Multidisciplinary care planning and teamwork in primary care

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ABSTRACT

Objective: To examine policy and implementation issues around multidisciplinary care planning (MDP) as a means of improving outcomes for patients with chronic disease and/or complex care needs.

Methods: We conducted a series of five systematic reviews of the literature from 1990 to 2006, sampling a spectrum of issues associated with chronic disease and complex health care needs, with a focus on planning and provision of multidisciplinary care.

Results: Our review showed that MDP does improve many functional outcomes in the areas studied. Analysis of MDP programs involves examination of two groups of variables — the multidisciplinary components (a range of clinical perspectives and specialist knowledge) and team components (eg, communication and support). Implementing MDP requires changing patterns of interaction between care providers, alignment of roles and work practices, and changes to organisational arrangements.

Conclusion: While MDP improves many functional outcomes, widespread implementation of MDP in standard practice will require complex and targeted strategies. Devising and testing such strategies is a prerequisite for widespread, routine use of MPD in chronic disease management.

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Australia's population is ageing. Estimates from the Australian Bureau of Statistics indicate that the proportion of Australians aged 65 years or over will increase from 13% in 2004 to between 26% and 28% in 2051.[1] Furthermore, the number of the very old is also likely to increase, with people over 85 years of age expected to form 5% of Australia's population by 2051.[2]

Statistical trends in disability suggest that these additional years of life in Australia are not necessarily disability-free years of life. Instead, a proportion of this increased time will be spent with light-to-moderate disabilities.[3] People aged 65 years and over are more likely to have disabilities than younger people, and the likelihood of acquiring a disability increases with age. Severity of disability also increases as people get older.[4]

Chronic diseases presently make up more than 70% of Australia's overall disease burden due to death, disability and diminished quality of life; this is expected to increase to 80% by 2020.[5] These patterns are likely to increase the pressure on health care services and consequently on health expenditure. They are also likely to have specific burdens for primary care providers, who act as gatekeepers to health services and are often the point of coordination for the patient.

Interest in integration, coordination and multidisciplinary care approaches (Box 1) reflects a response to the emerging pattern of needs resulting from an ageing population and a changing pattern of disease. Potentially, they offer a means to moderate demands on the health system by managing health care needs through the primary care sector within the community setting and preventing, deferring or reducing the demands on the secondary and tertiary sectors.

Multidisciplinary care occurs when professionals from a range of disciplines work together to deliver comprehensive care that addresses as many of the patient's health and other needs as possible. This can be delivered by a range of professionals functioning as a team under one organisational umbrella or by professionals from a range of organisations, including private practice, brought together as a unique team. As a patient's condition changes over time, the composition of the team may change to reflect the changing clinical and psychosocial needs of the patient. From the individual patient's point of view, this distinction is not critical — patients "see" care delivered in similar aliquots, and by a similar range of disciplines.

General practice also provides continuity of care for patients, and personalises the care that is offered. General practice provides day-to-day care of episodic and chronic conditions, as well as gatekeeping and coordination roles. In the context of chronic disease management, the complexity of care frequently requires other professionals to be involved. This may be professionals within the general practice setting, as well as outside of it. This reality is reflected in changes of definition — contrast the Royal Australian College of General Practitioners' person-based definition of general practice of the 1970s[11] with a later view that allows for a broader, team-based style of care, with its inherent risks of fragmentation of care.[12]

For primary care, participation in multidisciplinary teams may be initiated in the secondary sector or by primary care practitioners themselves to ensure comprehensive care for a patient. Uptake of care planning has accelerated in recent years,[13] and examples of systematic implementation of multidisciplinary care are emerging.[14]

Here we examine some of the policy, operational and implementation issues associated with multidisciplinary team care planning. These include questions about who constitutes a multidisciplinary team; whether teams for a given condition are generated by primary or secondary care, and what motivates their formation; what features of the team or the way it works facilitate improved outcomes; and what policy changes might facilitate the uptake of multidisciplinary care planning (MDP).

Methods

We completed a systematic examination of integration, coordination and multidisciplinary approaches to the care of people with chronic or complex care needs, with primary care delivery as the focus. Given the vast literature on the subject, we opted to examine the impact of two examples of these care approaches — MDP and multidisciplinary team care — on a series of sentinel conditions that represented common trajectories of chronic illness[10] and sentinel populations with complex care needs. The selected populations were palliative care patients and the frail aged. The disease trajectories represented were slow progression over years with rapid deterioration towards the end of life (type 2 diabetes mellitus); relapsing and remitting disease (chronic obstructive pulmonary disease [COPD]), and severe disease requiring high-level care on a daily basis (completed stroke). The result was a series of five systematic reviews sampling a spectrum of chronic and complex health care needs. The specific review questions for each of the five studies are detailed in Box 2.

1 Glossary of terms

Integration

Sample definitions

1. Integrated care is a concept bringing together inputs, delivery, management and organisation of services relating to diagnosis, treatment, care, rehabilitation and health promotion. Integration is a means to improve the services in relation to access, quality, user selection and offering care (World Health Organization).[6]

2. The patient's perception of the care received.[7]

3. The level of structural interdependence within and between services.[7]

Coordination

Coordination had many meanings and could be tied to case management or care coordinators as well as to coordination between practitioners and/or health services.

Multidisciplinary

Used in the context of direct patient care by multiple health professionals or referring to multidisciplinary teams.[8]

Enhanced Primary Care program[9]

An Australian national program of funding of general practitioners that encourages GP involvement in multidisciplinary care of patients with chronic disease or complex care needs. The program funds GP involvement with comprehensive patient assessments, routine follow-up of complex cases and people with chronic disease, multidisciplinary care planning, and provides limited access to national funding for some allied health services. Multidisciplinary case conferences to develop care plans are also funded as part of the service.

Trajectories of illness (after Lynn[10])

Level 1: Steady decline from full function, with a rapid deterioration to death (chosen condition: type 2 diabetes mellitus).

Level 2: Steady decline from full function, with exacerbations requiring periods of intensive intervention (chosen condition: chronic obstructive pulmonary disease).

Level 3: Steady decline from a low functioning base, with death being the result of a prolonged period of significant impairment (chosen condition: completed stroke).

Primary care

Direct health care delivered to people in the community.

Secondary care

Health care delivered by specialist health professionals, or in regional hospitals.

Tertiary care

Care delivered by health professionals in a large hospital with subspecialist units. ◆

The common aspect for each study population was that care was needed over a period of time and that the focus of care was not curative. The conduct of each systematic review was similar, and the methodology is briefly outlined in Box 3. Full details on the study methodology can be found elsewhere.[18,19]

Results

There was diversity in outcome measures identified within and between the individual reviews. Literature that described care planning often did so in the context of complex care interventions, so it was difficult to assess the impact of care planning in isolation.

Specific issues from the individual reviews are briefly described here, and in more detail in a companion article.[18] In early-stage diabetes, the review found that care planning and the subsequent care were normally based in the community and managed by general practice. The aim of care was to normalise glycaemic control and cardiovascular function and to detect potential complications. Physical outcomes were mixed, but all projects reported improvements in the process of care. There appeared to be a relationship between the diversity of the care team and improvements in outcomes.

In COPD, multidisciplinary team care was mostly managed from secondary care and delivered in the community. Contact with general practice varied in intensity and structure. Meaningful contact between general practices and the primary care team and specialist services at the time that care plans were developed appeared to be important. One form of care planning identified in the literature was the development and implementation of agreed treatment protocols. Across studies, lung capacity did not improve, but there was improved functional capacity and quality of life. Costs were increased, as was the use of certain services that appeared to result from increased patient understanding of the necessity to treat infective exacerbations early.

In completed stroke, multidisciplinary team management was almost completely hospital-led, with outreach into the community. Outcomes were the length of stay in hospital, the proportion of patients who were able to return to the community, and the proportion who were functionally independent. There were few randomised controlled trials, but they demonstrated improved outcomes where there was intense care planning and where a clear role delineation for the general practitioner was identified. Specialist expectations of the role of the GP did not necessarily match what actually happened, highlighting the importance of defining the tasks allocated to the GP.

For palliative care, communication between GPs and specialist palliative care services was particularly important. Case conferences seemed to be a logical means of providing that care planning and delivery, and there were benefits for the participants. Many of these related to in-depth dialogue about the patient and opportunities for learning and debriefing for difficult cases. However, utilisation of the Enhanced Primary Care (EPC)[9] item for case conferences remains relatively low.[20] Barriers to uptake identified in the review included organisational barriers and legislative and

2 Systematic review questions

- Does case conferencing improve care planning in patients receiving palliative care?
- Does a multidisciplinary approach to care improve outcomes for the frail aged in the primary health environment?
- Does multidisciplinary care planning (MDP) improve outcomes for patients with diabetes mellitus (representing slowly developing chronic disease)?
- Does MDP improve outcomes for patients with chronic obstructive pulmonary disease (representing relapsing and remitting disease)?
- Does MDP improve outcomes for patients who have experienced completed stroke (representing severely ill patients requiring constant high-level care)? ◆

3 Synopsis of our systematic review method*

Search strategy

Databases searched were MEDLINE, PubMed, EMBASE, CINAHL, PsycINFO, Informit, Australian Digital Theses, and Dissertation Abstracts. Websites of peak bodies in the fields covered by the reviews were searched. Search strategies were initially formulated in MEDLINE, then restructured to reflect the taxonomies of subsequent databases, as required. The search combined synonyms for "primary care" with synonyms for the population of interest and terms relating to methods and delivery of multidisciplinary care. Searches covered the period 1990–2006.

Inclusion criteria

Study types: Specific to the individual review question.

Setting: Primary care.

Comparable health system: Countries seen as having a health system equivalent to that of Australia, including the United Kingdom, New Zealand, the United States, The Netherlands, Sweden, and Canada.

Language: English-language articles dated on or after 1990.

Exclusion criteria

Studies that addressed problems in mental health, paediatrics or acute care, or dealt with social initiatives with no health care focus.

Data collection and analysis

Two independent reviewers applied the selection criteria and extracted data.

Quality assessment tools specific to the individual review included the JBI-QARI for systematic reviews,[15] the Cochrane review method for controlled trials,[16] and the APRAC rating system[17] for qualitative studies.

Over 5000 articles were considered for the five reviews, of which 167 were included in our analysis.[18] Final articles for inclusion and quality assessment were decided by consensus.

Findings were analysed and presented thematically.

APRAC = Australian Palliative Residential Aged Care. JBI-QARI = Joanna Briggs Institute Qualitative Assessment and Review Instrument. * A similar review method was employed for all five systematic reviews undertaken. Full details of our methods are described elsewhere.[18,19] ◆

remuneration requirements, such as complex paperwork, workload issues and time constraints. As seen in the COPD review, care coordination resulted in increased costs and use of services.

Our final study investigated the effect of care planning on outcomes for frail older people. Multidisciplinary teams frequently operated as one element of a multifaceted program or strategy. Case conferencing was shown to improve some outcomes, such as medication appropriateness, length of stay in hospital, and home-help hours for older people with dementia. Higher team functioning had a positive impact on some short- and long-term health outcomes.

Discussion

The participants

Community-based members of multidisciplinary care teams commonly include GPs, nurses and allied health professionals. Outreach teams from secondary care sources are similar, but include nurses and doctors with specific discipline expertise. For effective team functioning and patient outcomes, it is important that the roles of participants in care planning and care delivery are clearly articulated and negotiated. Regular communication about patients should also check perceived roles and empower GPs to carry out their defined tasks. Without this, there is the risk that GPs will not know what their role should be, or there may be confusion about roles and tasks where the care is shared.

4 Example of a multifaceted implementation strategy for multidisciplinary care planning

The stroke discharge project conducted in Trondheim, Norway, had different implementation strategies for patients who had been referred after an acute stroke from urban and rural areas. For urban patients, a home visit and team meeting were performed. Participants included the patient and family, the mobile stroke team and members of the primary care team. A plan for further follow-up for necessary nursing, support, and rehabilitation was made. Different tasks necessary for the follow-up program were delegated to dedicated members of the service system.[21] For rural patients, the stroke team asked the primary health care provider to make the home visit and report back to the mobile stroke team. Planning for provision of services, follow-up and task allocation was arranged by phone. Services were delivered locally.[22] ◆

Policy context

The EPC[9] and Chronic Disease Management (CDM)[9] programs represent major policy advances for multidisciplinary management. While they provide an important mechanism for enabling team-based care in the community setting, there are many barriers associated with their uptake and implementation. The mechanisms by which EPC and CDM items are developed and promoted to encourage participation across primary and secondary care sectors will influence the effectiveness of MDP.

The notion of a multidisciplinary team necessarily implies two groups of variables — the multidisciplinary components (eg, enriched knowledge base and a range of clinical perspectives) and team components (eg, communication and support). The effects of both are important for policy and planning. However, it is not always possible to establish the relative contribution of these components to outcomes. The most effective participant numbers, discipline composition, source of initiation and timing of care planning teams is still to be determined.

Putting policy into practice

Many attempts to coordinate care have been reported in the literature.[19] On the whole, these have provided useful outcomes for patients and benefits for the health professionals who have participated. The challenge is how to implement this into mainstream health practice. MDP and management is a complex intervention requiring changing patterns of interactions between care providers, alignment of roles and work practices, and changes to organisational arrangements. Complex interventions need to be supported by multifaceted implementation strategies that recognise and respond to structural and contextual barriers (Box 4).

Patients are cared for in general practice, providing continuity of care across their lifespan. However, many of their complex diseases are managed in specialist settings during periods of instability, returning to primary care during quiescent phases of the disease trajectory. The organisation of health services in Australia makes integration between different forms of care difficult. There is a

need to explore ways of sustaining intersectoral care of patients. Designing and testing models of funding and delivery of secondary-led community care planning and case coordination is one avenue. Another is investigating team structures and arrangements that will support meaningful participation and contribution of members from different sectors and disciplines. Patient outcomes will be improved if high-quality intersectoral care can be achieved as a matter of routine.

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Competing interests

None identified.

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