National Lead Clinicians Group
Enhancing clinical leadership and engagement in the Australian health system

Australian Government
Department of Health and Ageing

Patient safety – handover of care between primary and acute care
Policy review and analysis

Prepared for the National Lead Clinicians Group by the Australian Primary Health Care Research Institute, ANU

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Outline of project

The transition of care between different sectors of the health system is a key point in the delivery of health care where adverse events and disruptions in the continuity of care can occur. Much of the patient safety focus on transfer of care or 'handover' has been on transfer between staff within the same care delivery team and system (e.g. between shift changes of nurses or doctors). However, the interface (or multiple interfaces) between primary and community-based care and acute care also present a preventable safety risk to patients and their carers. These care transitions are also therefore a source of preventable additional health care expenditure, due to factors such as preventable hospital re-admissions and redundant tests.

The Integrated Care Working Group (ICWG) of the National Lead Clinicians Group (LCG) commissioned the Australian Primary Health Care Research Institute (APHCRI) to undertake a review of evidence and policy around patients' transitions between the primary and acute sectors.

The paper includes an international and national literature review and analysis on transitions of care, including the clinical handover of care, between primary / community-based and acute care sectors. This data and evidence are reported and analysed in the context of current and future health care reforms underway in Australia. The aim is to provide an assessment of opportunities for improvements in transitions of care that will result in reduced mortality and morbidity, fewer opportunities for medical errors, improved health outcomes, greater stakeholder involvement, and reduced healthcare costs. The paper makes recommendations about potential policies and strategies and how these might be implemented to improve patient safety during transitions of care.

This review does not address clinical handover issues within the acute care / hospital sector. However, where relevant, the impact of issues within this sector on transitions of care across the sectors is noted.

Methodology

The methodology for this project included the following components:

Academic literature review: A thorough, but not necessarily complete, review of Australian and international literature was conducted, with a focus on recent publications.

Grey literature review: There are a range of sources of 'grey' literature on this issue. These include: reports, submissions and other documents from Divisions of General Practice; reports and other documents from the Primary Health Care Research and Information Service, including information from the database of Divisions' activity; evaluation reports for relevant programs, such as the Hospital Admission Reduction Program (HARP), the Enhanced Primary Care program and the Coordinated Care trials; State government policies, programs and associated reviews.

Expert input: An Expert Reference Group, with representatives of the ICWG, APHCRI, the Australian Commission on Safety and Quality in Health Care (ACSQHC) and the National Health and Medical Research Council (NHMRC), was formed to provide guidance and expert input to APHCRI for this project.

Policy analysis: The aim of this project is to provide:

1. A policy assessment of opportunities for improvements in transition / handover care that will result in reduced mortality and morbidity, fewer opportunities for medical errors, improved health outcomes, greater stakeholder involvement, and reduced healthcare costs.

2. Assess gaps in current knowledge.

3. Provide recommendations about the best investments in research and pilot / demonstration programs that will advance Australian work around improvements in transitions of care.

4. Highlight where this work can be linked into other innovative and reform efforts currently proposed or underway.

Stakeholders

The key stakeholders identified for this project are:

- medical practitioners, including general practitioners (GPs) and specialists, both salaried and in private practice;
- nurses working across the medical / social spectrum, including hospitals, aged care, mental health, general practice, disability, maternal and child health and the community;
- allied health professionals;
- pharmacists, both hospital and community;
- paramedics and Royal Flying Doctor Service staff;
- Aboriginal Health Workers;
- case management workers / social workers; and
- patients / consumers and their families / carers.

This is not an inclusive list.

There are also organisations and professional bodies that are stakeholders, including:

- Medicare Locals (MLs);
- Local Hospital Networks (LHNs);
- Aboriginal Medical Services (AMSs) and Aboriginal Community Controlled Health Organisations (ACCHOs);
- Professional medical organisations;
- Educational institutions; and
- Commonwealth and state / territory bodies which set standards and accredit health services.

Definitions

The transfer process

There are a range of terms which are commonly used to describe the process of providing health care as patients move from one setting to another.

The transfer of information between care providers is an essential component of any transition of care. In fact, it is often identified as the most important focus on any strategy to support the transition process. For example, the Australian Commission on Safety and Quality in Health Care (ACSQHC) has stated that *"The importance of the right information being given and understood by the right people at the right time is key to ensure patient safety during the handover process"*[1].

However, information provision and transfer is only one component of the transition process and does not, in itself, ensure that other aspects of care, such as moral and legal responsibility, are also transferred across settings.

In medical circles the term 'clinical handover' is used to describe the transfer of care from one medical professional to another. For example, the following definition is used by the Australian Medical Association: Clinical handover is ".. *the transfer of professional responsibility and accountability for some or all aspects of care for a patient, or group of patents, to another person or professional group on a temporary or permanent basis.*" [2]

This definition, which is used by many clinical groups, addresses both the responsibility and accountability issues involved with the transfer of care. It illustrates that clinical handover is much more than the transfer of information which is "*irrelevant unless it results in action that is appropriate to the patients' needs.*"[3]

However, the concept of 'clinical handover' has limitations in its capacity to capture the broad range of issues necessarily involved with this movement of a patient and their care responsibilities from one part of the health care system to another. Specifically, it is very focused on the role of the health care professional and takes a medico-centric approach to the transfer of care which does not recognise or acknowledge the role of the patient and his/her needs.

The term 'Transitions of Care' is a related term which refers to the movement of patients between health care locations, providers or different levels of care within the same location as their conditions and care needs change.[4] This term is broader than 'clinical handover' as it encompasses both the clinical aspects of care transfer as well as other factors, such as the views, experiences and needs of the patient.

A more detailed definition of transitional care is provided by The American Geriatrics Society as follows: "*a set of actions designed to ensure the coordination and continuity of health care as patients transfer between different locations or different levels of care within the same location. Representative locations include (but are not limited to) hospitals, sub-acute and post-acute nursing facilities, the patient's home, primary and specialty care offices, and long-term care facilities. Transitional care is based on a comprehensive plan of care and the*

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[1] Australian Commission on Safety and Quality in Health Care 2009

[2] Australian Medical Association 2006. This definition was initially developed by the UK-based National Patient Safety Agency (*Safe Handover: Safe Patients*, British Medical Association (2004))

[3] Manias *et al* 2008

[4] National Transitions of Care Coalition Measures Work Group 2008

availability of health care practitioners who are well-trained in chronic care and have current information about the patient's goals, preferences, and clinical status. It includes logistical arrangements, education of the patient and family, and coordination among the health professionals involved in the transition. Transitional care, which encompasses both the sending and the receiving aspects of the transfer, is essential for persons with complex care needs." [5]

As the term '*transition of care*' captures a broader, more robust sense of care transition and includes both the consumer and health care provider perspective, it is the preferred term used in this paper.

Care interface

While the term 'acute-primary care interface' is commonly used, there are in reality a number of interfaces between these two sectors of the health care system.

The following diagram provides a high level overview of the interfaces between the different components of primary / community-based care and acute / hospital care and the transitions that a patient's journey through the health care system might involve.

This document includes within its scope all of the transitions outlined below. However, due to the availability of literature and research into this issue, it focuses more on the transitions between hospital and general practice / aged care than on other transitions.

As the diagram makes clear, the one constant in these transitions of care is the patient and their family / carers. Given this, it is imperative that their role must be central to any strategies developed to support transitions of care across sectors if these are to be maximally successful.

Primary & community-based care	Acute care	Primary & community-based care
General Practice / AMS • Specialists • Allied Health • Mental Health / Substance Abuse • Community Health Services	*Hospital* Incoming may be planned or via ED Outgoing may be via Transition Care	*General Practice / AMS* • Specialists • Allied Health • Mental Health / Substance Abuse • Community health services
Aged Care • Community • Residential		Aged Care • Community • Residential
Hospital in the Home		Hospital in the Home
		Rehabilitation
		Palliative Care

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[5] Coleman and Boult 2003

Why the transition between acute and primary care is important

Every patient who is admitted to hospital has already experienced one transition, and - short of death - will experience a second transition to another setting. This means that transitions of care are an issue relevant to every hospital patient and critical to the overall performance of our health care system.

There are over 8.9 million separations from Australian hospitals annually[6] and a significant percentage of these people experience an adverse event at some point in the care process. These adverse events are associated with higher costs, longer length of stay and higher mortality rates. While there are data about the impact of these adverse events on costs, length of stay and mortality rates for in-patients,[7] it is harder to find such data for discharged patients as there is little focus on adverse events in general practice. A 1998 study of adverse events within Australian general practice found that one of the major contributing factors to adverse events was poor communication between health professionals, including clinical information about the outcomes of hospital referrals or admissions and the expected role of GPs in post discharge care.[8] A more recent study of rural and regional hospitals in Queensland found that a significant number of unplanned readmissions within 28 days of discharge were medication related and the majority was considered preventable.[9] The main reasons for readmission were inadequate communication / monitoring (41%) and inappropriate / suboptimal pharmacological therapy at discharge (62%).

There are a number of studies which identify transitions of care between health care settings as a high risk scenario for patient safety and an issue of concern to both consumers and providers.

For example, a 2006 clinical handover survey of health care providers, found that handover between acute and community-based care was seen as the second most problematic type of handover (next to shift to shift) with 45% of respondents identifying this as a problem area.[10]

The literature in this area identifies a number of problems associated with a lack of coordination and integration of care around the transition between acute and primary care. Specific studies focus on analysing the issue from a structural (overall health system) level, a health service organisation level, and at the level of the individual. Older patients with chronic and complex health problems are the most likely to experience multiple transitions of care and thus be at the highest risk for adverse events. This is highlighted in a 2007 report commissioned by the Aged Care Association which examines in detail the issues around the transfer of patients from acute to residential aged care (RAC).[11]

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[6] Australian Institute of Health and Welfare 2012

[7] Ehsani *et al* 2006

[8] Bhasale *et al* 1998

[9] Rothwell *et al* 2011

[10] Victorian Quality Council 2006

[11] McDonald 2007

The impacts of problems identified at the acute / primary care interface(s) in the literature are:

- Increase in mortality

- Increase in morbidity (temporary or permanent injury or disability)

- Increase in adverse events

- Delays to appropriate treatment and community supports

- Additional primary health care (PHC) or emergency department (ED) visits

- Additional or duplicated tests

- Preventable readmissions to hospital

- Additional costs to consumer, family, health system and community

- Emotional and physical pain and suffering for consumers, carers and families

- High level of consumer and provider dissatisfaction with coordination of care across primary care / hospital interface.

The evidence base for the impact of these problems is variable. There is little quantitative evidence for the impact of problems specifically due to clinical handover or other specific components of transition of care as most of the research does not focus on a single aspect of this process.

A summary of the evidence for the problems identified above is provided in Table 1 below.

Table 1

Problem	Evidence	References
Increase in mortality	A 1995 study estimated about 12,000 Australians were dying each year because of preventable events (the number due to handover issues was not identified).	Wilson RM *et al* (1995)
	The Victorian Coroner identified a number of deaths associated with poor coordination and communication between sectors.	O'Brien A (2006)
Increase in morbidity	There is good evidence supporting a relationship between poor clinical handover and an increase in morbidity.	Wong MC *et al* (2008) Scott, IA (2010)
Increase in adverse events	Good evidence for an increase in adverse events following transition from one health sector to another. No specific research on the impact of clinical handover processes.	
	Specific risks identified post-discharge: falls, medication problems and infections,	Wong MC *et al* (2008)
	Specific patient groups at risk of problems: post-operative patients, psychiatric patients and aged care patients	Bywood PT *et al* (2011)
Delays to treatment/ medication supply issues	There is mounting evidence of gaps in the continuity of medication management, sometimes leading to adverse events, when patients are discharged from hospital to a residential aged care (RAC) facility.	Harvey PA *et al* (2012)
	One Australian study on medication management after discharge from hospital to residential care. It found	McDonald T (2007)

	medication supply problems were noted in 22% of cases eight weeks after discharge.	
	An Australia-wide survey of 371 RCAF staff found that medication-related problems occurred with around two thirds of transfers from hospital.	Belfrage M (2006)
Additional primary health care (PHC) or emergency department visits	There is good evidence that there is an increase in unnecessary or preventable hospital / PHC visits following poorly managed discharge.	McDonald T (2007) Wong MC *et al* (2008)
Additional or duplicated tests	There is widespread evidence that poor handover processes result in unnecessary additional and duplicated tests.	Wong MC *et al* (2008)
	One study found that 10% of patients discharged into the community had a medical test that may have been unnecessary because it had already been done.	Final report Clinical Epidemiology and Health Service Evaluation Unit, Royal Melbourne Hospital (2009)
Preventable readmissions to hospital	There is good evidence that problems with the primary / acute care interface, including poor clinical handover, contribute to an increase in preventable hospital admissions.	AIHW (2012) Rothwell M *et al* (2011)
Additional costs	No study on the additional costs associated with poor clinical handover was identified.	Rigby K *et al* (2002)
	The direct hospital costs of adverse events, both fatal and non-fatal, were estimated in the Quality of Australian Health Care study at $900 million per annum. This does not include adverse events not in hospital, such as relating to mental health services, nursing homes, domiciliary care, day patients, and general or specialist practice.	Richardson J and McKie J (2007)
Emotional and physical pain and suffering	There are a number of reports of consumer and family experiences of poor handover and transition between primary and acute care and associated adverse events. However, no studies quantifying the pain and suffering were identified.	Wong MC *et al* (2008) Bywood PT *et al* (2011).
High level of consumer and provider dissatisfaction	There is good evidence that both consumers and providers are not satisfied with the coordination of care generally, although clinical handover issues are not always identified as a specific factor contributing to the problems.	
	The Commonwealth Fund survey of adults with chronic conditions found that 23% of Australians reported that there were problems with the coordination of their care.	Schoen C *et al* (2008)
	One survey found that overall, 18% of respondents felt that their time had been wasted because their care was poorly organised.	Wong MC *et al* (2008)

Clinical and non-clinical issues

The clinical necessity for a transfer of care should be primarily determined by the patient's health condition. However in reality this is often not the case, and other factors, such as hospital over-crowding, lack of appropriate services, and social and economic factors determine where patients end up.[12]

Of particular concern for most patients is the need for ongoing hospitalisation and the appropriateness of discharge. Premature discharge or discharge into an environment that is not capable of meeting the patient's clinical needs is a risk factor for hospital readmission.[13] In addition, early hospital discharge may not lead to overall cost-savings if it results in the need for more intense subsequent health care utilisation. On the other hand, failure to make timely referrals to services such as rehabilitation or palliative care can affect patient recovery and/or quality of life.

The decision whether or not a hospitalised patient is appropriate for discharge requires evaluation of multiple factors involving clinical, as well as psychosocial, logistic, and economic considerations. However, instruments for determining suitability for discharge that have been appropriately validated are not available.[14]

Determinants of the appropriate site of care, and subsequent decisions about transfer of care, involve clinical, functional and social aspects of the patient's illness: the patient's acute and chronic medical conditions, potential for rehabilitation, decision-making capacity and social support systems must be taken into account.[15] Evaluations of strategies to improve transitional care demonstrate that it is often the non-clinical issues that determine the outcomes. They are therefore crucial to consider when developing policies and programs in this area.

Factors beyond the clinical determinants include:

- Patient cognitive status
- Patient activity level and functional status
- The suitability of the patient's home (e.g. cleanliness, stairways, location)
- Availability of carer, family, companion support
- Ability to obtain medications and needed health care and social services
- Availability of transportation.[16]

Screening for increased risk can help target resources to patients most likely to be at risk. However no screening tool will be perfectly accurate.

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[12] See for example Poulos *et al* 2011

[13] Alper *et al* 2013

[14] Alper *et al* 2013

[15] Kane 2011

[16] Alper 2013

Australian research and experience

There has been a significant amount of work undertaken in Australia on transition of care issues, in particular by governments of all jurisdictions and the ACSQHC, working with professional groups and other stakeholders. Some key and representative projects are summarised below with more comprehensive information provided at <u>Appendix 1</u>.

THE AUSTRALIAN COMMISSION ON SAFETY AND QUALITY IN HEALTH CARE

Clinical handover has been a specific focus of the work of the ACSQHC. Standard 6 of the *National Safety and Quality Health Service (NSQHS) Standards* (developed by ACSQHC in conjunction with other stakeholders and experts) focussed on clinical handover and states:

NSQHS Standard 6: Clinical leaders and senior managers of a health service organisation implement documented systems for effective and structured clinical handover. Clinicians and other members of the workforce use the clinical handover systems.

The ACSQHC states that the aim of this standard is to ensure there is timely, relevant and structured clinical handover that supports safe patient care. It also notes that it is intended to be applied in the context of the other NSQHS standards, in particular *Standard 1: Governance for Safety and Quality in Health Service Organisations and Standard 2: Partnering with Consumers.*

Sitting under this standard are three specific criteria which must be fulfilled in order to meet the standard. These are as follows:

1. **Governance: Health service organisations implement effective clinical handover systems**. This requires organisation-wide governance and leadership to support effective clinical handover policy, procedure and/or processes within a health service organisation. This includes building on and improving established clinical handover policies, procedures and/or processes.

2. **Systems: Health services organisations have documented and structured clinical handover processes in place.** This requires a structured and documented approach to clinical handover in all health services, recognising that the needs of health service organisations vary significantly and that a flexible approach is required.

3. **Consumer input: Health service organisations establish mechanisms to include patients and carers in clinical handover processes.** Consumers are key stakeholders in clinical handover processes and their experiences can identify problems with the handover processes and suggest areas of improvement.

As part of its role in supporting the implementation of the NSQHS standards, ACSQHC has produced a number of resources for health services. These include:

- OSSIE Guide to Clinical Handover

- Implementation Toolkit for Clinical Handover Improvement

- Electronic Resource Portal for Clinical Handover Improvement

- Electronic Discharge Summary Systems Self-evaluation Toolkit

- Accreditation Workbook for Hospitals and an Accreditation Workbook for Day Procedure Services

- A Guide for Dental Practices (relevant only to Standards 1–6)

- A series of fact sheets on the NSQHS Standards
- Frequently Asked Questions
- A list of approved accrediting agencies.

COMMONWEALTH GOVERNMENT INITIATIVES

The Commonwealth has not been as active as State/Territory Governments in this area but has undertaken a small number of initiatives to support the transition of care between sectors. Primarily, these have involved using funding levers to provide an incentive for health care providers to improve the transition process. The main strategies implemented by the Commonwealth are the following:

Enhanced Primary Care package

The Enhanced Primary Care (EPC) package, introduced in November 1999, included Medicare Benefits Schedule (MBS) items to provide Medicare rebates for EPC discharge care planning and EPC case conferencing services. The EPC package recognised the multidisciplinary care needs of older patients and those with chronic and complex conditions and provided GPs with a central role in coordinating this care. The Commonwealth also supported a range of strategies to encourage use of these item numbers (one of which is discussed below).

Despite these strategies, uptake of the EPC item numbers was not extensive. An evaluation report produced in 2003[17] found that the EPC package had caused important shifts in the fundamental approach of GPs to the care of patients with chronic and complex conditions, although substantial impact was limited to a small number of practices. However the report noted that the current structure and nature of general practice, specifically the fee-for-service model, created challenges for multidisciplinary activity and that major barriers to GP involvement in discharge planning existed despite the availability of discharge planning EPC MBS items. Where GPs employed practice nurses to undertake the information gathering component and/or to assist with care plans, case conferences and discharge planning, the impact on GP workload was minimised, and the relationships with allied health providers were, to some extent, enhanced.

The EPC package and associated items were replaced in 2005 by the Chronic Disease Management package. This package no longer contained MBS items specific for discharge planning, although items 729 and 731 (this latter item is for patents in RAC) can be used by health care providers involved in contributing to or reviewing a multidisciplinary care plan, including a hospital discharge plan, for patients with a chronic medical condition.[18]

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[17] Wilkinson *et al* 2003

[18] Department of Health and Ageing Fact Sheet

Figure 1

Uptake by GPs of MBS items for case conferencing / discharge planning
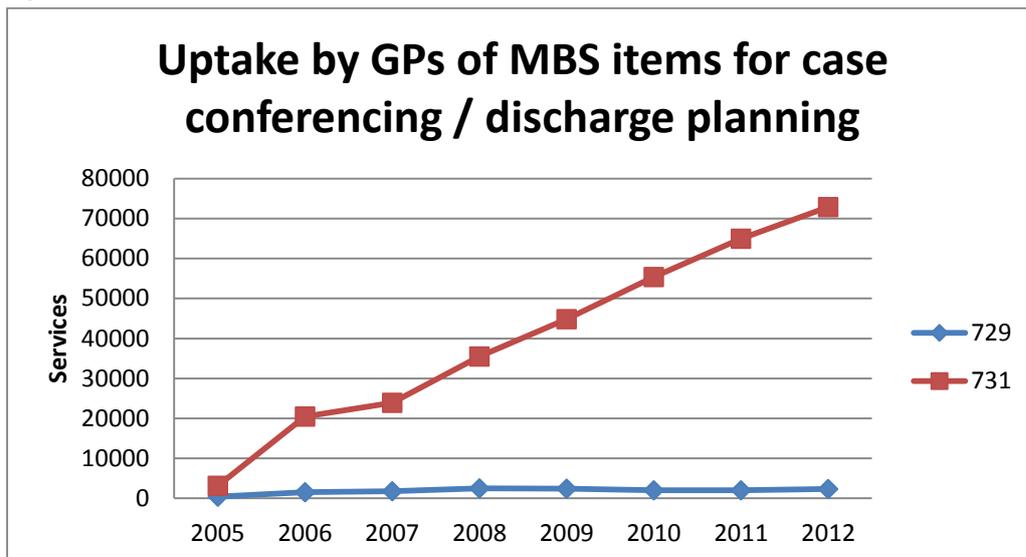
As Figure 1 shows, there has been a steady climb in the use of item 731 for case conferencing / discharge planning since its introduction in 2005. However there is no way to know what percentage of these services is for discharge planning. Data from the Australian Institute of Health and Welfare (AIHW) show that in 2001, 9% of hospital separations for people aged 65 and over (82,500) were into RAC.[19] This figure could be expected to be significantly higher now.

There are six additional MBS multidisciplinary case conferencing items available for GPs who organise and coordinate or participate in a case conference in a RAC facility or a community case conference or a discharge case conference for patients with a chronic or terminal medical condition and complex care needs. Items 735, 739, 743 are for the organisation and coordination of the case conference, and items 747, 750, 758 are for participating in the case conference.

Figure 2

GP use of MBS items for case conferencing including discharge case conferencing

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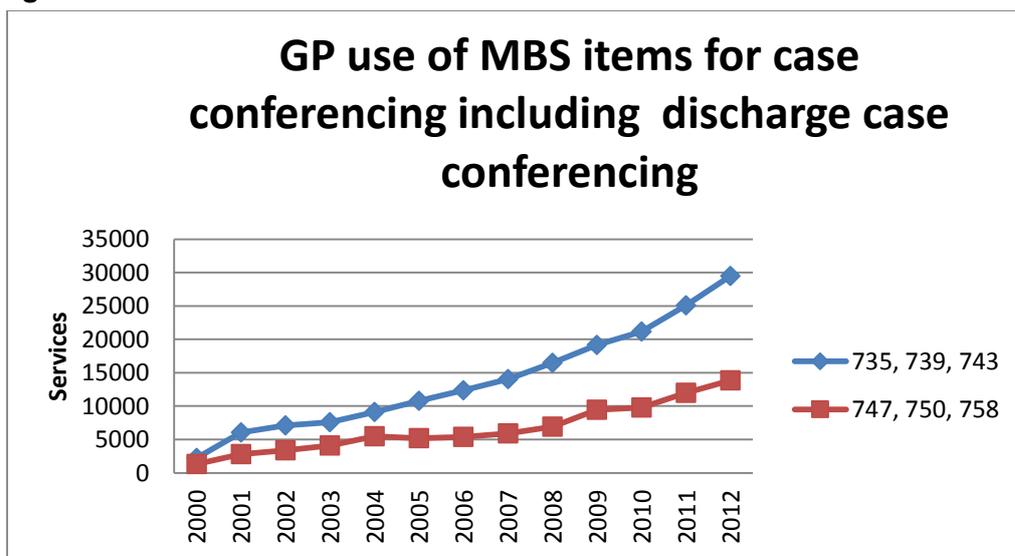
[19] Australian Institute for Health and Welfare 2008

As Figure 2 shows, the uptake of these items has been relatively steady since their introduction in 2000. Interestingly, most of the recent increase in case conferencing organisation and coordination is due to a three-fold increase in the use of item 739 (for case conferences lasting 20-40 minutes) in the three years since 2009.

There are a set of MBS items specifically for discharge case conferencing for specialists. Items 830, 832, 834 are for organising and coordinating a discharge cas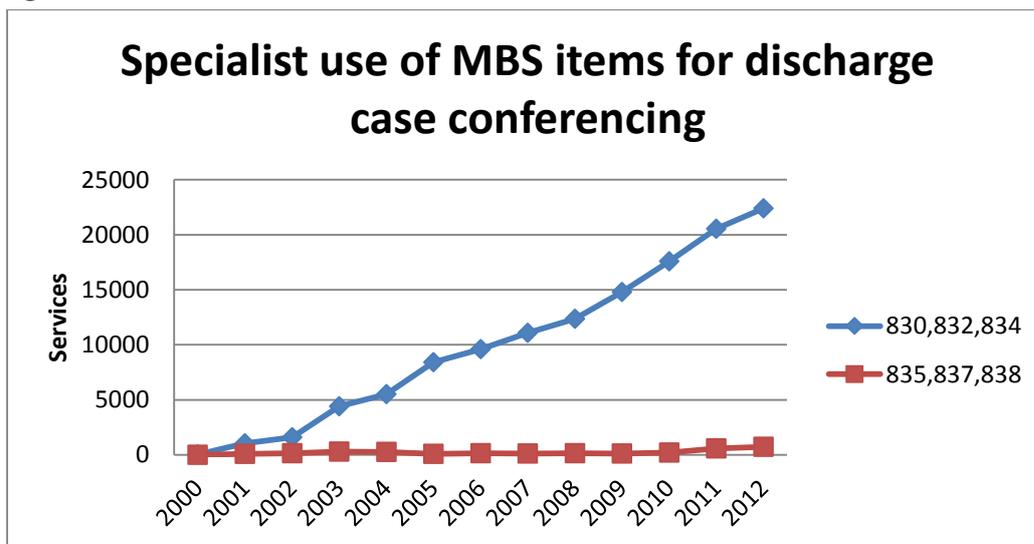e conference and items 835, 837, 838 are for participation in such case conferences. It is reasonable to assume that the majority of these items are used for patients being discharged from private hospitals.

Figure 3

Specialist use of MBS items for discharge case conferencing

As Figure 3 shows, Medicare was billed for 22,400 discharge case conferences in 2012; 80% of these were for conferences lasting 15-30 minutes. There is apparently little participation in such case conferences by specialists who are not the organisers and there is no way to know who the other participants are.

It is possible that MBS items 820-828 could also be used by specialists for discharge planning – or at least immediately post-discharge for case conferencing. These are for the organisation and coordination of or participation in a community case conference with at least three other formal care providers.

Uptake of these items since their introduction in 2000 has been steady but not substantial. However as Figure 4 shows, these are the only MBS items that show a reasonable participation rate by non-organising doctors.

Figure 4

Specialist use of MBS items for community case conferencing
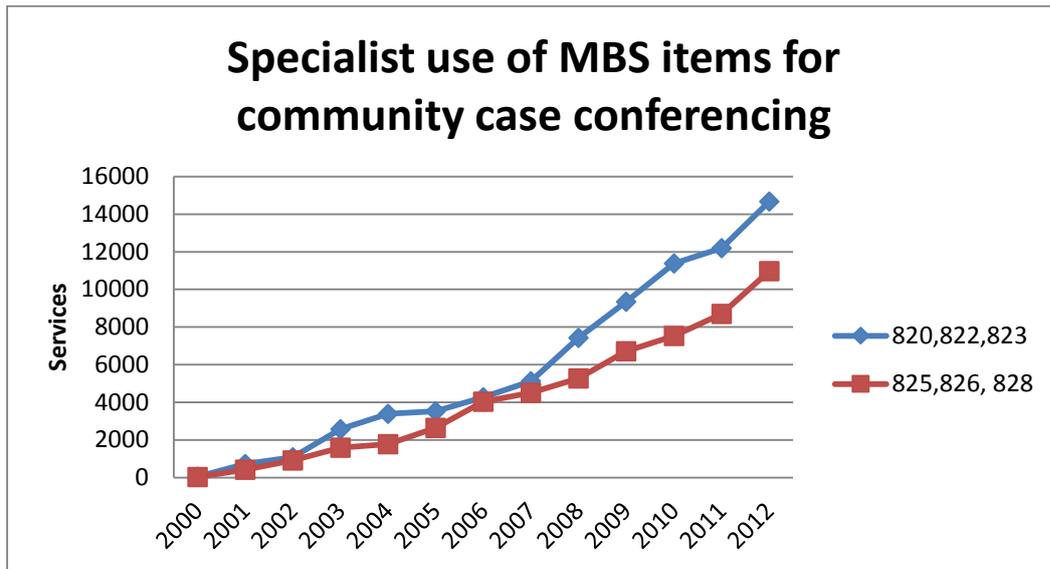
With such little publicly available data on the numbers and types of medical practitioners billing Medicare for discharge planning, it is not possible to make an assessment of how useful specific Medicare items covering transitions of care issues can be. The limited evidence that is available from the EPC evaluation, suggests that financial incentives to undertake discharge planning and other tasks related to a transition of care can be a useful component of an overall strategy but should not be relied on, in isolation, to deliver major behavioural and cultural changes within medical and health services.

Enhanced Primary Care item numbers Discharge Demonstration Projects

The Commonwealth partnered with General Practice Divisions Victoria to implement demonstration projects which supported the appropriate use of the EPC Medicare Benefits items to improve linkages between hospitals and GPs in discharge planning and coordination in Victoria for patients with chronic and complex conditions.

The objectives of the demonstration projects were to develop sustainable processes that demonstrate:

- Effective means for informing relevant hospital staff and GPs about the new MBS items as they relate to improving discharge processes;

- Effective systems and processes for overcoming logistical barriers to hospital and GP involvement in discharge planning and coordination; and

- Effective use of the EPC Medicare items to improve linkages between hospitals, GPs and other community providers in discharge planning and coordination.

Four demonstration projects were selected. These were:

- The North East Valley Division of General Practice, the Northern Division of General Practice and the Austin & Repatriation Medical Centre;

- The Royal Women's Hospital in partnership with Melbourne, Western Melbourne, North West Melbourne and Ballarat and District Divisions of General Practice;

- Sisters of Charity Health Services in partnership with Melbourne, Inner Eastern Melbourne and Otway Divisions of General Practice; and

- Central Gippsland Health Service in partnership with East Gippsland Division of General Practice.

The evaluation found that the projects had limited success in supporting the use of the EPC item numbers. It also identified seven building blocks for GP involvement in discharge planning for those with complex needs, as follows:

1. Processes that encourage patients to nominate a GP;
2. GP name to be on the patient file;
3. Access to up to date GP contact details;
4. Designated discharge coordinator at unit level;
5. Process for routine notification of admission and/or discharge to GPs;
6. All staff see their job includes safe referral home; and
7. Senior and junior medical staffs respect the GP role.

Without these building blocks in place, hospitals could not institutionalise systems for GP involvement in discharge planning for those with complex needs and doctor-to-doctor contact was vital.

The projects also showed that GPs welcomed involvement in discharge planning for patients with complex needs but did not necessarily claim the EPC items. GPs were able to provide valuable information about family capacity and community supports available. The term 'EPC' was not helpful in engaging hospital staff but the term 'safe referral home' and 'involving GPs in discharge planning' did facilitate staff interest in the projects. While feedback from patients was limited, the vast majority agreed that discussion between the hospital and their GP was valuable for planning their discharge home, that they felt well looked after, and valued a good relationship.[20]

STATE/TERRITORY GOVERNMENT INITIATIVES

State and Territory Governments have undertaken a number of projects to improve the transition of care between hospital and primary care. A number of these projects have achieved promising results in improving outcomes and reducing adverse events in their target audiences. Most State / Territory government activity in this area has been clinically-focussed with hospital-based strategies which involve improving information transfer between sectors. However, there are some examples of projects which have taken a broad and more consumer-focussed approach to improving the transition of care. Some examples of these projects are outlined below.

New South Wales

The NSW Safe Clinical Handover Program[21] arose out of the 2008 Special Commission of Inquiry into Acute Services in NSW Public Hospitals (Garling Report) which recommended that each facility in NSW Health should have a mandated clinical handover policy within 18 months. The project started after an initiation workshop that engaged GPs, clinicians, consumers and other key stakeholders. It focusses on the following three elements:
1) handover to hospitals; 2) handover to GPs; and 3) handover to patients/carers. There is also a separate element which looks at handover between ambulance and hospital ED.

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[20] Victorian Government 2003

[21] NSW Health. Safe Clinical Handover Program.

The project has resulted in a number of initiatives and resources, including the following:

- A guide for bedside clinical handover for nursing and midwifery – South Eastern Sydney Illawarra Area Health Service.
- A guide for the Team Leader Role in clinical handover – South Eastern Sydney Illawarra Area Health Service.
- Guide to using the shift / patient summary sticker and Clinical Handover Tool - Northern Sydney Central Coast Area Health Service.
- Safe clinical handover questionnaire – North Coast Area Health Service An evaluation questionnaire for nursing/midwifery shift to shift handover.
- Clinical communication and handover audit tool – Hunter New England Area Health Service.
- Clinical communication and handover audit tool used within the HNEAHS.
- ICU Project WaTCHDOg22 - Sydney South West Area Health Service.
- Nursing/Midwifery managers letter – South Eastern Sydney Illawarra Area Health Service.
- Template of a letter for Nursing/ Midwifery Managers regarding the bedside clinical handover.
- Clinical handover for Allied Health Professionals – Greater Western Area Health Service.
- A communication framework for Allied Health Staff, including C-CEBAR an adaptation for Allied Health Professionals from the iSoBAR tool.

A resource recently produced by the NSW Agency for Clinical Innovation also focusses on the transfer from hospital to primary care and identifies the main elements required to achieve best practice in GP-Hospital clinical handover. These are:

1. Building a patient-centred shared care culture;
2. Achieving a shared understanding of the tasks and responsibilities of the hospital clinician and GP;
3. Engaging patients and carers in the clinical handover process; and
4. Standardising the two-way exchange of clinical information. [23]

The document notes the importance of a workplace culture that has shared access to clinical information which would then facilitate optimal clinical management across the continuum of care. It concludes that a clinical handover strategy built around peer review and audit, supported by consultant feedback, with clear referral criteria and evidence-based guidelines is most likely to be both cost and clinically effective.

Victoria

The Hospital Admission Risk Program (HARP)[24] was developed in the late 1990s to address the increased demand on acute health care services. HARP was initially implemented as more than 80 pilot projects that aimed to identify patients at risk of, or already experiencing,

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[22] WaTCHDOg stands for: Ward Round, Team, Communicate, Handover, Documentation, Outcomes. Liverpool Hospital ICU introduced a 2 page brochure for staff, to assist in the provision of a consistent approach to clinical handover, ward rounds, documentation, delivery of evidence-based care and a guide for complex/long stay patient review. Incorporated into the brochure is a simple outline of a Care Plan for the day.

[23] NSW Agency for Clinical Innovation 2012

[24] Victorian Department of Health. Hospital Admission Risk Program.

frequent emergency presentations or hospital admissions, in order to provide them with alternative interventions. These projects were formally evaluated in 2004-05 and, over a 12 month period, were found to have resulted in 35% fewer emergency department attendances, 52% fewer emergency admissions and 41% fewer days in hospital.[25]

The reduced need for hospital services was equivalent to approximately one emergency department attendance, two emergency admissions or six days spent in hospital each year for every HARP client.

Due to HARP's success, 87 individual HARP projects were mainstreamed through amalgamation into 15 HARP services across Victoria. From 2005-2007 HARP was expanded to provide services within sub-regional areas, resulting in the provision of 22 state-wide HARP services. Funding through the Commonwealth of Australian Governments (COAG) Long Stay Older Patients (LSOP) initiative enabled 13 additional HARP programs to be piloted in rural Victoria between 2007-2010. These projects specifically provided care to older people and as such were named HARP Better Care of Older People (HARP BCOP).

Initial evaluation findings indicate that HARP BCOP clients experienced:

- 64% reduction in hospital separations post intervention, compared to pre-HARP BCOP utilisation;

- 55 % reduction in the number of ED presentations, compared to pre-HARP BCOP utilisation; and

- 39% reduction in the number of clients presenting to the emergency department (ED) post discharge from HARP BCOP. [26]

This initial data suggests that HARP BCOP has had a positive impact on hospital utilisation in rural Victoria by significantly reducing the hospital and ED utilisation of the HARP BCOP cohort. Since July 2010 the 13 rural HARP BCOP pilots have been mainstreamed into the Victorian HARP, resulting in 35 state-wide HARP services.

Western Australia

The Cancer Nurse Coordination (CNC) Service in WA was established in 2006 to ensure an integrated approach to cancer care and delivery in WAWA.[27] The CNC's involvement in the patient process was proposed to: ensure a one-on-one relationship between patient and CNC; facilitate navigation of the cancer care system; provide a central point for information and support; provide a direct link into the Cancer and Palliative Care Network's Tumour Collaboratives; and provide the benefits of a multidisciplinary care model. The project was evaluated in 2010 and it was found that CNCs played an important role in coordinating patient care across the primary and acute care sectors. The role of CNCs was supported both by consumers and health professionals and the evaluation recommended that the service be expanded.

This is just a selection of the work undertaken by the States and Territories.

More information about State/Territory Government projects, including projects run in ACT, NT and Queensland, is at Appendix 1.

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[25] Victorian Department of Health 2006

[26] Victorian Department of Health 2006

[27] Western Australian Department of Health. WA Cancer and Palliative Care Network.

International research and experience

This part of the paper focusses on initiatives in the clinical handover / transitions of care area from the United Kingdom (UK), the United States (US) and the European Union (EU) Handover Project. The projects examined reflect the Australian experience of transitions of care / clinical handovers as a complex and multi-dimensional issue. As in Australia, the majority of the initiatives identified had a hospital / medical focus and involved improving the transfer of information between sectors, for example, through discharge summaries.

UNITED KINGDOM

A number of patient safety improvement programs have been implemented in the UK. These include the 1000 Lives Plus in Wales, Patient Safety in Primary Care – Healthcare Improvement Scotland, Patient Safety Express, Patient Safety First (2008-2010) and the Safer Patients initiative. Many of these use the improvement science approach and the programs are either centred around specific disease pathways or the consistent implementation of solutions such as the World Health Organization (WHO) Surgical checklist. None of these had the handover or transfer of care between settings as a program theme. However, some did have medicines management as a key area which is known to be one of the commonest causes of harm with transitions of care.

One initiative by the Royal College of Physicians aimed to improve the transfer of information about medicines across all care settings. The project focussed on the development of core principles to underpin the safe transfer of information about medicines whenever a patient transfers care providers, at any point in the care pathway. This involved standardised data sets with templates, a patient fact sheet, and the development of organisational systems and processes to support the safe transfer of information about patients' medicines. The key data set has been recommended in further guidance issued by the Royal Pharmaceutical Society in 2012.[28]

In Scotland, the Scottish Patient Safety Program is working with GP surgeries to identify key areas of risk as patients move between health care services. The aims are to reduce mortality by 15% and adverse events by 30% across National Health System (NHS) Scotland.[29] One Scottish project has developed and tested change packages to improve patient safety in three primary care (GP) areas that are a major source of clinical risk and cause significant harm to patients as they move across the health system.[30] The areas addressed were:

- Developing reliable systems for medicines reconciliation at discharge from hospital with the aim of having 95% of patient medication records accurate within the practice system;

- Improving clinical communication between specialist outpatient clinics and primary care; and

- Developing safe and reliable systems for managing test results.

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[28] Royal Pharmaceutical Society 2012

[29] Scottish Patient Safety Programme.

[30] Health Foundation. Developing Patient Safety in Primary Care.

A number of interventions were implemented at the practice level to help ensure:

- Discharge summaries are entered into the practice workflow processes on day of receipt
- Medicines reconciliation occurs within two (2) working days
- Changes to medications are documented
- Changes to medications are discussed with patients or their representatives.

Over a nine-month period, results showed improvements in each of the components with the exception to the fourth component (discussion with patients or representatives). However analysis for the whole 'bundle' showed that it did not achieve reliability and the authors commented on the need for expert and strong facilitation in use of improvement tools.[31] This initiative demonstrates that improving transitions of care is not just a matter of improving the communication but also requires a component that translates that improved communication into action.

In order to reduce communications problems, the NHS Institute for Innovation and Improvement has developed the Situation, Background, Assessment, Recommendation (SBAR) package for use in handovers of care.[32] The tool can be used to shape communication at any stage of the patient's journey, from the content of a GP referral letter, consultant to consultant referrals, and discharge back to the GP. A study of patients with heart failure[33] cited in the project report demonstrated that use of SBAR in communications with GP led to suggested improvements to implementation of changes patients' management plans being improved from 66% to 92-100%. [34]

A number of Primary Care Trusts in the UK have employed a predictive risk modelling approach to identify patients with a high probability of secondary care utilisation.[35] For example, it is possible to develop an algorithm for identifying inpatients at high risk of re-admission to a National Health Service hospital within 30 days of discharge using information that can either be obtained from hospital information systems or from the patient and their notes.[36] While not directly related to transitions of care, this work suggests there may be value in exploring predictive risk modelling approaches to identify patients needed increased oversight during and after transitions of care.

Additional information about UK initiatives is available at Appendix 2.

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[31] Health Improvement Scotland. Safety Improvement in Primary Care 2 – Final Report to the Health Foundation.

[32] National Health Service Institute for Innovation and Improvement. Safer Care, Improving Patient Safety.

[33] Health Improvement Scotland. Safety Improvement in Primary Care 2 – Final Report to the Health Foundation

[35] NHS Evidence Adoption Centre East of England 2011

[36] Billings *et al* 2012

UNITED STATES

The US health care system often fails to meet the needs of patients during transitions because care is rushed and responsibility is fragmented, with little communication across care settings and multiple providers. A recent survey by the Agency for Healthcare Research and Quality (AHRQ) on Patient Safety Culture, found that 42% of the hospitals surveyed reported that "things fall between the cracks when transferring patients from one unit to another" and "problems often occur in the exchange of information across hospital units."[37]

In 2001, the Institute of Medicine issued a seminal report that called for increased care coordination across the health care system to improve quality of care and reduce errors.[38] In 2008, the National Priority Partnership identified care coordination as one of six national priorities, noting that "increased communication between patients and providers, stronger record keeping, and more efficient, patient-centered care can reduce harm while making healthcare more reliable and accessible."[39]

In 2010, enactment of the Patient Protection and Accountability Care Act (PPACA) put in place new programs aimed at improving the quality of the US health care delivery system. In recognition of the value of proper transitions in leading to improved care and the social and economic costs of poor transitions, care coordination and improved transitions of care are a major focus of the innovative new approaches to care delivery and financing found in the PPACA. There are both financial incentives and financial penalties to drive improvements in transitions of care and a five-year, $500 million Community-Based Care Transitions Program. This program pays organisations that partner with hospitals with high readmission rates to provide care transition services for high-risk Medicare beneficiaries. All-inclusive payments cover the cost of care transition services provided to individual beneficiaries in the 180 days following an eligible discharge plus the cost of systemic changes made by partner hospitals to improve care transitions. To date, 47 awardees have been announced.[40] This work will build on a raft of initiatives currently underway in both the public and private sectors.

One example of such an initiative is the Care Transitions Program (CTP) [41] which has been adopted by more than 700 sites nationwide. The program lasts for four weeks, during which patients with complex care needs receive specific tools, are supported by a Transitions Coach (usually a nurse or social worker), and learn self-management skills to ensure their needs are met during the transition from hospital to home. Patients who received this program were significantly less likely to be readmitted to hospital; more likely to achieve self-identified personal goals around symptom management and functional recovery. Results are sustained for at least six (6) months.

In a large integrated delivery system in Colorado, the CTP reduced 30-day hospital readmissions by 30%, reduced 180-day hospital readmissions by 17%, and cut average costs per patient by nearly 20%.[42] A randomised study of the program showed that the program cost was $196 per patient.[43]

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[37] National Transitions of Care Coalition 2010

[38] Institute of Medicine 2001

[39] National Priorities Partnership 2008

[40] Center for Medicare and Medicaid Innovation. Community-Based Transitions Program.

[41] Care Transitions Program.

[42] Coleman *et al* 2006

[43] Coleman. The Care Transitions Program.

A different approach was taken by another initiative, the Transitional Care Model, implemented by Kaiser Permanente and Aetna to a number of hospitals. This model targets Medicare beneficiaries with two or more risk factors, including multiple chronic conditions and history of recent hospitalisation. It involves the provision of comprehensive in-hospital planning and home follow-up for chronically ill high-risk older adults hospitalised for common medical / surgical conditions. A trained Transitional Care Nurse visits patient in hospital prior to discharge, facilitates transition process, conducts weekly home visits, and is always available by phone. The program runs for 1-3 months, depending on patient needs. In six academic and community hospitals in Philadelphia, this approach reduced readmissions by 36% and costs by 39% per patient (nearly $5,000) during the 12 months following hospitalisation. The annual total intervention cost was $982 per patient.[44]

The strength of these models is their strong evidence base, that the responsibility for overseeing coordination of care resides with specially trained individuals (analogous to case coordinators) and that there is a key role for patients and carers.

There are several other models which primarily address the larger issues of care coordination but which contain elements of transitions of care. These programs have higher costs because they are ongoing and address a broader range of issues. Nevertheless they have been found to be cost effective.

Guided Care

Guided Care was developed for older adults with chronic conditions and complex health needs.[45] The specially trained Guided Care nurse works in partnership with physicians and others in a primary care. The nurse conducts in-home assessments, facilitates care planning, promotes patient self-management, monitors conditions, coordinates the efforts of all care professionals, helps with transitions between sites of care, educates and supports family caregivers, and facilitates access to community resources. Guided Care has been tested in numerous clinical trials and studies and has been shown to improve both the quality of patient care and physicians' satisfaction with care. The total annual intervention cost has been estimated at $1,743 per patient, producing savings of $1,364 over the cost of the intervention.[46]

Geriatric Resources for Assessment and Care of Elders (GRACE)

The Geriatric Resources for Assessment and Care of Elders (GRACE) model of primary care for low-income seniors and their primary care physicians was developed to improve the quality of geriatric care to optimise health and functional status, decrease excess healthcare use, and prevent long-term nursing home placement.[47] Patients receive home-based care management by a nurse practitioner and social worker who collaborate with the patient's primary care physician and a geriatrics interdisciplinary team and are guided by care protocols for common geriatric conditions. A randomised study indicated that in this high-risk group, increases in chronic and preventive care costs were offset by reductions in acute care costs, and the intervention was cost saving by the third year of implementation. Total annual intervention costs were $1,432 per patient.[48]

Additional information about US initiatives is available at Appendix 3.

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[44] Naylor *et at* 2004

[45] Guided Care

[46] Leff *et al* 2009

[47] Counsell *et al* 2006

[48] Counsell *et al* 2009

EUROPEAN UNION

The HANDOVER Project was initiated by the European Union (EU) in 2008 as the first multi-year, multi-million-euro effort to improve handovers at the interface between the hospital and the home. Six European nations (Italy, the Netherlands, Poland, UK, Spain, and Sweden) – selected to represent different European systems for the organisation and funding of healthcare – participated in the 3-year, €3.5 million project, along with researchers from the US and Australia.

The aims of the project were to optimise the continuum of clinical care between primary care and hospital to reduce unnecessary treatment, medical errors, and avoidable harm. Specific objectives included identifying and studying best practices, creating standardised approaches to handover communication, and measuring their effectiveness in terms of impacts on patients and health care costs.

The Project had a number of interventions:

- Professional-oriented interventions, such as:
  - Education and training (education toolbox)
  - Audit and feedback (video).

- Organisational interventions, such as:
  - Transfer nurse / transition coach
  - Discharge protocol and planning
  - Medication reconciliation
  - Structured standardised discharge letter
  - Electronic tools.

- Patient-oriented interventions, such as:
  - Patient empowerment (education)
  - Discharge information for patients.

Early analysis of this project showed that while adverse events and re-admissions were common, affecting about 25% of all patients, only a proportion of these were caused by problems specifically at handover. Hospital re-admission rates are heavily influenced by age and the reason for admission. The most promising handover interventions were found to combine pre- and post-discharge action together with discharge planning and discharge support and include educational components for both health care professional and patients.[49]

The facilitators and barriers to good handovers [50]

Hesselink *et al*[51] from the Netherlands found that time constraints and a low prioritisation of discharge communications, pressure on available hospital beds, and variability in patient and family member involvement in discharge planning resulted in a sizable portion of patients feeling unprepared for discharge and post-discharge care that did not meet patients' needs and preferences. They also found that both hospital doctors and GPs feel they do not know enough about patients' home situations.[52] Their findings suggest that involvement of patients and families in the preparations for discharge is determined by the

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[49] Pijnenborg 2011

[50] This is a summary of a series of papers from the HANDOVER Project published in the BMJ, December 2012.

[51] Hesselink 2012

[52] Hesselink 2013

extent to which care providers are willing and able to accommodate patients' and families' capabilities, needs and preferences, which are variable and perhaps not easily recognised.

Frankel *et al*[53] in the US studied non-verbal communication during handovers, identifying 'joint focus of attention' as the optimal model. The requirement to include a face-to-face conversation as part of a handover is considered to be a critical element for ensuring reliable handovers. However variation in how these face-to-face conversations occur suggests gradations in how they impact handover accuracy and reliability.

Groene *et al*[54] from the UK researched the needs and potential added risks of handovers involving 'vulnerable patients' – those with limited language, cognitive and social resources. They identified quality and safety problems, including a lack of medication reconciliation at discharge, loss of discharge information, and absence of plans for follow up care in the community, which that occurred more frequently for this population, suggesting that transitions between the primary care and hospital setting may pose a particular risk for 'vulnerable patients'.

Several studies under the HANDOVER Project's aegis revealed that patients and the healthcare system rely on GPs to take the lead in coordinating patient care between the primary care and hospital settings. However multiple factors, such as the lack of direct contact between professionals in the two settings, involvement of multiple individuals and a lack of explicit feedback, make it difficult for GPs in the six European countries studied to fulfil this expectation in a satisfactory way. Moreover, GPs do not feel appreciated or rewarded for the challenging role of care coordination.[55]

The need for an active patient role in the handover between the hospital and primary care was emphasised by the majority of patients and healthcare professionals who participated in the surveys, interviews and focus groups that explored the patient's role in the handover in five EU countries.[56] Analysis revealed patients' participation ranged from being the key actor, to sharing the responsibility with healthcare professional/s, to being passive participants. For active participation, patients required both personal and social resources as well as prerequisites such as information and respect. Both health professionals and the patients expressed concern about the amount of responsibility for information transfer placed on patients and family members. When patients are expected to contribute to their own handovers, it may create unmet expectations and a new 'weak link' in the handover chain, resulting from patients being poorly informed about their role in these transitions or not able to carry out the activities required as part of this added responsibility.

One paper in the series looked at what training interventions improved handover.[57] The concept mapping study identified three types of handover training interventions: formal training in handover, workplace learning and clinical microsystem-based interventions. Workplace learning does not need to be formal or entail organised training events, but must be guided by explicit learning goals to be achieved and that can be measured. Job aids, handover electronic performance systems, supervision and guided practice on a one-to-one basis, discussion of cases, and workplace observation were all recommended. One proposal from this work was that patient handover should be recognised, taught and

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[53] Frankel *et al* 2012.

[54] Groene *et al* 2012

[55] Gobel *et al* 2012

[56] Flink *et al* 2012

[57] Stoyanov *et al* 2012

assessed as an "entrustable professional activity."[58] The handover requires the application and integration of clinical and communication skills, and an understanding of the systems of care, which must come together in an activity that is both time-limited and highly constrained but is also very context and case specific. Acquiring the ability to perform this activity well can take years to perfect.[59]

The analysis of the HANDOVER project noted the anticipated benefits of technology-supported handovers include reducing reliance on human memory, increasing the efficiency and structure of the verbal exchange, avoiding read backs of numeric data, and aiding clinical management following the handover. However it was also noted that in their current form, electronic health records store large amounts of information, yet are not configured to optimally support continuity of care.[60]

Conclusions

The HANDOVER Project created an inventory of barriers to effective and safe transitions present across the six participating nations, and it also produced a series of evidence-based recommendations for how to overcome these barriers. It also highlighted concepts that require further study including: (1) an expanded notion of 'work group' that crosses the different 'clinical jurisdictions' of primary care and the inpatient setting, so that there is shared common ground among individuals who work in different parts of the health care system but must collaborate around the transition of patients and their information; and (2) a proposal that handovers could be "wired" into the health care system through novel uses of technology, potentially including social media, to directly link patients and health care professionals.

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[58] Ten and Young 2012

[59] Ten and Young 2012

[60] Patterson 2012

Analysis of Australian and international initiatives

As outlined above and in Appendices 1-3, a range of solutions has been trialled to address the problems associated with the acute / primary care interface in both Australia and international settings. These include both large and small-scale interventions working at the health care system (macro), health service organisation (meso) and service delivery (micro) levels. The target groups for these potential solutions vary and include people within a specific geographical area, people with a particular disease or disability, and people with a specific are need or group of needs.

A number of discrete strategies can be identified within the interventions that have been introduced, although most interventions use more than one strategy. For example, an electronic discharge summary project may involve both developing agreed guidelines on discharge report content between primary care and acute care clinicians as well as establishing the required information technology infrastructure to enable communication of the discharge reports.

Interventions reported in the literature typically involve a range of individual strategies focussing on specific aspects of the handover process. These strategies can be categorised as follows:

Structural strategies

These include strategies involving structural changes to the way in which the health system is organised, such as:

- Co-location of health services
- Payment mechanisms, such as bundled payments
- Pooled funding arrangements.

Systems strategies

These are strategies which address systems issues within health care, seeking to change the way health care is provided at the operational level. Systems strategies include:

- Patient registers and shared records
- Shared care plans across services/providers
- Shared decision support systems across services / providers.

Process strategies

These are strategies which focus on the process of health care delivery. They include strategies such as the following:

- The development and implementation of discharge protocols
- Care coordinators / case managers focussed on a specific patient group
- The development of clinical pathways for specific conditions.

Communication strategies

These strategies focus on improving communication between providers and/or health services. They include:

- Meetings between health care providers and/or consumers / families / carers
- GP hotline to hospital EDs
- Electronic health records and/or referral systems.

Relationship strategies

These strategies focus on building relationships between providers and/or health services. They include:

- Memoranda of Understanding (MoUs) or similar agreements between health services
- Inclusion of representatives of primary care organisations on key acute care committees (and vice versa)
- Dedicated positions, such as 'GP liaison officer' within organisations to establish relationships with other health care sectors.

Clinician support and education strategies

These strategies target clinicians and aim to change their behaviours, usually in relation to a specific target group. They include:

- Professional development education focussed on the provision of coordinated and integrated care
- Seminars/education sessions for clinicians
- Specific education and training requirements incorporated into under- or post-graduate medical training.

Patient / carer / family support and education strategies

These strategies target consumers and their families / carers to provide them with information, education and support to assist them in obtaining the best possible care for their condition. These include:

- The development of educational resources, such as brochures and DVDs to support the handover process
- Telephone communication / follow-up with patients post-discharge
- Tailored instructions provided to a target groups of patients on discharge.

OUTCOMES OF STRATEGIES – EVIDENCE BASE

Evaluations of strategies to address handover issues between acute and primary care do not identify any individual strategy or program as consistently and uniformly addressing the identified problems. While almost all of the interventions reported in the literature achieve positive outcomes overall, a number of reports identify some negative outcomes, including poor health outcomes and patient dissatisfaction. There is also an inconsistency across geographical areas and populations, with some strategies reported as successful in some areas or with some groups and the same strategies appearing to be less successful elsewhere.

The variability in the outcomes of the strategies and interventions studied may be a reflection of the complexity of the issue and the varied health needs of the populations studied. It may also reflect the limitations of the literature and differences in evaluation methodology. Not all of the interventions described in the literature have been rigorously evaluated and there is a wide variety of approaches to evaluation. For example, some of evaluations focus on health outcomes, some on process indicators and some on consumer / provider satisfaction. Some include information about the cost impact of an intervention but very few evaluations include a comprehensive cost-benefit analysis. Where costs are included in evaluations they tend to focus on direct, short term costs (such as costs associated with additional tests and treatment) rather than indirect longer term costs (such as those due to poorer quality care). The focus on costs and benefits is consistently medical

when many of the resources needed and the benefits that accrue are elsewhere in the social welfare system.

There are a number of limitations with the literature which make it difficult to determine the critical factors influencing the success and failure of various interventions. These include: a lack of agreement on the relevant terms; inconsistent data collection practices; a failure to include patient / carer / family views and experiences; and a failure to include intangible and long term costs. Evaluations of interventions are variable and range from high quality robust evaluations to less formal descriptive reports of the process. Much of the literature is very 'hospital-centric' and focusses on the hospital and hospital-based care as the defining form of health care with community-based care seen from a hospital perspective. There is also often a very episodic approach to analysing health care with treatment being seen as a series of individual tests / diagnosis / treatment events rather than an ongoing and seamless patient experience. The handover between hospital and GP or aged care is the main focus of most of the literature with less information available on handover between hospitals and other forms of primary care, such as allied health, community health and Aboriginal Medical Services.

The need for multiple strategies is a reflection of the complexity of this issue and the range of factors contributing to the identified problems with clinical handover. However, the simultaneous implementation of multiple strategies can make it difficult to determine the effectiveness of individual strategies. There are also often differences in the perception of stakeholders about the outcomes of interventions with providers and consumers reporting conflicting views.

However, there are some common themes that emerge from the literature and some trends which can be identified in which indicate strategies which have a higher rate of success and those which have a lower rate of success. These are discussed in more detail, below.

FACTORS CONTRIBUTING TO SUCCESS OR FAILURE OF INITIATIVES

As discussed above, there is no 'one size fits all' approach to addressing the problems with the acute-primary care interface. The success or failure of a strategy appears to be as much dependent on its context, including the people involved and the way in which it is implemented, as on its intrinsic focus.

However, there are some general trends which can be observed in the literature. For example, a meta-analysis[61] of studies into interventions to support integration between acute and primary care reported that the most successful strategies in terms of health outcomes were communication, relationship and process strategies – in particular those focussing on coordinating care. This differed slightly from the interventions that received the highest rating from consumers, which included strategies focussed on supporting the relationships between clinicians and services.

Other factors that can be identified as contributing to the success of interventions include:

A balance between having clear boundaries and being flexible: projects with clear boundaries and well-defined objectives and target groups were more successful than those with less well defined structures. However, within these boundaries, a degree of flexibility in implementation processes appears to be a benefit. For example, the Mental Health

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[61] Bywood *et al* 2011

Integration project was successful in clearly targeting a specific group but demonstrating a flexible approach to meeting their needs within their local setting. This flexibility enables strategies to reflect the local environment and consumers' / providers' varying needs and preferences. Projects that were too rigidly defined were unable to adapt to different community needs.

The right mix of strategies: projects that involved a small number of strategies (between 2 and 4) tended to be more successful than those which just involved one strategy or those which attempted to implement a large number of changes. Ensuring that the strategies used are complementary and target the specific identified problems is important. For example, programs that had a high level of success in terms of health outcomes were integrated care programs that included both structural arrangements to support coordination and systems to improve communication. Another study found that more than 50% of studies reported better patient health outcomes as well as increased patient satisfaction when strategies included: support for clinicians; a specific communication strategy; and enhanced relationships between service providers.

Involving consumers / carers / families: Programs which included consumers/carers/families appeared to have a greater potential for success than those which focussed exclusively on health services and health care providers. This is particularly the case when they are involved at all stages, including the development, implementation and evaluation of the program. Seeing consumers as genuine partners in health care is an important component of a successful strategy.

Empowering consumers: including consumer education and/or self-management strategies (where these are appropriate) appears to result in better health outcomes. For example, a program that involves both comprehensive discharge summaries and consumer information about post-discharge care is likely to be more successful than one which just focusses on the provision of discharge information.

A 'continuum of care' approach: Taking a consumer-centred approach to care and seeing health care as a seamless journey (rather than an isolated series of individual treatment episodes) appears to deliver better results. For example, seeing discharge processes within the context of the pre-admission / admission / treatment / discharge / post-discharge continuum enables discharge planning and associated communications to commence earlier than would be typical for a discharge-specific process.

Building enabling infrastructure: There are a number of underlying factors which contribute to a more favourable environment for the implementation of strategies to address handover and transition issues. These include: communications infrastructure between acute and primary care; a multidisciplinary approach to education/training/service delivery; flexible workforce practices, including the use of practice nurses/care coordinators; and health literacy/consumer empowerment. Focussing on policies / programs / initiatives which support this infrastructure, even in a general sense, is likely to promote successful outcomes for targeted strategies addressing clinical handover and transition issues.

Factors that can be identified as barriers to the success of interventions include:

A failure to embrace all the relevant sectors: Programs which are too centred within one sector and fail to embrace the different culture and environment of other health care sectors are less likely to succeed. For example, a program that is too hospital-centric may not meet the communication or information needs of GPs or work within the context of a community health care setting. Programs are more likely to be successful when stakeholders from all sectors have input into and ownership of them.

Relying on non-existent infrastructure: Successful implementation of many transition programs relies on the existence of communications infrastructure between the acute and primary care sector. If this does not exist the program is unlikely to succeed. For example a discharge summary project which focusses on preparing and sending out discharge summaries for patients leaving hospital will not achieve its goal if there is no secure messaging/email system established between GP practices and hospitals.

A failure to contextualise strategies within the culture / practices of the organisations: Strategies that do not take into account the different culture and workforce practices of health care sectors are unlikely to be successful. For example, a strategy that relies on nurse practitioners within GP practices obtaining information from hospital-based doctors will not work if the hospital culture does not support the role of nurse practitioners.

THE POTENTIAL IMPACTS OF THE NATIONAL HEALTH REFORM ENVIRONMENT

In general, the current national health reform agenda should support the implementation of strategies to address transition issues between primary and acute care. The following table outlines the components of the reform agenda that could potentially facilitate strategies to improve clinical handover, the key features of the implementation process that are required to support a positive outcome for transition strategies, along with any potential risks and barriers.

Reform component	Potential benefits	Potential risk
The Commonwealth assuming greater responsibility for hospital funding	This provides the Commonwealth with an incentive to address problems with transition between hospital and acute care. This creates both the motivation and the funding levers to drive changes within the hospital sector.	The Commonwealth has little experience in working within the hospital sector to make changes and may not have the knowledge or skills to do this properly. A poorly managed attempt to address transition issues could backfire and reduce the states' trust in the Commonwealth on this issue.
The establishment of Medicare Locals (MLs) and Local Hospital Networks (LHNs)	These provide an infrastructure for addressing systemic coordination issues between acute and primary care. Both MLs and LHNs should ideally have strong relationships with providers/services and local knowledge about their needs/priorities.	MLs and LHNs are relatively new institutions which may not have developed the required knowledge-base or trust. They could potentially introduce an additional layer of bureaucracy which increases the administrative burden of any program. The Commonwealth may also require stringent funding and reporting processes which hinder the flexibility and independence of these organisations.
A focus on prevention	An increased focus on prevention should provide support for addressing problems associated with the acute-primary care interface, including adverse events and preventable re-admissions.	The prevention agenda has thus far been focussed on specific population health issues, such as tobacco use and obesity. If the prevention agenda remains very narrow it will exclude the issues involved with the acute-primary care interface.

Reform component	Potential benefits	Potential risk
A consumer-centred approach to health care	Placing consumers at the centre of health care should potentially assist in the development and implementation of strategies to improve transition from one care sector to another.	The involvement of consumers in health care policy making and program development / implementation has increased but is still not optimum. If this component of the reform agenda is simply tokenistic and does not involve substantial changes it will not achieve significant outcomes.
The development of a national eHealth infrastructure, including Personally Controlled Electronic Health Records (PCEHRs)	The development of a national eHealth infrastructure should provide a solid foundation for the implementation of other communication processes around the acute-primary care interface.	Potential barriers to the successful implementation of an eHealth system include: lack of trust by providers / consumers; failure of systems to reflect existing practices (e.g. integration with GP software); and the embedding of poor data collection practices or incorrect information.
Establishment of the National Hospital Performance Authority and development of a Performance and Accountability Framework	An overarching framework for measuring health system performance should promote the need for improvements in the transition between sectors. For example, hospitals could be assessed and financially rewarded according to the percentage of patients who are discharged with comprehensive discharged summaries or their rate of preventable re-admissions.	There is a risk that if performance assessments are based around services or sectors that they may entrench the existing divisions within the health system. There needs to be a performance process that supports continuity of care across sectors.
Implementation of the *Living Longer Living Better* aged care reform package	Implementation of these reforms over the next decade will provide numerous opportunities to ensure that resources and incentives are available to facilitate seamless transitions of care for elderly, frail Australians.	The risk is that this issue will be lost in the myriad other challenges facing aged care, or that it will be seen as a medical responsibility.
National Disability Insurance Scheme (NDIS)	The implementation of the NDIS will highlight the medical and rehabilitation needs of the disabled and the important role that family and carers play in ensuring that these are delivered. The stated aim of the NDIS, to maximise the potential for disabled Australians, should help to focus on how effective and timely transitions of care deliver the best health outcomes.	The delivery of the NDIS is the responsibility of the Department of Families, Housing, Community Services and Indigenous Affairs (FaHCSIA) and therefore the healthcare issues might not be seen as a priority.
Mental health reforms	Mental health reforms are bringing together a number of Commonwealth government departments and are a COAG priority. The annual National Report Card potentially provides an opportunity to report on transitions of care for people with mental illness.	Funding for mental health services is split between the Commonwealth and the States and Territories and with all services struggling to meet the demand, there is a potential for patient dumping and cost shifting.

Reform component	Potential benefits	Potential risk
Closing the Gap on Indigenous Disadvantage	A fully realised commitment to address the burden of injury and chronic disease in the Indigenous population should encompass an increased focus on transitions of care.	Perhaps the biggest risk is that the focus of efforts to address transitions of care for Indigenous Australians will focus on those in remote communities at the expense of the larger populations in metropolitan and regional areas.

TRANSITION OF CARE ISSUES FOR SPECIFIC POPULATIONS

There is also a significant body of literature focussing on problems associated with the acute/primary care interface and their impact on specific consumer groups. These include older people, people with complex care needs, Aboriginal and Torres Strait Islanders and people with mental illnesses.

A number of programs discussed in the literature address specific population groups. These include Indigenous Australians, people from culturally and linguistically diverse (CALD) communities and those living in rural and remote areas. There are also a number of programs that focus on people with a specific disease or disability. Some of the specific issues relevant to these target groups are outlined below:

Indigenous: There is good evidence that transitions between sectors are high risks for Indigenous Australians. There is also evidence that many health services are not accessible to this group for cultural reasons that may not be apparent to non-Indigenous people. Programs targeting Indigenous Australians tended to use a case worker or case manager strategy more than mainstream programs. This appeared to reflect the need for a more flexible and individual approach than required for other programs. A key focus of many of the programs was on identifying Indigenous people on admission to a hospital or health care institution and tracking them throughout their health care journey.

Rural: Problems associated with the transition between acute and primary care are often compounded for people in rural and remote areas. There were a number of successful rural programs which often involved a 'meta organisation' such as a Division of General Practice or Area Health Service taking on a coordinating role. These programs appeared to benefit from the fact that relationships between health services are often better in rural areas than they are in urban areas. A key focus of some programs was on transition from city-based hospitals to community-based care in the patient's rural community. These raise challenges involved with service access and availability as well as communication and coordination.

Residents of Aged Care facilities: The transition between RAC and acute care is a vulnerable time for sick and frail patients, many of whom have dementia and others who lack family and advocates. There is evidence of major shortfalls in information and communication procedures which are aggravated by the lack of standardised policy procedures for transfer. Many RAC facilities struggle to provide timely primary care services to residents and to have sufficient well-trained staff on site.

CALD: CALD communities are often included as a specific target group within more general strategies to address issues at the acute-primary care interface. The specific needs of CALD communities are often presented simply as communication issues, for example, in relation to poor English language skills and the need for translated documents. Cultural issues that may affect the way in which people access health care and the decisions they make around treatment are rarely considered in the design of programs relating to clinical handover.

Disabled: Failure to have optimal recovery as a therapeutic objective can lead to preventable levels of disability. The multiple care needs of the disabled often mean they are at high risk of being inappropriately transferred, either in terms of timing or location.

Mentally ill: The growing demand on mental health services means decreased lengths of stay in inpatient units and a need for active community management of persons who remain significantly unwell and may also have physical co-morbidities and/or substance abuse problems. Discharge of these patients from hospital and residential care demands effective clinical handovers and other wrap around services such as housing, transport and social welfare.

'SILVER BULLET' SOLUTIONS

All of the strategies often presented as 'silver bullet' solutions to problems with acute-primary care transition have demonstrated benefits. However, none of these, on their own, will address all the problems identified with clinical handover. Overall, these 'solutions' should be looked at as tools to support the implementation of broader strategies, rather than solutions in themselves. They can be useful but require skilled use and they all have their limitations. There are also potential problems which have been reported in practice relating to these strategies. The benefits and risks reported in the literature for each of these strategies are outlined below.

Person-Controlled Electronic Health Records (PCEHRs)
There are clear benefits to PCEHRs in terms of communication between providers / services and easy transfer of relevant data, such as medication records. There are also benefits in terms of consumer ownership / involvement in treatment. However, potential problems exist if GP and hospital-based clinicians don't agree on what data is important for inclusion in PCEHRs. If there is no agreement around terms / format and if doctors do not trust the data (for example because it can be modified by patients), PCEHRs will not assist significantly in managing transitions between sectors. It is also important to note that PCEHRs rely on the accurate and complete recording of information and should not be seen as a substitute for rigorous record keeping by health services. (Note: PCEHRs are also discussed in national health reform section above.)

E-Health
There are a number of ways in which eHealth can support communication and integration at the acute / primary care interface. However, a number of issues relating to the implementation of national health technology strategies have yet to be resolved (for example, legal issues, data security and access issues). eHealth strategies typically rely on shared communication and data collection systems which different sectors of the health system do not always agree upon. It is important that eHealth is seen as a tool to support transition strategies rather than a replacement for these processes.

Case Workers
Case workers play an important role in a number of programs, in particular those targeting consumers with very high needs. They allow for a very individualised and flexible approach and can specialise in specific areas, such as cancer care, thus becoming very familiar with services/issues for that particular disease / area. They can therefore be a useful resource for patients / carers / families. However, as a general strategy to support care integration they can be costly and are not always the most efficient option. A potential disadvantage is that they can create another barrier to consumers having direct input into services and can be used by services as an excuse not to be responsible for problems associated with transition between sectors (as they know that there is a case worker who can deal with any issues).

Caseworkers are either based in hospitals or in the community and there are documented problems with both. Hospital-based caseworkers are not always able to build productive relationships with community-based providers – they tend to become part of the hospital culture and remain isolated from community services. Community-based caseworkers often have a more general focus and good relationships with primary care services but can struggle to maintain the relationship with patients during lengthy periods of hospitalisation. Another potential limitation of case workers is that they can be perceived by consumers as being 'part of the system' with their first loyalty to their place of employment and not patients.

Gaps in the research

THE ROLE OF CARERS / FAMILIES

Carers and families are important stakeholders whose roles can significantly impact upon the outcomes of programs designed to support the integration and coordination of care across sectors of the health system. As discussed above, their role is often not considered in the development and implementation of strategies. In many cases families / carers are not included in planning / implementation of programs and their experiences are not recorded as part of the programs' evaluation. The costs (both tangible and intangible) incurred by carers / families resulting from problems at the acute-primary care interface are not identified as part of the costs associated with this issue. There is a need for additional research into the role of carers and families and their potential to support the implementation of strategies around the acute-primary care interface.

THE NEEDS OF PEOPLE WITH DISABILITIES

Those who come into acute care as the consequence of a disabling accident or illness almost always face a long and difficult road to recovery, via rehabilitation and community care. The services they need may be provided by a variety of public and private services and many different health care professionals and may involve substantial out-of-pocket costs and for the patient and their family / carers.

Those with disabilities, both physical and mental, are at increased risk of hospitalisation and the need for residential care, and a focus on one aspect of their illness (for example a mental health problem) may mean that other aspects of their care (such as cardiovascular health) are forgotten.

SHARED CARE BETWEEN GPS/SPECIALISTS

The majority of the literature focusses on the interface between hospitals and either GP or aged care. There are a small number of projects, particularly in the chronic disease areas, which address the interface between GP and specialist care (sometimes also involving hospitals). For example, programs targeting people with diabetes will typically involve GPs, specialists and outpatient hospital-based clinics. However, there is scope for additional research into the issues affecting care across this interface and involving specialists in the development of strategies to support greater integration and coordination of care.

It is also strikingly obvious that transitions of care / clinical handovers are just one aspect of coordinated care. Thus the raft of initiatives being implemented to address the care coordination and multidisciplinary care needs of the chronically ill must include coordination of transitions between health services.

EMERGING ROLES

There are a number of emerging roles in the health sector for people who support consumers improve their health outcomes. These include health coaches, health advocates and wellness coaches. Many of these professions are better established overseas than they are in Australia. Their role is to focus on individual patients, generally with a chronic condition, and to support them through a range of different strategies, to improve their health outcomes. Their specific role depends on the patient's needs but typically includes regular one-to-one contact and counselling / advice / encouragement to start or maintain a health and treatment regime. There are a range of models for the provision of these services, for

example, they may be integrated into a primary care practice, hired directly by consumers or employed in a workplace. There is little research available on these emerging professions, however that which is available has shown that they can be effective in improving outcomes for people with chronic diseases.[62] For example, one US clinic evaluated its program which assigns health coaches to high-risk chronic disease patients to provide instruction regarding health care needs. These coaches, who are integrated into primary care practices, provide evidence-based information to patients by telephone, during office visits, and in group class settings, with the goal of improving patient self-management skills, better preparing patients for their physician office visits, encouraging physician–patient communication, and engaging patients in their care plans. The evaluation found that the program attracted a high percentage of eligible patients and reduced hospital readmission rates and costs for patients age 65 years and older.[63]

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[62] Olson 2010

[63] Agency for Healthcare Research and Policy

Recommendations for action

Improving transitions of care can be readily categorised as a 'wicked problem'.[64] Part of the wickedness of an issue lies in the interactions between causal factors, conflicting policy objectives, the need for different levels of government to work together, and disagreement or lack of evidence over the appropriate solution or solutions. Wicked problems require innovative, comprehensive solutions that can be modified in the light of experience and on-the-ground feedback.

This paper summarises what has been published about what works to improve transitions of care; however there are many gaps in the literature. In particular, there are some transitions of care (for example from hospital or home to hospice) and some patient groups (for example the mentally ill and Indigenous people from remote areas) where there is virtually nothing available in the literature. But we can be sure that some health care professionals and some communities are doing this well, unsung and too busy to write an academic paper. We need to know about this 'grass roots' work and to understand the lessons that can be learnt from it and from areas such as breast cancer and paediatric cancers where the patient's treatment is better comprehended as a journey through the health care system that needs many non-clinical resources.

At the same time we need to know more about why current incentives to encourage better transitions of care (e.g. MBS items for discharge planning and case conferencing) are not utilised more. Aside from the studies on EPC done almost a decade ago, there has been little or no analysis of how these MBS items are used, by whom, and what the barriers are to their increased use.

Based on the evidence from existing strategies and programs outlined in this paper, and bearing in mind the cautions above, the following future actions are recommended. In making decisions about what next steps should be, we strongly advise that consideration is given to the following issues:

- Building the data base through better collection of data about patients' experiences in transition and regular public reporting of key data from all relevant sectors

- Enabling the sharing of data and information

- How to establish indicators, targets and evaluation methodologies to address the needs of all stakeholders

- How to undertake effective economic analyses of initiatives that span different health care services funded by different providers (e.g. Commonwealth and state/territory governments; public and private)

- The need for shared terminology and communication systems

- The pros and cons of a requirement that health care organisations and/or professionals verify that they have sent / received / read / acted upon a discharge summary

- The incentives (including the levels of financial incentives) that appropriately change the behaviours of all the stakeholders in transitions of care

- The barriers to the uptake of current programs and initiatives and how these might be effectively addressed

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[64] Australian Public Service Commission 2007

- Integrating new efforts in this area with those already underway at both the Commonwealth and state and territory levels

- Instituting a process whereby transitions of care is factored into all relevant initiatives that involve care coordination and continuity

- Building Commonwealth and state / territory coalitions to work on transitions of care issues

A key point to note here is that general practices in Australia vary greatly in their capacity and capabilities to implement reforms. These variations are also reflected in the extent to which Medicare Locals are currently up and running and actively undertaking the wide-ranging responsibilities with which they have been charged. This diversity must be considered in any recommendations that are proposed for implementation.

BUILDING THE EVIDENCE BASE

- Collect current Australian data, publications, and reports, including relevant documents that are currently archived) on to a website. It is suggested that this information is curated to ensure it is maximally available and useful. The former Australian Resource Centre for Healthcare Innovations (ARCHI) could serve as a model. A single location for the sharing of information, tools, and resources relating to transitional care would assist in identifying, disseminating and promoting successful strategies.

- Conduct an audit of current 'grass roots' efforts to address transitions of care. This information should also be included on the website above.

- Geo-mapping Australian data in a timely fashion to look at issues such as hospital readmission rates; rates of (unplanned) transfer of patients from aged care to acute care; patient safety problems in primary care.

RESEARCH PROJECTS

Additional research should be conducted into the following issues:

- Economic analysis of the costs associated with problems at the primary / community to acute and acute to primary / community care interfaces.

- Exploration of the most appropriate strategies for specific situations /target groups.

- The role of carers and families in supporting positive outcomes for transition programs.

- Development and verification of screening tools to identify patient groups most at risk.

- Analyses of current MBS data that relate to transitions of care, discharge conferencing, etc.

- What can be learnt from current programs such as cancer care that work to provide patients with a seamless journey through the health care system.

- The resource issues in primary / community care and acute care that are barriers to improving transitions of care.

- The culture issues in primary / community care and acute care that are barriers to improving transitions of care.

- A stakeholder consultation to define the roles and competencies of health and social welfare staff which could be involved in transitions of care. This could also include the essentials of training programs for these roles.

PILOT PROGRAMS

On the basis of the research conducted (above) and existing research a number of pilot projects could be developed to test specific strategies for supporting transitions of care. Priorities for action should include:

- A pilot to develop, test and evaluate mechanisms to identify high risk patients in the community, in RAC and in acute care.

- A series of pilot programs to see if reliability can be achieved in the implementation of key elements and to help understand the variation that exists in these key elements (i.e. getting the basics right).

- A pilot targeted at a high risk population that explores and compares the outcomes (health and cost) of a transition of care manager based in: (1) the hospital; (2) the affiliated Medicare Local; (3) the GP office or RAC facility; and (4) the community.

- A pilot to trial a remuneration system which incentivises hospitals and clinicians (specialists and GPs) to take an active role in patient transitions. This could be through direct financial incentives or penalties, MBS items, or Practice Incentive Payments.

- A pilot to provide support and resources to family members and/or carers to enable them to be effective advocates for patients moving through transitions of care.

- A pilot using transition teams (managed by a ML or LHN) which facilitate and manage the transitions of care for at-risk patients (identified by hospital / RAC facility / GP / specialist) and ensures all the needed information is transferred to the relevant health care professionals, the patients and their carers.

Pilots should be focussed on addressing the following factors:

Micro level
- Identification and targeting of the high risk populations.
- Specific interventions, the key ones being some sort of care coordination / case management function and self-management.
- Creating commitment and reliability on the part of all health care professionals.

Meso level
- Implementing a co-ordinated approach to bring stakeholder together in the local health economy, including links between primary care providers and acute settings, MLs and LHNs.

Macro level
- Levers to engage.
- Financial incentives.
- Financial disincentives – for example, there are no disincentive for hospitals to reduce their readmission rates.
- Performance management – these may work for public hospital but are harder to develop and implement for private hospitals and private specialist / GPs.
- Regulation – using regulation and feedback to drive improvements e.g. accreditation standards to reflect engagement in improvement efforts around transition of care.

Consideration should be given to making new approaches to transitions of care an intrinsic component of current pilot programs in related areas (e.g. coordinated care; programs to avoid preventable hospitalisations and ED presentations).

INFRASTRUCTURE SUPPORT

Support should be provided for broader initiatives which provide the foundation for successful clinical handover, including: inter-disciplinary care; health literacy / patient empowerment; chronic disease management; eHealth infrastructure; multidisciplinary education and training.

Education and training
A greater focus on integration and transition issues in undergraduate and post-graduate education would help ensure new graduates in the health care and social welfare professions are aware of the importance of transitions of care, which should be seen as integral to the provision of health care, not as an add-on. Ongoing support for multi-disciplinary education and training initiatives is also important to facilitate the implementation of these strategies. The importance of transitions of care could be included in the Health Workforce Australia Leadership framework that is currently out for public consultation.

Workforce capabilities
Workforce reforms, such as the introduction of nurse practitioners and/or physician assistants, as well as a more flexible approach to task allocation and roles, are important to address a number of the problems occurring at the acute-primary care interfaces. Current health care reforms underway in Australia offer opportunities to assess the need for roles such as discharge planning coordinator, case manager, community care coordinator and the appropriate competencies for these roles.

Building in failsafe mechanisms
Transition of care is a complex process and the reliable implementation of effective care processes is dependent on a number of factors, including human factors, and therefore at risk of failure. As for any safety improvement program, the risk of failure needs to minimised but there also needs to be checks in the system to mitigate against potential failures that may still happen.[65] Strategies to minimise risk include: compliance with nationally agreed upon guidelines; agreement on terminology; standardisation of discharge summaries and their delivery, irrespective of where they were generated or who is to receive them; and the use of simple checklists. Strategies to mitigate against potential failures may include tracking systems for tests, referrals and appointments.

Health literacy / patient empowerment
The success of many interventions involving integrated care depend upon consumers (and their carers / families) having a degree of health literacy. As the move towards increased self-management of chronic diseases continues, this is going to become even more important. Without a basic level of health literacy, it is difficult to engage patients / carers in their own care at any level. Support for both general and targeted health literacy strategies will help create a supportive environment for improving care across different sectors of the health system.

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[65] Reason 2000

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Appendix 1 – Australian initiatives summary

Name	Location	Target Group	Description	Outcomes	Reference
Coordinated Care Trials	National – specific locations	People with chronic and complex health conditions	Regional projects to test whether multi-disciplinary care planning and service coordination leads to improved health and well-being. Some involved funds pooling between Commonwealth and State/Territory Governments.	Patient satisfaction high but no evidence of reduced costs or improved health outcomes.	Coordinated Care – Evaluation Report of 2nd Round Trials: Department of Health and Ageing
Mental Health Integration Project	Three projects (Vic/NSW)	People with mental illnesses	Three projects aiming to improve formal linkages between private psychiatric services and public mental health services, expanded to include local GPs and non-government organisations.	Mixed health outcomes for patients Overall high level of patient satisfaction with the program Patients perceived improved continuity of care.	Evaluation reports: Far West: Department of Health and Ageing Illawarra: Department of Health and Ageing
Hospital Admissions Risk Program (HARP)	Vic (urban and rural)	People at risk of hospital admission	A program of integrated response of hospital and community services which aim to: improve patient outcomes; provide integrated seamless care within and across hospital /community sectors; reduce avoidable hospital admissions and emergency department presentations; and ensure equitable access to healthcare.	Reduced emergency department attendances, admissions and days in hospital Improved functional independence, quality of life and satisfaction with better communication with providers.	Final evaluation report: Department of Health Victoria

Name	Location	Target Group	Description	Outcomes	Reference
GP/Facility Clinical Handover project	NSW (urban and rural)	People being discharged from hospital	Close engagement of clinical and non-clinical representatives from General Practice, hospitals and patient and carer groups to develop a system-wide focus on handover between General Practice and hospitals.	Early findings are: mixed outcomes for patients/overall satisfaction with continuity of care.	ARCHI website: ARCHI
Transitional Care Program	National (urban)	Older people being discharged from hospital	The Transition Care Program provides goal oriented, time limited and therapy focused care to help older people at the conclusion of a hospital stay.	A reduction in hospital readmissions and emergency department visits. Not low cost. Appreciated by patients and carers.	National evaluation report: Department of Health and Ageing
IMPACT program	ACT (urban)	Women who are pregnant or have young children who are receiving treatment for mental health issues and/or opioid dependence	A hospital-based coordination service for pregnant women, their partners and their young children (less than two years of age) who are clients of Mental Health ACT and/or are receiving opioid replacement therapy and require assistance to manage their involvement with multiple services.	Reduced severity of depression Increased compliance with depression medication Improved satisfaction with care and quality of life.	Evaluation of the IMPACT program: ACT Health
Cancer Nurse Coordinators (Australian Better Health Initiative)	WA (urban and rural)	People with cancer	The aim of this project is to facilitate a coordinated approach to cancer services so that the patient experiences an efficient and effective treatment pathway that is individualised and embraces multidisciplinary care.	Clinically significant benefits to patients were reported along with a high degree of patient satisfaction. Resource intensive with resources being drawn from other areas – not cost/benefit analysis.	Evaluation of the Cancer Nurse Coordinators Program – Final Report: Health WA
I'm OK Project	NT (urban and rural)	People with advanced chronic kidney disease	Aims to enhance communications between medical staff and patients, and enable close-to-home access to specialist health care in regional ACCHSs.	The program has not been evaluated.	More information: Health Info Net

Name	Location	Target Group	Description	Outcomes	Reference
Enterprise Discharge Summary (Queensland Health)	Queensland	Patients being discharged from hospital	The Enterprise Discharge Summary is an electronic discharge summary (EDS) sent from Queensland Health Hospitals to GPs. Currently 75% of GPs are enabled to receive EDS.	The majority of GPs (but fewer consultants) reported being satisfied with the summaries. Areas of concern include medication documentation, pathology results and recommendations for GP follow-up. No data on consumer views or health/economic outcomes.	Information on evaluation: Stainkey L *et al* (2010)
The MedGap project (Austin Health, Northern Health, North East Valley Division of General Practice & Monash University)	Melbourne	RACPs being discharged from hospital	Aimed to implement and evaluate a new process for medication management and administration on transfer from hospital to residential care, including the use of a hospital-provided interim medication administration chart.	Baseline audits found that ≈20% of patients experience a medication delay or error after discharge. This was reduced to <5% with the supply of a hospital provided interim residential care medication administration chart. Locum medical attendance was also reduced from ≈33% to <12%. High level of clinician satisfaction, increased workload for pharmacist. No cost-benefit analysis but significant reduction in locum costs.	Final Report available at: NEVDGP
Discharge Management of Acute Coronary Syndrome (DMACS) project	National	People with acute coronary syndrome being discharged from hospital	This project involved targeted intervention strategies to optimise: prescription of recommended medications; education regarding lifestyle modifications; and communication between hospital staff, patients, and GPs.	Modest improvements for the discharge management of patients with acute coronary syndromes, including increases in: the prescription of all four classes of guideline-recommended medications, overall referral to cardiac rehabilitation, discharge medication and smoking cessation counselling and communication to patients and carers.	Final evaluation report: CIAP

Name	Location	Target Group	Description	Outcomes	Reference
The 'Yellow Envelope' project (North East Valley Division of General Practice)	Victoria	People moving between hospital and RACFs	The yellow envelope is a communication tool that assists staff of residential aged care facilities (RACFs) and hospitals to provide relevant medical information about patients transferred to and from hospital from RACFs., the back of the envelope features a checklist of crucial handover information to be included when a resident is transferred.	The envelope was found to be useful, improved clinical handover where implemented and raised awareness of the importance of clinical handover. High clinician and consumer satisfaction.	Information on evaluation: Belfrage *et al* (2009)
The Tactical eReferral Project	Qld	GP patients being referred to hospital outpatients	A template integrated with practice software to enable GPs to send referrals electronically to outpatient departments.	No evaluation performed.	More information: General Practice Queensland
Management of cardiac function (MACARF) program	NSW	People being treated in hospital for heart failure	The heart failure nurse first contacts the patient whilst in hospital and referrals are made to a general practitioner, specialist and allied health services. Education and a follow-up home visit within seven days of discharge are provided to patients who each receive a Heart Failure Plan.	Reduction in unplanned admissions. Patient satisfaction.	Report on Phase One: NSW Health

Appendix 2 – US initiatives summary

Name	Location	Target Group	Description	Outcomes	Reference
Community-based Care Transitions Program (CCTP)	Center for Medicare and Medicaid Innovation – currently 47 initiatives underway	Medicare beneficiaries	Launched in 2011, to run for 5 years. Funding is provided to Community-based organisations to provide transition services to Medicare patients. Funding is based on the cost of care transition services provided at the patient level and of implementing systemic changes at the hospital level.	Too early for evaluations. Expected outcomes: • Improved transitions from inpatient hospital to other care settings, • Improved quality of care, • Reduces readmissions, • measurable savings to Medicare	More information at: Community-based Care Transitions Program
Care Transitions Program	Adopted by more than 700 sites nationwide. Centers for Medicare and Medicare Services have launched this program at 14 sites.	Medicare beneficiaries, including those with depression or dementia if they have a caregiver.	During a 4-week program, patients with complex care needs receive specific tools, are supported by a Transitions Coach (usually nurse or social worker), and learn self-management skills to ensure their needs are met during the transition from hospital to home.	Patients who received this program are significantly less likely to be readmitted to hospital; more likely to achieve self-identified personal goals around symptom management and functional recovery. Results sustained for at least 6 months.	More information, including published evaluations, at: Care Transitions Program

Name	Location	Target Group	Description	Outcomes	Reference
Transitional Care Model (TCM)	Deployed through a Kaiser Permanente and Aetna to a number of hospitals.	Medicare beneficiaries with two or more risk factors, including multiple chronic conditions and history of recent hospitalisation.	Provides comprehensive in-hospital planning and home follow-up for chronically ill high-risk older adults hospitalised for common medical / surgical conditions. Trained Transitional Care Nurse visits patient in hospital prior to discharge, facilitates transition process, conducts weekly home visits, and is always available by phone. Program runs for 1-3 months.	Three NIH-funded randomised, controlled trials show TCM has achieved significant and sustained outcomes: • Avoidance of hospital readmission and ED visits for primary and co-existing conditions • Improvements in health outcomes after discharge. • Enhanced patient and family caregiver satisfaction. • Reductions in total (physician, hospital, and home health) health care costs.	More information on evaluation and scale-up at: Washington Patient Safety Coalition

Appendix 3 – UK initiatives summary

Name	Location	Target Group	Description	Outcomes	Reference
Discharge Summary	NHS	NHS Trusts	Development of a standardised data set and template for handovers between clinicians, together with patient information sheet.	Agreement on what constitutes a minimum data set. Further guidance issued by Royal Pharmaceutical Society (RPS) in 2012.	Clinician's Guide to Record Standards at: Royal College of Physicians RPS final report at: Royal Pharmaceutical Society
Electronic 24-hour discharge	Connecting for Health	Acute Trusts	Based on Academy of Medical Royal College (AoMRC) Discharge Summary headings, together with Royal College of Physicians and Royal College of General Practitioners a toolkit produced for acute trusts to improve discharge and funded through the CQUIN (Commissioning for Quality and Innovation) scheme. This project aims to improve timeliness and quality of discharge summary.	No formal evaluation. Benefits of pilots sites cited include reduced calls from GPs and consistency of discharge information across all specialties. Barriers cited include cultural change and legacy systems and perceived differences in minimum data set. Consultation and involvement of clinicians (particularly consultants) at micro level felt to be critical to success.	More information at: NHS Connecting for Health
Quality of GP Diagnosis and Referral			This paper explored the evidence on the quality of diagnosis and referrals. With the quality of referrals it reviewed the timeliness, appropriateness, destination and quality of the communication from primary to secondary care. There is evidence of consensus of what should be include in the referral letter and this includes shared expectations of the specialist and patient.	The authors conclude that the quality of referral letters is a heavily researched area and there is strong evidence suggesting that quality could be improved for at least a substantial minority of letters. A specific example is cited of 17% of emergency referrals having inadequate information. They also concluded patients' experience of referral is strongly influenced by their sense of making progress through the system. Involving patients in	Foote *et al* (2010)

Name	Location	Target Group	Description	Outcomes	Reference
				decision-making and informing them about the referral process increases patient satisfaction, and can help limit feelings of powerlessness and being left 'in limbo'.	
1000 Lives Plus Patient Safety First Scottish Patient Safety Program	UK Countries	National Programs	The UK countries have a number of quality improvement programs. These include the 1000 Lives Plus, Patient Safety First and the Scottish Patient Safety programme. Many of these use the improvement science approach and the programmes are either centred around specific disease pathways or the reliable implementation of known solutions e.g. WHO Surgical checklist. None of these had the handover or transfer of care between settings as a programme theme. However, some did have medicines management as a key area which is known to be one of the commonest causes of harm with transitions of care.	There are no published evaluations of the programs available that drill down to a sufficient depth to understand their impacts.	More information: 1000 Lives Plus: 1000 Lives Patient Safety First: Patient Safety First Scottish Patient Safety Programme: Scottish Patient Safety Programme Healthcare Improvement Scotland: Health Improvement Scotland

Name	Location	Target Group	Description	Outcomes	Reference
Healthcare Improvement Scotland Patient Safety in Primary Care	Scotland		The overall aim of this project was to develop and test change packages to improve patient safety in primary care (GP) areas that are a major source of clinical risk and cause significant harm to patients as they move across the health system.	There were improvements in each of the bundle components with the exception of discussion with patients or their representatives. The analysis for the whole 'bundle' showed that it did not achieve reliability. The authors commented on the need for expert and strong facilitation in use of improvement tools e.g. process mapping. The project was in association with others projects to improve medicine's reconciliation in the hospital part of the patient journey.	Evaluation not yet published. Personal Communication (PD) with Neil Houston, GP Lead.
Predictive Risk Tool	Various NHS PCT	PCTs	Patient at high risk of admission were identified using predictive modelling algorithms of which there are a number. Those stratified to be at high risk were then offered intervention including case management and virtual wards.	Predictive modelling tools show good projecting ability in identifying high risk patients in a general population. Targeted interventions to high risk patients can improve their quality of care, however, there is no evidence that they reduce emergency admissions.	