records was consistently raised.

Throughout program interviews

All concerns diminished as the pilot unrolled. General practitioners completed the Medicare paperwork with fewer errors and omissions, which streamlined Medicare approvals, AH referrals and AH service delivery. As relationships developed between GPs, their staff and AH providers, better understanding developed of roles and responsibilities and new opportunities were identified for integrated care in CDM.

Program exit interviews

Respondents acknowledged that their initial concerns regarding service integration processes were largely unfounded. The pilot provided valuable positive opportunities for GPs and their staff to experience practical integrated CDM. Almost every exit interview provided anecdotes about improved communication between health providers, and better patient understanding, management and ownership of their disease, coupled with examples of sustained significant changes made by patients to diet and exercise regimens. General practitioners also noted that pilot participation had improved their efficiency in appropriately completing the Medicare EPC paperwork, which translated into fewer payment delays and increased GP income. This was an incentive for GPs to continue using the CDM Medicare EPC items for other patients with chronic disease.

General practitioners and practice nurses highlighted the need for clearer guidelines for GPs regarding referral to AH providers for CDM, including which AH providers for which services and for how many consultations. For instance, should newly diagnosed type 2 diabetics consult all three AH providers, or only one? They commented on the inadequacy of five AH visits in one calendar year, particularly for patients requiring multiple CDM.

Figure 1. Process of pilot program rollout

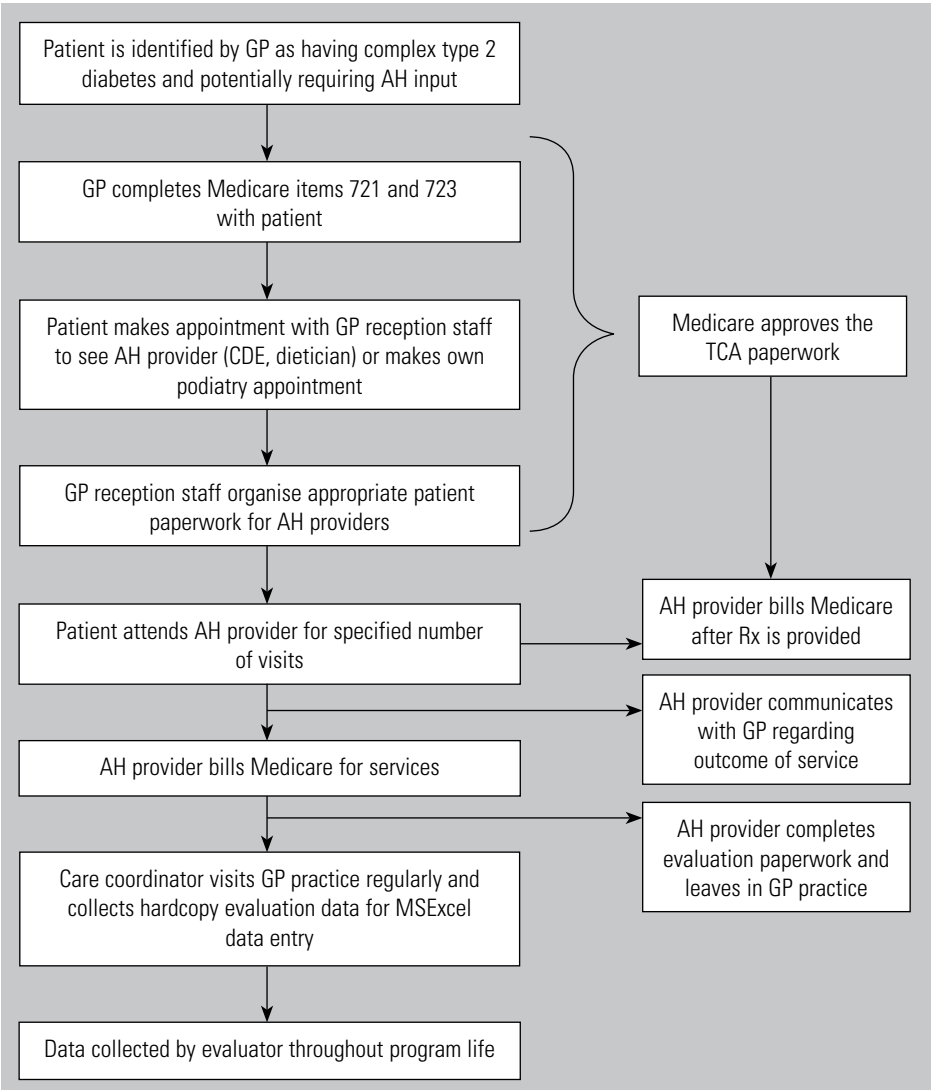

Table 2. New patients consuming AH services

	Pod only	CDE only	D only	Pod + CDE + D	Pod + one of CDE/D	CDE + D
Total	13	70	201	12	3 (2 x D, 1 x CDE)	289

Pod = podiatrist, CDE = credentialed diabetes educator, D = dietician

Case study 1

Dr G was a solo practitioner in a low socioeconomic area. He entered the pilot program for the opportunity to offer his patients access to 'free' AH services. His experience was that AH services were generally unaffordable for most of his patients. He and his elderly receptionist were initially overwhelmed by the organisation required to ensure that AH providers received the appropriate paperwork each visit and to arrange sufficient appointments to fill an entire AH session. After 6 weeks, the processes smoothed out, there was a waiting list of patients for AH providers, and Dr G admitted that he enjoyed having AH providers in his clinic (both for his own benefit and his patients). He said that he had learnt a lot about what AH providers did (in general), as well as seeing what they could offer his type 2 diabetic patients. This largely related to information and supports he couldn't offer. At the end of the pilot, Dr G was in negotiations with AH providers to continue their involvement with his clinic to manage not only diabetic patients, but patients with other chronic diseases.

Case study 2

A large suburban clinic with 12 full time GPs entered the pilot because of the influence of the practice nurses and practice manager, who could see the merit the program potentially offered diabetic patients attending the clinic. The practice nurses were very busy already, and felt that more could be done for their patients with chronic diseases. Also, there were no local, publicly funded podiatry services and the CDE offices were some distance away with limited public transport access. There were several local dieticians, however the practice nurses had no contact with them.

The GPs were equivocal about the pilot and couldn't see that AH providers in the clinic presented a viable business option. To their surprise, the pilot program brought a new dimension of care to the practice. The CDEs and dieticians often shared coffee breaks with the GPs and their staff and found opportunities to discuss patient management and the services they could provide. The GPs were heartened by the feedback from their patients, who appreciated access to a range of services supported by their GP. The GPs also realised that AH providers were good for business as the remuneration from preparing care plans and TCAs was rewarding, and patients often came back to the GP with questions raised in AH consultations. When the pilot ended, AH providers had already been contracted to extend the service.

On completing the pilot, GPs and practice staff reported better understanding of AH services. They had established viable multidisciplinary networks. They reported that integrated AH care improved service efficiency, provided a 'one stop shop' for patients and improved patient satisfaction with, and confidence in, their CDM. They recognised that this program could benefit patients with other chronic disease and were keen to explore other opportunities to do this.

Discussion

This pilot demonstrated that AH providers and GPs can provide an efficient integrated CDM service that is acceptable to all stakeholders. Enhanced Primary Care item numbers were effectively operationalised by GPs to benefit their patients who could access nongovernment AH organisations and private providers charging only the Medicare Plus fee.

This model could be considered by any GP interested in implementing integrated CDM care. These GPs should have a sufficient volume of chronic disease patients as well as the capacity to develop viable networks with AH providers who could co-locate services. General practitioners seeking to adopt this service delivery model should engage in business discussions with interested AH providers regarding viable room rental, shared costs for receptionists, internet access and shared access to electronic records. Allied health providers interested in engaging in this model of service delivery would need to determine whether co-location with GPs, and acceptance of the Medicare Plus rebate only, represented a viable business opportunity.

To ensure AH EPC Medicare items are appropriately and effectively used for CDM, clinical guidelines should be established to inform GP referrals. General practitioners and AH providers require a sound working knowledge of each others' services and professional roles so that TCAs are relevant and patients can access appropriate integrated health care for CDM.

From perspectives of GPs and their staff, this pilot improved service integration and CDM, and produced significant benefits to patients. To truly demonstrate the effects of integrated AH and GP care, objective health outcomes need to be measured over longer time periods.

Implications for general practice

- Type 2 diabetes is an increasingly common and incurable chronic disease in Australia.
- Services by AH providers such as CDEs, dieticians and podiatrists

are available under the Medicare Plus initiative to assist GPs with management of patients with type 2 diabetes.

- GPs and their practice staff believed that their care of type 2 diabetes improved through working with AH providers situated in, or close to, their practice setting, and that patients obtained significant benefits from the integrated care.

Conflict of interest: none declared.

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