Multidisciplinary care plans for diabetic patients

What do they contain?

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BACKGROUND
The Enhanced Primary Care package, introduced in 1999, included an item number for multidisciplinary care plans. There has been little research into what is contained in care plans. This study investigated what general practitioners documented in care plans for their diabetic patients.

METHODS
A retrospective audit of care plans was conducted as part of a larger audit that evaluated the impact of multidisciplinary care plans on the care of patients with type 2 diabetes. The subjects were GPs and their diabetic patients with care plans.

RESULTS
The care plans of 230 patients, identified by 26 GPs, were audited. Most GPs used a template to document care plans and the nature of the template influenced the content. There was limited information documented in care plans.

DISCUSSION
Simplification and consistency of care plan templates would assist the care planning process and encourage better documentation. Appropriate GP education is required to support this.

The introduction of Medicare item numbers for multidisciplinary care plans, part of the 1999 Enhanced Primary Care (EPC) package, was a major shift in the way chronic disease is managed in general practice. A care plan is a written, comprehensive and longitudinal plan of action that sets out the health care needs of a patient and the type of services and supports required to meet these needs. New models of chronic illness management recommend the preparation of care plans for patients.[1–3]

The Royal Australian College of General Practitioners (RACGP) developed standards which stated that a multidisciplinary care plan should identify the patient's diagnoses and problems, their needs, establish goals and tasks, and describe liaison with at least two other providers.[4] The RACGP, divisions of general practice and individual general practitioners developed written templates for this process.

In July 2005 there were changes to the EPC package: multidisciplinary care plans were replaced with two new items, GP management plans (GPMPs) and team care arrangements (TCAs).[5] The GPMPs are effectively care plans developed by GPs for patients with chronic disease while TCAs are aimed at those who require care from multiple providers. The combination of a GPMP and TCA is equivalent to the old multidisciplinary care plan item. Despite the new items, the essence of what constitutes a care plan was unchanged.

Although there has been research identifying barriers to uptake of care planning in general practice,[6,7] there has been little published about the process of care planning, including what care plans actually contain. Our research team therefore undertook to investigate what was documented in care plans prepared by Australian GPs. This was part of a larger study that also examined the impact of multidisciplinary care plans on the process and outcomes of diabetes care. The findings of the impact of care planning on diabetes care are published separately.[8] This current article, which is descriptive in nature, describes what GPs documented in care plans for their diabetic patients.

Methods

The study used a retrospective audit of multidisciplinary care plans prepared for patients with type 2 diabetes. It was part of a medical record audit that examined diabetes care in the 12 months before and following the preparation of a care plan.

General practitioners from five divisions of general practice in southwestern Sydney (New South Wales) were invited to participate. Those who had completed care plans for diabetic patients were eligible. Patients of these GPs were eligible if they had type 2 diabetes diagnosed at least 1 year before the care plan, had a care plan prepared

between November 2000 and March 2003 and had received care from the GP for at least 1 year before and after the care plan. Patients were identified by examining practice billing records for care plan item numbers.

The care plans were audited using a tool which collected data on: date of care plan, type of template used, other care providers mentioned and whether they contributed to the plan (defined in this study as evidence of a copy of the plan having been sent to the provider), diagnoses, problems, needs, goals and tasks documented.

This article presents a descriptive analysis of the contents of the care plans. Mean values and standard deviation (SD) of measures were calculated based on the total sample of 230 care plans. The impact of the care plan template on two aspects of content (needs/goals/tasks and contribution of two other care providers) was examined by cross tabulation (RACGP and practice based templates vs. division templates) and significance tested using Pearson Chi-square statistic. The RACGP and practice based templates were grouped together as they had similar formats.

The study was approved by the University of New South Wales Human Research Ethics Committee and consent was obtained from both patients and GPs.

Results

Invitations to participate in the study were sent to 845 GPs. Consent was obtained from 47 of these GPs. Some were found to be ineligible and some withdrew leaving 26 GPs who identified patients for the study. These GPs identified 428 potentially eligible patients and 230 of those who consented were eligible and had their care plans audited. The mean number of care plans audited per GP was 10 with a range of three to 32.

Use of templates

All GPs in the study used templates with 51.7% (119/230) utilising a division of general practice based template and 30.4% (70/230) utilising the RACGP template. Of the remaining, most used a template specific to their practice.

Care providers

The audit demonstrated that 93.9% (216/230) of care plans mentioned two or more other providers. Based on this study's definition of contribution, 51.3% (118/230) had two or more care providers contributing to the care plan. *Table 1* shows the most frequent providers both mentioned and contributing to the care plans.

Diagnoses and problems

Diagnoses were listed in 57.4% (132/230) of care plans. The mean number of diagnoses was 2.1 (SD 2.3). Diabetes as a principal diagnosis was mentioned in 55.7% (128/230) of the care plans. Hypertension, ischaemic heart disease, dyslipidaemia and obesity were the next most frequent.

Only 31.7% (73/230) of care plans identified problems with a mean of 0.8 (SD 1.4) problems documented. The commonest problems identified by GPs were diabetes or uncontrolled diabetes 17.9% (41/230), missed appointments 7.0% (16/230), high blood pressure 6.5% (15/230), and high cholesterol 5.7% (13/230).

Needs, goal and tasks

Needs were documented in 77.4% (178/230) of care plans, goals in 58.7% (135/230), and tasks in 35.7% (82/230) of plans. The mean number of each was: needs 3.8 (SD 3.3), goals 2.7 (SD 2.9) and tasks 2.2 (SD 3.4). *Table 2* shows the most frequent needs, goals and tasks documented.

Type of template and documentation

The content of the care plan was associated with the type of template utilised (*Table 3*). Divisions of general practice templates showed significantly less documentation of needs, goals and tasks than the RACGP and practice based templates; however they showed better documentation of health care providers who had contributed to the plan.

Discussion

The content of the care plans examined was relevant to diabetes care but the striking feature was that there was limited information documented. This is consistent with an audit of EPC care plans by Medicare Australia[9] and brings into question the role of the care plan as a tool for communication. The reasons behind this lack of documentation are likely to be multifactorial, including external issues such as time pressures on GPs. However, one important factor reflected in our results was that the content of the care plans was associated with the type of template used by GPs.

The templates varied in their capacity to capture information depending on their format. The RACGP and practice based templates provided better opportunities to record needs, goals and tasks while division templates allowed for better documentation of contributing health care providers. This highlights the need for greater consistency of templates so that an accepted minimum level of documentation is included. Organisations involved in providing care plan templates should consider this finding when designing templates.

Another factor contributing to the limited documentation was the overlap in documentation between diagnoses and problems and similarly between needs, goals and tasks so that either the same things were written under each item or material was written crossing both headings. This

Table 1. Most frequent health care providers involved (N=230)

Care provider	Mentioned in the care plan		Evidence of contribution*	
	N	%	N	%
Diabetes educator	178	77.4	108	47.0
Endocrinologist	73	31.7	29	16.2
Ophthalmologist	73	31.7	29	16.2
Dietician	67	29.1	29	12.6
Cardiologist	39	17.0	14	6.1
Optometrist	26	11.3	10	4.3
Podiatrist	24	10.4	10	4.3
Physiotherapist	10	4.3	1	0.4
General physician	8	3.5	2	0.9
Gastroenterologist	7	3.0	2	0.9

* A copy of the care plan sent to health care provider

suggests that GPs have not been provided with enough guidance in the process of documenting a care plan or it may be that they do not find the templates provided appropriate for documenting patient care.

These findings about templates and their influence on care plan content provides information as to what is useful in template structure. We believe templates need to be less ambiguous so that each section has a defined purpose. Problems and needs are best grouped together as they are unique to the individual patient. They should be clearly separated from goals based on guidelines for various chronic diseases. Tasks should allow for the documentation of what will actually be done and by whom. Providing a designated section for recording which other providers are involved would also appear to be useful. Semi-structured care plans for major chronic diseases such as diabetes may assist the process.

Education for GPs about care planning was provided following the introduction of the EPC item numbers in 1999. The RACGP was funded by the commonwealth government to develop web based information and resources, including templates, while divisions of general practice similarly developed templates and provided education to GPs via continuing professional development presentations. This provided information about the item numbers and the Medicare requirements, with perhaps less emphasis on the theoretical underpinnings of the purpose of care planning. Subsequently there has been less emphasis on ongoing education until the introduction of the new items in 2005 when again there has been a focus on the requirements although to a lesser extent than in 1999.

Table 2. Most frequent needs, goals and tasks documented in care plans (N=230)

Need	**N**	**%**
Monitor/control/reduce BP	57	24.8
Control/reduce body weight	54	23.5
Regular/annual eye check	48	20.9
Control/reduce serum lipids	38	16.5
Improve/maintain good/reasonable glycaemic control	38	16.5
Goal		
Monitor/maintain/improve glycaemic control	62	27.0
Control/maintain/reduce body weight	55	23.9
BP <140/85	43	18.7
Prevent/control/detect/monitor eye complications	30	13.0
Prevent/control/monitor diabetic complications	30	13.0
Task		
Improve/reinforce exercise	41	17.8
Improve/maintain/reinforce healthy diet	35	15.2
Regular review by GP	34	14.8
Regular BSL/HbA1c checks	31	13.5
Refer to/review by ophthalmologist/optometrist	24	10.4

Table 3. Relationship between type of template used and content of care plan

Content of care plan	**Type of template**				
	Division based templates (N=119)		**RACGP/practice based templates (N=108)**		***p* value**
	n	**%**	**n**	**%**	
Needs and goals and tasks documented	19	27.9	49	72.1	<0.001
Two or more care providers contribution documented	87	73.7	31	26.3	<0.001

Multidisciplinary care plans require GPs to ask other health care providers to contribute to the plan. This study found around half of care plans had two or more providers contributing but it was difficult to know the extent to which they contributed based on the medical record audit alone and therefore whether they truly were multidisciplinary care plans. Previous research[6,7] and the national evaluation of EPC items[10] has shown that GPs find incorporating multidisciplinary care for their patients difficult due to the way Australian general practice is structured and remunerated. Furthermore, many of the goals and tasks GPs listed do not require multidisciplinary care. The new GPMP item[5] has to a great extent addressed this issue and now allows GPs to prepare care plans for patients who may not necessarily require multidisciplinary care.

It is acknowledged that this study audited care plans from only 26 GPs across five divisions of general practice in southwestern Sydney. A contributing factor to the low rate of recruitment from the invited sample was that not all GPs invited to participate (845) had completed care plans. During the period of this study an average of 22.5% of GPs in southwestern Sydney were remunerated per quarter for preparing care plans.[11]

Further limitations to our study were that the majority of care plans which used a division based template were from one particular division and there may have been a clustering effect as care plans prepared by the same GP are likely to have been similar; therefore our findings might not be generalisable across all GPs in Australia who perform care plans. Given the small sample size there is a potential for bias as it may be that those who participated were atypical with a particular interest in care planning. If this was the case, however, and those who participated were more committed to care planning, then the poor documentation found in our study is even more significant.

This study highlights the need to provide guidance about the conceptual thinking behind care plans and what documentation is

appropriate. Consistency and simplification of templates would assist the process. Templates developed for the new item numbers may have addressed some of these issues but there is still a need for appropriate education about the care planning process if these items are to be utilised effectively. Since their introduction the new item numbers have proved popular and there has been some concern regarding their use. An audit is to be conducted by Medicare in early 2007 to see if GPs are complying with requirements.[12]

It is unknown whether the content of the care plans bear any relationship to whether it is implemented, to the quality of care provided or to whether it results in greater involvement of multidisciplinary providers. Evaluation of the new item numbers is required to explore these issues.

Implications for general practice

- Multidisciplinary care plans from a small sample of GPs showed relevant but limited documentation.
- Appropriate template design is important to ensure minimum acceptable levels of documentation in care plans.
- Ongoing GP education about the care planning process will be important to improve GP understanding of what to document in a care plan.

Conflict of interest: none.

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