Performance Indicators for Effective Discharge

Human Services

Peoplefirst

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November 2000

Acknowledgements

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List of Abbreviations

EDS	Effective Discharge Strategy
GP	General Practitioner
HACC	Home and Community Care
HCO	Health care organisation[1]
KPMG	KPMG Consulting Pty. Ltd.
MPS	Multi Purpose Services
PAC	Post Acute Care
RDNS	Royal District Nursing Service
VAED	Victorian Admitted Episode Dataset

Definitions

Community Providers Where the term community providers is used throughout this document it generally refers to: district nursing services, community nursing services, community health, home and community care providers (HACC), post acute care (PAC) and residential care inclusive of aged residential care and community residential units.

1 Health Care Organisations. For the purpose of this project refers to all public acute hospitals, sub-acute services inclusive of extended care centres and sub-acute units in public hospitals. Mental health services are not included.

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Executive Summary

Effective discharge is a priority area for the Department of Human Services. The Effective Discharge Performance Indicator Project is part of the Department of Human Services' Effective Discharge Strategy.

Introduction

This is the final report for the Effective Discharge Performance Indicator Project prepared by the Health Services Research Unit, Department of Epidemiology and Preventive Medicine, Monash University, for the Acute Health Division of the Department of Human Services Victoria.

The main aim of this report is to propose a suite of potential performance indicators for an effective discharge designed for use throughout Victoria. It also outlines the issues for implementation and considers the data collection of these performance indicators.

Quality of Care and Performance Indicators

It is important to recognise that performance indicators are just one mechanism available to monitor and drive improvement of the quality of care in our health care system.

Processes of care, rather than outcomes, were used to develop the performance indicators because process indicators are more sensitive and more responsive to changes in care than outcome indicators. The outcome measures available have significant limitations. However, the Department of Human Services recognises the importance of outcome measures and where outcome measures can be utilised they are implemented, for example, the use of elective surgery indicators for specific procedures.

If suitable indicators describing the outcomes of care are subsequently developed these could be used to complement the processes of care indicators.

It is important to recognise that the performance indicators reflect what is done most of the time by most of the hospitals to most of the patients, and their primary purpose is to reflect what happens at a population level (HCO) rather than at an individual level.

Project Method

An extensive search of the published literature was undertaken to identify the processes associated with an effective discharge strategy and existing performance indicators for effective discharge. Studies both locally and internationally were reviewed to identify programs of performance measurement, health outcomes and processes of care.

Extensive consultation with the field occurred in two phases. Phase One involved developing the discussion document and translating the processes of care into performance indicators. Phase Two evaluated the acceptability and feasibility of the proposed performance indicators.

Identifying the Potential Performance Indicators

The numerous published studies examining discharge planning and effective discharge are quite diverse. The critical appraisal concentrated on the relevant published studies that provide evidence for evaluating the processes of care that are related to effective discharge. Wherever possible, randomised control trials were used.

The key processes of care for an effective discharge are based on a proactive discharge strategy often described as discharge planning. The components of an effective discharge strategy include:

- An assessment phase
- A planning phase
- An implementation phase
- An evaluation phase.

Within each phase there are multiple sub-component processes of care. Two common themes emerge within each phase. Firstly, early consultation with the patient, their carer and the relevant community providers is important. Secondly, in the most successful research trials, the key processes of care are usually the responsibility of a highly trained and designated discharge plan coordinator. It is difficult to generalise results of these studies to the public health system in Victoria because all of the large intervention studies are internationally based.

The next stage translated the identified processes of care into performance indicators. Two important factors that required consideration are whether the process of care can be clearly described to ensure accurate measurement and whether the intent of the process of care has been preserved in the translation. Obviously the more specific the description of the performance indicator becomes, the more likely it will be interpreted consistently. The most difficult processes of care to develop performance measures for are the processes that involve interpersonal interactions and shared decision-making. Adherence to a specific explicit statement does not accurately reflect the emotions, content and nature of the interpersonal interactions.

The next step in selecting and translating processes of care into performance indicators considered:

- Whether the process of care is specifically related to an effective discharge or reflects the more general aspects of care.
- Whether the process of care has a recurring theme.

Ideally, the performance measures would complement each other and the suite of performance indicators would complement existing quality activities.

The suite of performance indicators should include those that:

- Reflect the phases of an effective discharge.
- Reflect the identified priorities in effective discharge.
- Accommodate the diversity of patients, health care organisations (HCOs) and services.

This led to the selection and development of the following performance indicators:

- An assessment phase—provision of timely and informative risk screening.
- A planning phase—commencement of the preparation of the discharge plan.
- An implementation phase—timely notification of community health care providers.
- An implementation phase—provision of a timely and informative discharge summary.
- An evaluation phase—follow-up of the discharge plan.

The consultations at the workshops and the written submissions to the project team had the following main themes:

- Clarification and modification of the definitions of the individual performance indicators.
- Debate about the preferred methods of measuring quality of care.
- Who would shoulder the responsibility for the burden and logistical feasibility of data collection.
- The appropriateness of linking funding to performance indicators.

One of the major revisions of the performance indicators was to change the timeliness component to be measured in units of 'days'; the original versions measured time in units of hours. A major benefit that comes with measuring time in units of days is that the performance indicators are more relevant to the HCO work practices.

Description of Performance Indicators

The performance indicators consist of two components. One component describes the timeliness of the process of care, the second component describes the actual content criteria of the process of care.

1. Provision of Timely and Informative Risk Screening

Risk screening should be complete within one day of admission, the minimum content criteria of the risk screen are questions related to:

- Patient likely to have self-care problems.
- Patient lives alone.
- Caring responsibilities for others.
- Patient used services before admission.

A variation to the definition of this indicator exists for sub-acute services and paediatric patients.

Recommendation—Proposed Indicator One

Risk Screening: This performance indicator is ready to undergo pilot testing prior to statewide implementation.

2. Commencement of Preparation of the Discharge Plan

Commencement of the preparation of the discharge plan should be completed within two days of admission. The minimum content criteria of the discharge plan is:

- Predicted discharge date.
- Predicted discharge destination.
- Actions to address positive risk screening questions.

A variation on the definition of this indicator exists for patients with a length of stay of three days or less.

Recommendation—Proposed Indicator Two

Commencement of the preparation of the discharge plan: This performance indicator is ready to undergo pilot testing prior to statewide implementation.

3. Timely Notification of Community Providers

Timely notification is considered to occur at least two days prior to patient separation. The minimum content criterion is the provision of:

- Basic patient demographic information.
- Identification of a contact person within the HCO who is able to provide further relevant information.
- The predicted discharge date.

A variation to the definition of this indicator exists for patients with a length of stay of three days or less.

Recommendation—Proposed Indicator Three

Timely notification of community providers: This performance indicator is ready to undergo pilot testing prior to statewide implementation.

Irrespective of the results of pilot testing further work should be undertaken to determine the best approach to improve the interaction between HCOs and community provider groups.

4. Provision of a Timely and Informative Discharge Summary

The discharge summary is dispatched to the patient's nominated general practitioner (GP) within one day of separation. The minimum content criteria of the discharge summary are:

- Basic demographic information.
- Relevant clinical information.
- Medication list.
- Information regarding follow-up.

A variation to the definition of this indicator exists for small rural and remote HCOs.

Recommendation—Proposed Indicator Four

Discharge Summary: This performance indicator is ready to undergo pilot testing prior to statewide implementation.

5. Follow-up of the Discharge Plan

Contact is made with the patient within ten days following separation. The minimum content criteria for the follow-up of the discharge are:

- Documentation of contact number/address to follow-up patient.
- Determination of whether all the elements of the discharge plan were implemented as planned.
- Determination of whether the patient is experiencing any difficulties.

The feasibility of this indicator requires clarification. It is unclear whether the benefit from this indicator is significant enough to warrant statewide implementation at this stage. Additionally, there would be considerable cost implications associated with this performance indicator if it is to be implemented for every patient discharged from hospital. Further investigation needs to be undertaken to determine the patient type that would receive the most benefit from this indicator.

Recommendation—Proposed Indicator Five

Follow up of the discharge plan: This performance indicator requires further investigation before pilot testing is considered. The investigation should be designed to answer the following questions:

- Is it logistically feasible?
- What are the resource requirements for a HCO to implement?
- What are the costs and benefits of this process of care?

Implementation of Performance Indicators

There are significant issues regarding the application of the performance indicators in practice. The frequency of reporting the performance indicators, the presentation of the results, and a mechanism to review the impact of the data reporting and interpretation on practice within the HCO, needs careful consideration.

The performance indicators are intended for all public HCOs in Victoria. The intent of these performance indicators is to provide a tool for reflecting current practice and improving discharge

practice. The performance indicators must be viewed in the context of:

- Integration of the performance indicators into the global strategy for providing an effective discharge.
- Recognition that performance indicators are one aspect of evaluating the patient care provided by HCO.

Recommendation—Monitoring of Patient Satisfaction
These performance indicators should be used to complement existing performance measures such as the monitoring of patient satisfaction.
Recommendation—Indicators in Context
These performance indicators should be considered as one component of a global strategy to improve effective discharge practice in Victoria.
Attention should be given to determine the relative merits of a HCO performance based on the different components within the global strategy, and the performance of a HCO should not be judged solely on these performance indicators.

A number of different possibilities exist for data collection. Ideally, data gathering should be specific, planned and prospective, with audits to verify the accuracy and reliability of data.

The use of an existing data gathering mechanism would limit the burden of collection and be financially feasible. At present these processes of care performance indicators cannot be easily or efficiently extracted from existing administrative databases. The HCO is probably the most conveniently situated data collection point to gather the information from the patient and community providers as well as from itself.

Regardless of the system used to gather the data, a method to check the reliability of the data is mandatory. Ideally, the performance indicators should be obtained from planned prospective collection of the necessary data.

Recommendation—Data Collection
The data collection methods and the collected data should be regularly audited to monitor and ensure the reliability and validity of the data.

A balance is required between the following factors related to the reporting of any performance indicator: comprehensiveness, frequency of reporting, timeliness and ensuring relevance to clinicians and institutions.

Recommendationˆ Data Collection and Reporting
The medical record is the primary data source
Data collection is undertaken by staff trained to collect the performance indicator using explicit review
Random external auditing of the data collection is undertaken to ensure reliability
Reporting of performance occurs annually

A mechanism to review the impact of the performance indicator data reporting and interpretation on practice within the HCO is desirable.

To achieve valid comparisons between HCOs, a method to identify and classify the different organisations is required. The classification system recently used by the Department of Human Services for the patient record audit of discharge planning may be adequate for the needs of the proposed performance indicators.[1]

A benchmarking group with representatives of stakeholders within each hospital category may be an ideal forum to share and discuss mechanisms and opportunities for improvement. This group may be voluntary and work on the notion of sharing best practice between like organisations.

Recommendation—Data Interpretation
The HCO groupings[2] should be considered as a starting point for comparisons between organisations.
A forum of benchmarking partners be established between the stakeholders.
The rates reported for the performance indicators should be interpreted within the limitations of the data.

In Victoria there is a number of sub-specialist hospitals that do not have a peer equivalent with which to compare performance. Examples are The Royal Victorian Eye and Ear Hospital, The Royal Children's Hospital and the Peter MacCallum Cancer Institute. These hospitals should be considered on an individual basis as each organisation addresses different and specific clinical areas.

Recommendation—Data Interpretation Sub-Specialist Hospital Groupings
The Royal Victorian Eye and Ear Hospital, Peter MacCallum Cancer Institute and The Royal Children's Hospital should be considered on an individual basis.
The individual HCO, in consultation with the Department of Human Services should develop objectives regarding performance.

The complex issue of determining a weighting/scoring criteria for the indicators needs to consider a multitude of factors. Due to the complexities and implications of scoring and weighting, and the release of performance data, the project team advocates the involvement of appropriate disciplines to advise on the best methods for presenting the data to serve the individual needs of the different stakeholders. This phase should be conducted during the pilot testing of the indicators.

Recommendation— Data Interpretation
A multidisciplinary team be involved in determining how to represent and interpret the performance indicator data.
Education of stakeholders to interpret the reports accurately

The Way Forward

This project has completed the initial step in developing performance indicators for effective discharge. The next step is pilot testing the selected indicators which includes the collection, analysis and interpretation of the performance indicators. The pilot testing phase is vital for informing the issues of implementation.

2 Refers to the groupings used for the Effective Discharge Patient Record Audit [1]

Introduction

The Effective Discharge Performance Indicator Project is part of the Department of Human Services' Effective Discharge Strategy. The major initiatives for the strategy are:

- Discharge Improvement Plans—developing and implementing plans by HCOs that are designed to improve current discharge processes and practices.
- In the absence of performance indicators, an audit of patient records to assess current discharge practices in acute hospitals, sub-acute services and Multi-Purpose Services (MPS).
- Performance bonuses—allocated on the basis of the findings of the audit.
- Performance indicator development—focusing on indicators of effective discharge processes.

This is the final report for the Effective Discharge Performance Indicator Project prepared by the Health Services Research Unit, Department of Epidemiology and Preventive Medicine, Monash University, for the Acute Health Division of Department of Human Services Victoria.

The main aim of this report is to propose a suite of potential performance indicators for an effective discharge designed for use throughout Victoria. It outlines the issues for implementing the data collection of these performance indicators. The performance indicators chosen are based on a combination of the best available evidence in the published literature[3] and formal consultation with relevant stakeholders through a discussion document.[4]

It is important to note that these performance indicators fall within the boundaries of existing confidentiality and privacy requirements that HCOs and community providers must adhere to. The Department of Human Services has recently released a document Draft Health Records Bill which establishes privacy standards for the handling of health information in Victoria.[5]

This report completes the development phase of the performance indicators for effective discharge. Pilot testing the indicators is the next step toward statewide implementation.

Report Outline

This document is divided into several sections. **'Quality of Care and Performance Indicators'** provides a brief background to the general issues of any performance measurement and explains the different types of performance indicators, including why the performance indicators were developed from the processes of care rather than the outcome of care.

'Project Method' describes the method of the literature search, the initial consultations with stakeholders and the consultations surrounding the discussion document.

'Identifying the Potential Performance Indicators' describes background information of considerations for developing performance indicators. It contains a summary of the literature review, explaining how the suite of potential process performance indicators was developed from the processes of care. This section describes the complexity of the competing factors that must be considered during the translation of a process of care into a performance indicator.

3 Refer:DHS, Continuity Unit, Quality Branch, Acute Health. Effective Discharge Performance Indicator Project. Literature Review. April 2000.

4 Refer: DHS, Continuity Unit, Quality Branch, Acute Health. Effective Discharge Performance Indicator Project. Discussion Document. May 2000.

5 See website: www.dhs.vic.gov.au/ahs/healthrecords/index.htm

'Description of Proposed Performance Indicators' describes each of the potential performance indicators in detail, including the title, rationale, definition of terms, data elements and potential limitations.

'Implementation of Potential Performance Indicators' describes the issues that impact on putting the performance indicators into practice, the main focus being on collection of the data and interpretation of data through benchmarking. This section outlines a number of options regarding achieving valid comparisons between HCOs. The pilot testing phase is vital for informing the specific implementation issues of this suite of performance indicators.

'The Way Forward' reiterates the indicators ready to proceed to the pilot testing phase.

The recommendations of the project team are presented within the relevant sections of this report.

Quality of Care and Performance Indicators

It is important to recognise that performance indicators are just one of many different techniques available to monitor and improve the quality of care of our health care system. Developing performance indicators for an effective discharge is limited by a number of unresolved issues, including:

- The lack of unique patient identifiers and integration of databases.
- Whether participation in quality measurement should be compulsory or voluntary.
- The inherent redundancy of performance measures due to advances in science, medicine and health service delivery.
- The multiple interfaces in the delivery of health services blurring the responsibilities of different health providers for patient care. [2]

Some of the more contentious issues in performance measurement concern the debate surrounding the use of outcomes or processes of care, the relevance of a performance indicator for an individual patient, and maintaining congruence between the intent and application of performance indicator data. The first two issues are discussed below and the final issue is discussed in the section 'Implementation of Potential Performance Indicators'.

Processes or Outcomes of Care

The debate about whether to measure the processes or outcomes of care is ongoing and is not unique to this project or subject. The entire field of researchers, academics and practitioners involved in quality performance measurement, monitoring and improvement are wrestling with these issues. Ideally, comprehensive assessment of health care performance requires a complement of different types of measures.

In general, the reasons for selecting processes of care performance indicators are multi-factorial. Process data is useful when we have strong evidence that particular processes affect important outcomes, in particular when one or more of the following apply:[3]

- The goal is to improve the delivery of health care.
- The processes of interest affect long term outcomes.
- Tools to adjust or stratify for patient factors are lacking.
- We need to know why specific providers achieve particular outcomes.
- Short time frames are necessary.
- Providers are being compared.

In order to measure the performance of an effective discharge, two types of performance indicators need to be considered—process of care and outcomes of care indicators. There are both theoretical and practical reasons for restricting this suite of performance indicators to processes of care. However, an explanation of why processes of care performance indicators are currently preferred to outcome of care is warranted. The potential advantages of processes of care indicators include:

- Their ability to readily identify the area of care deficiencies, thereby giving a clear direction for efforts to improve care.
- The processes of care indicators can identify poor care earlier than outcome measures. [4]

Outcome measures are often perceived as clearly defined and objective events with obvious relevance to the person most affected, that is, the patient. However, this is a simplistic and, at times, misleading argument. The direct link between these outcomes to the quality of the hospital care delivered often cannot be made because of confounding variables such as patient and disease factors. This is particularly relevant to an effective discharge.

The current outcome measures used to determine an effective discharge include readmission rates and length of stay. These are inadequate due to significant limitations being:

- Significant measurement error, especially for unplanned readmission.
- Presence of confounding factors.

- A highly questionable relationship to quality of care.
- They do not focus specifically on the aspects of care related to an effective discharge.

Discharge is only one component of the episode of care, and it is difficult to use outcome measures that cannot separate discharge from the entire episode. Generic outcome measures have been shown to be relatively inefficient at addressing improvements in quality of care.

The major limitation of outcomes of care indicators is the absence of a direct link between the outcome to the quality of the care. This is due to the presence of multiple confounding variables, such as patient characteristics, disease factors, and the nature and extent of community providers. This is exacerbated by measuring outcomes of care using methods such as the duration of follow-up after discharge. This increases the difficulty of separating the important processes of care that should occur within the hospital from community-based services.

The requirements for reliable measurement impose some limitations on the proposed indicators, individually and as a suite.

The processes of care performance indicators have their own limitations and are not perfect, however these indicators are preferable to the existing outcome measures.

Recommendation Process vs Outcome

If suitable indicators describing the outcomes of care are subsequently developed these should be considered to complement the processes of care indicators.

Finally, one must remember that this is the starting point to begin reflection on the discharge practices in Victoria. In the future, a combination of process and outcome of care indicators may need to be considered.

Population versus Individual Approach

A criticism of the performance indicators is that 'hospitals can comply with the criteria and still deliver sub-optimal care to an individual patient'. This is a common misconception about the purpose of performance indicators. The performance indicators reflect what is done most of the time by most of the hospitals to most of the patients. Thus the purpose of the performance indicators is to reflect what happens at a population level rather than at the individual level.

Compliance with the indicators suggests there is appropriate care for each patient, it does not guarantee optimal care for each individual.

A parallel example is seen with vaccination and immunisation. The process of care is 'vaccination of an individual patient'. The performance indicator is 'rate of vaccination of eligible patients'. However, the process of vaccination does not always generate the production of an immune response to protect every individual patient. Therefore, some patients who are vaccinated remain at risk of infection but most patients who are vaccinated do become immunised.

Project Method

Literature Search and Review

An extensive search of the published literature was undertaken to identify the processes associated with an effective discharge strategy and the existing performance indicators for effective discharge. Studies both locally and internationally were reviewed for identification of programs of performance measurement, health outcomes and processes of care. A detailed search of the relevant published literature was undertaken using a comprehensive, standardised protocol to identify the material that could answer the project aims. Searches of MEDLINE, CONQUEST database, Cochrane Library, EMBase, CINAHL and the National Library of Health Care Indicators database were utilised. The project team did not identify a recognised existing performance measurement program that used process of care indicators for measuring effective discharge.

An extensive critique of the published literature was subsequently undertaken to identify the processes of care associated with an effective discharge and to provide the foundation for the development of the performance indicators. The literature review is available on application through the Acute Health Division of the Department of Human Services.[6]

Consultation

Extensive consultation with the field occurred in two phases. Phase One was directed towards developing the discussion document and was aimed at translating the processes of care into performance indicators. Phase Two was directed at evaluating the acceptability and feasibility of the proposed performance indicators.

Phase One—Development of Discussion Document

Information was obtained from selected individuals, government departments, universities and other professional organisations by phone, email and personal interviews. The extensive on-site library was used, and the expertise of the multidisciplinary members within the Department of Epidemiology and Preventive Medicine provided an additional valuable resource.

In addition to, and in conjunction with, the extensive literature review, the project team consulted with various key stakeholders in formulating the discussion document. These consultations included representation from patients/carers, health providers, Effective Discharge Strategy project officers, various community-based services (GPs, district nursing services). Also consulted were existing programs, particularly those health professionals specifically involved in the Department of Human Services' Effective Discharge Strategy.

Opportunity to participate was available by invitation to submit comments to the project team via the Department of Human Services' website[7]. In addition, a bulletin to all HCOs was released by the Department of Human Services in February 2000 outlining the aims of the project and providing contact details.

Phase Two—Release of Discussion Document and Workshops

The discussion document for the Effective Discharge Performance Indicator Project presented a suite of potential performance indicators for consideration by all parties with an interest in health care.

6 Refer:DHS, Continuity Unit, Quality Branch, Acute Health. Effective Discharge Performance Indicator Project. Literature Review. April 2000.

7 See website: www.dhs.vic.gov.au/ahs/quality/contin.htm

The first aim of the document was to inform all the stakeholders about the development, selection and role of performance indicators for an effective discharge from HCOs. The second aim was to determine whether the proposed performance indicators met the needs of the stakeholders and whether the implementation of these performance indicators was feasible.

The discussion document was circulated widely throughout Victoria and more than 600 copies were mailed directly to public hospitals, Divisions of General Practice and other peak organisations including the Municipal Association of Victoria, Victorian Healthcare Association, community providers, and consumer organisations. The project team, with the Department of Human Services, conducted a series of workshops throughout Victoria during May and June 2000. These workshops were open to all interested parties and provided another opportunity for discussion. The five Department of Human Services rural Regions (Hume, Barwon South, Grampians, Loddon Mallee and Gippsland) in Victoria were visited.

The workshops were two and half to three hours long and involved a formal presentation followed by question time and small group discussion. Feedback from the participants was collected in a structured questionnaire. More than 200 hospital personnel, community providers and health care consumers attended.

An issue considered at the workshops was the appropriateness and refinement of the process of care performance indicators. The logistic feasibility of collecting the performance indicator data, that is, the number of indicators to be collected, the breadth of the indicators and the burden of data collection, analyses and reporting requirements were also considered.

Written submissions were called for and received. The detailed comments were incorporated into this final document. The list of the written submissions is in Appendix 1.

Identifying the Potential Performance Indicators

Literature Review

The published studies examining discharge planning and effective discharge are diverse. The diversity results from differences in the definition of discharge planning, the patient population, the study design, the method of measuring the outcomes of care (the definition of effectiveness), the source of the collected data and what, if any, potential confounding factors were considered.

The critical appraisal concentrated on the relevant published studies that provide evidence for evaluating the processes of care that related to effective discharge. Wherever possible, randomised control trials were used. There were less than ten studies selected based upon criteria consistent with a robust study design. These studies included a comparison group using a prospective cohort design, examining the effects of additional care on patient discharge from hospitals.

The key processes of care for an effective discharge were based on a proactive discharge strategy often described as discharge planning. The components of an effective discharge strategy included:

- An assessment phase.
- A planning phase.
- An implementation phase.
- An evaluation phase.

Within each phase there were multiple sub-component processes of care.

The assessment phase included a mechanism for identifying patients with complex needs or who were at high risk of a sub-optimal discharge. The planning phase included the formulation of a discharge plan, a critical component of which was predicting the day and place for the patient discharge. The implementation phase included a mechanism to ensure that the patient was safe and ready for discharge by identifying the issues associated with continuity of patient care. The evaluation phase included a mechanism to ensure the discharge had been implemented as planned.

Two common themes emerged within each phase. First, early consultation with the patient and their carer and the relevant health service providers was important.

Second, in the most successful research trials, the key processes of care were usually the responsibility of a highly trained and designated discharge plan coordinator. This introduced the possibility that an effective discharge was due to the combination of the processes of care and the trained designated coordinator. Currently, there is insufficient evidence to resolve this issue.

For two reasons it is difficult to generalise results of these studies and apply them to the public health system in Victoria. Firstly, all of these large intervention studies are internationally based. In Australia there is a paucity of published research regarding intervention studies into effective discharge and discharge planning.

Secondly, of all the identified studies not a single one duplicated the methods of another. There was variation in the setting, patient selection, the different outcomes and different definitions of the same outcomes. Furthermore, most of the research had been conducted on patients with complex needs. There was very little information about what constituted an effective discharge for patients with minimal care needs.

Discussion Document

The next stage was to translate the identified processes of care into performance indicators. The translation of processes of care into performance indicators required consideration of several important factors. Two important factors were:

- Whether the process of care could be clearly described to ensure accurate measurement.
- Whether the intent of the process of care had been preserved in the translation.

Any ambiguity in the definitions and interpretation of a performance indicator increased the likelihood of mistakes occurring in the data collection stage and negated the validity of all subsequent interpretations of the data. Obviously the more specific the description of the performance indicator became the more likely it would be interpreted consistently.

The most difficult processes of care to develop performance measures for were the processes that involved interpersonal interactions and shared decision making. Adherence to a specific explicit statement did not accurately reflect the emotions, content and nature of the interpersonal interactions. Further, developing performance indicators for those aspects of care would be potentially misleading. This was an important area that required further attention to ensure patient involvement. The monitoring of patient satisfaction is an area that the Department of Human Services is currently addressing. Monitoring of patient satisfaction involved regular reporting of satisfaction with discharge processes, including satisfaction with information related to medications, the availability of services, follow-up appointments, time of discharge, and ongoing care required.

The next step in selecting and translating processes of care into performance indicators considered whether the process of care was specifically related to an effective discharge or if it reflected the more general aspects of care, and whether the process of care had a recurring theme.

Selection of indicators required consideration of the properties of each individual performance indicator as well as the relationship of each performance indicator to another's, that is, how the performance indicators work as a suite. Ideally, the performance measures would complement each other and the suite of performance indicators would complement existing quality activities.

The suite of performance indicators should include those that:

- Reflect the phases of an effective discharge.
- Reflect the identified priorities in effective discharge.
- Accommodate the diversity of patients, HCOs and services.

The properties of a robust performance indicator are well recognised and include reliability (that is, minimal reliance on subjective clinical judgements) and validity (that is, a demonstrated relationship to quality of care).

This led to the selection and development of the following performance indicators for further consideration; the components of an effective discharge included:

- An assessment phase—Provision of timely and informative risk screening.
- A planning phase—commencement of the preparation of the discharge plan.
- An implementation phase—timely notification of community providers.
- An implementation phase—provision of a timely and informative discharge summary.
- An evaluation phase—follow-up of the discharge plan.

Workshop Consultation

From the consultations at the workshops and the written submissions to the project team the following main themes were identified:

- Clarification and modification of the definitions of the individual performance indicators—addressed in a later section of this report (see section 'Description of Proposed Indicators').
- Differences of opinion about the preferred methods of measuring and improving quality of care, that is, the merits of outcome based performance indicators—this has been addressed earlier in the report (see section 'Process or Outcome of Care') and detailed in the discussion document[8], the literature

8 Refer: DHS, Continuity Unit, Quality Branch, Acute Health. Effective Discharge Performance Indicator Project. Discussion Document. May 2000.

review[9] and previous work on performance indicators [5]
- The responsibility for the burden and logistical feasibility of data collection for individual organisations—this has been addressed in the section 'Data Collection'.
- The appropriateness of linking funding to performance indicators—the issue of linking performance to funding is a complex matter that needs further consideration. Further details are addressed in section 'Implementation of Performance Indicators'.

Indicator Modifications Proposed Following the Consultation Process

There are specific performance indicator issues that need to be addressed separately. These are:
- Demonstrating an informative consultation.
- Unit of time measurement.

Demonstrating Consultation

The concept behind the performance indicators is the principle of identifying, integrating, analysing and synthesising information. This is a vital step in the development of an effective discharge plan. This consultation should occur between each of the key stakeholders, that is the patient and carer; the HCO (all the relevant health care professionals involved in the patient's care) and the community providers.

The type and depth of involvement, as well as the interpersonal interaction between the health care providers of a patient and their carer in an effective discharge, cannot be accurately defined. The following points describe the transition of the original indicators into the amended indicators, these indicators highlight the difficulty demonstrating consultation has occurred.

- **Indicator Two: Commencement of Preparation of a Discharge Plan** originally included the following content criterion—designating a health care professional as the discharge planner or liaison officer.
- **Indicator Three: Timely Notification of Community Providers** was originally based on a timeliness component only. This version included content criterion requiring demonstration that an informative consultation had occurred between the HCOs and the community providers.

The consultation between the HCOs with community providers is difficult to accurately define and therefore measure in an objective and reliable manner. All efforts to refine the content component of this indicator led to a performance indicator that loses the intent of the process of care. The consultation process requires the following stages:
- The HCO identifies and contacts community providers.
- There is an exchange of identification of the common issues facing the patient.

Unit of Time Measurement—From Hours to Days

One of the major revisions to the performance indicators was to change the timeliness component. The original version measured time in units of 'hours'. The revised version measures time in units of 'days'.

A major benefit with measuring time in units of days is the performance indicators are more relevant to the HCO work practice. The majority of activities related to discharge planning and effective discharge occur during the business hours of each day even though HCOs provide care 24 hours a day, seven days a week. Performance indicators that clearly relate to the usual pattern of work practice are more readily understood by HCO staff and have a greater level of acceptability.

For example, setting a 24-hour limit to complete a risk screen does not allow for the variation in the actual time the patient has been admitted or the circumstances of the admission. It is also more difficult to remain aware of, and to

9 Refer:DHS, Continuity Unit, Quality Branch, Acute Health. Effective Discharge Performance Indicator Project. Literature Review. April 2000.

compute and manage, the timeliness component because each patient on the hospital ward would need to have a different and specific time line. That is, HCO staff would have to remember that Patient A was admitted 20 hours ago, Patient B 15 hours ago, Patient C two hours ago and so forth. A more realistic setting is to state Patient A was admitted yesterday, Patient B was admitted early this morning and Patient C has just arrived.

Additional benefits of measuring time in days include a reduction in the level of documentation and data collection because the fields 'time of admission', 'time of risk screen' and 'time of discharge plan' are no longer required.

This change also allows more time to achieve compliance with all the performance indicators with the exception of the indicator 'notification of community providers'. For example, the risk screen timeliness component becomes 'completed by Day One' (that is, the day of admission and the next day). This allows a minimum of 24 hours and a maximum of 48 hours for the task. Therefore, risk screening for patients who are acutely unwell on the day of admission or admitted during the night can be deferred to the next day.

If hours are the unit of measuring time, it is a simple step to have a small incremental shift for a new standard from 24 hours to 16 hours. In contrast, if days are the unit of measuring time, it is a much larger shift from 'within one day following admission' to the 'day of admission'. Therefore, the potential limitation is the loss of flexibility in the timeliness component.

Description of Proposed Performance Indicators

1. Risk Screening

Discharge Planning Phase Category: Assessment

Rationale

Risk screening is one component of the process of care associated with assessment. The use of risk screening as a tool to stratify patients is a common theme in the literature [6,7]. Risk screening is useful for identifying patients at risk for adverse outcomes and it 'enhances clinical judgement and facilitates higher levels of service and safety for patients following discharge from acute care environments' [8].

The objectives of screening are to flag patients who are most likely to require services, and to minimise the number of inappropriate referrals for community providers. Risk screening has a common sense appeal as it is a clear starting point to the discharge planning process and, if applied systematically, is able to determine an appropriate discharge planning pattern.

Evans and Hendricks [6] specifically selected patients at high risk for readmission for their study. They used explicit criteria to screen 13,255 patients before random allocation of the subjects into intervention or control groups. These high-risk patients constituted a small proportion (6.3 per cent) of the total patients screened.

Screening can be administered in two ways—as a population-based screen or as a targeted screen. Population-based screening, as the name suggests, is a blanket screen of the entire population, for example the screening of all patients admitted to an acute care facility. Opportunistic screening is usually defined on the basis of an identified risk factor, for example the age of the patient, which then determines whether it is appropriate to apply a further screen.

Thomas and Associates [8] were engaged in 1998 by the Department of Human Services to develop a valid, reliable and practical tool to predict whether patients would require services following discharge from acute care. The screen was developed for application in the Post Acute Care (PAC) program, however, it has been recommended for wider use to all patients admitted to acute care facilities.

The aim of developing a risk-screening tool was 'to ensure that the most accurate and standardised possible results are obtained for the patients'[8]. There was evidence to suggest that there was variation in clinician approach to discharge decisions. Therefore, patient outcomes may be affected depending on the particular clinician involved in the decision making process. This variation, however, may be minimised with the application of a process for decision making. To achieve this it must be ensured that the best available standard assessment tools and protocols are used and applied.

The Thomas and Associates[8] four-question risk screening tool is simple and quick to administer. It could be used as a minimum standard for risk screening. It is clear that different health care facilities with their specialities would benefit from enhancing the tool to suit their patient demographic. For example, it may be argued that the application of the Thomas and Associates[8] risk screening tool for children may not be appropriate, a different tool may need to be considered.

Definitions

To achieve compliance with this indicator, there is a mandatory requirement to adhere to the timeliness component and all criteria in the content component.

Timeliness Component

Risk screening completed by **Day One** following the admission date.

Definition: Day Zero is the date of admission as collected for the VAED.
Day One is the date following the date of admission.

This means HCOs have a minimum of 24 hours and a maximum of 48 hours to complete the risk screen.

For Example: A minimum of 24 hours exists if a patient is admitted at 11:59 pm on 1/1/2000 (Day Zero) and the risk screen must be completed by 11:59 pm 2/1/2000 (Day One). A maximum of 48 hours exists if a patient is admitted at 12:01 am 1/1/2000 (Day Zero) and the risk screen must be completed by 11:59 pm 2/1/2000 (Day One).

Variation for sub-acute services to timeliness component

Patients admitted to sub-acute services usually receive detailed risk assessment that supersedes the risk screening process. The risk screen is usually embedded into the risk assessment procedures and is generally completed within one week. Therefore, the timeliness component for sub-acute services is 'completion of risk screen by Day Seven'.

Content Component

The following is a list of the relevant explicit criteria for this performance indicator. To achieve compliance with this content component there is a mandatory requirement to adhere to all of the criteria.

The content component consists of the four questions developed by Thomas and Associates[8]. These four factors are strong predictors of service need:

- Patient likely to have self care problems.
- Patient lives alone.
- Caring responsibilities for others.
- Patient used services before admission.

Definition of Compliance: Compliance requires documentary evidence of a response to each of the elements listed. The notation should allow for the following possible responses; 'Yes', 'No' or 'Not applicable'.

It is important to have specific risk screens that address local needs. HCOs are encouraged to expand their risk screens beyond the minimum content criteria listed in this performance indicator. However, compliance with this performance indicator will be confined to the stipulated minimum content criteria. Therefore, a HCO that uses a risk screen with ten items (that is, the four minimum criteria and six additional items) will only need to report on the four minimum criteria.

Variation for paediatric patients to the content component

Risk screening for paediatric patients is more complex. At present there is a lack of consensus about the applicability of the Thomas and Associates[8] risk screen. Therefore, it is proposed that HCOs[10] with a major responsibility for paediatric patients submit a minimum set of criteria applicable to their population to the Department of Human Services for inclusion.
Definition: Paediatric patient refers to children age 14 or less [9] Neonates <= four weeks old have been excluded from the paediatric definition.

Data Requirements

The calculated rate for the performance indicator must incorporate both aspects of the indicator. Satisfactory compliance with the performance indicator requires adherence to both the timeliness and content criteria.

The information needed to determine this performance indicator rate is:

Rate: Timely and informative risk screening.
Numerator: Number of separations adhering to timeliness and content criteria for risk screening.
Denominator: Total number of eligible separations for risk screening.

10 At this time there is a number of HCOs that have paediatric separations =>3000 for the 1999–2000 financial year. The hospitals areRoyal Children's Hospital, Monash Medical Centre (Clayton) and Sunshine Hospital.

Data Elements

Timeliness Component

- Admission date: DDMMCCYY
- Risk screen date: DDMMCCYY

Content Component

- Documentation of content criterion.
- Adherence to content criterion determined by explicit review.

Inclusions

- Same day stay patients
- All multi-day stay patients (elective and emergency)
- Transfer to non-acute psychiatric unit (rehabilitation/continuing care/other care)
- Transfer to other acute hospital/extended care/rehabilitation/geriatric centre
- Transfer to nursing home (unless prior residence)

Exclusions

All patients are potentially eligible except for the following groups:

- Emergency department stay only
- Admission to intensive care unit within one day of admission to hospital
- Statistical separations
- Unqualified neonates
- Deaths
- Acute psychiatric separations
- Patients primarily requiring ongoing chemotherapy, radiotherapy or renal dialysis
- Patients who leave against medical advice

Data Sources

- Hospital patient record, manual extraction of data required from HCO patient record.

Data Sampling Period

- Each 12-month period.

Data Gathering Personnel

- Personnel who have been trained to collect this performance indicator.

Calculation of Rates

The risk screening rate is calculated by dividing the number of separations adhering to the timeliness and content criteria (numerator) by the total number of eligible separations (denominator) and multiplying the resulting quotient by 100.

There are two additional rates that can be calculated, the timeliness component of the performance indicator and the content adherence component of the performance indicator.

These additional rates could be used by each HCO to identify aspects of care that require further attention. The calculation of these rates would be at the discretion of the individual organisations.

Current Practice

The Effective Discharge Strategy is a five-year initiative that commenced in 1998–99. The strategy identifies clearly the four stages of discharge as assessment, development, implementation and evaluation. Risk screening is identified as part of the assessment procedure. In the recent *Second Effective Discharge Patient Record Audit–Final Report [10]* risk screening is present in approximately 50 per cent of records reviewed. This is indicative of the relevance this indicator has to current practice.

Special Comments

- This measure is applicable to a broad range of HCOs and admission types. Efforts towards improving patient care may be more efficient if the performance indicator focussed on the patients with the greatest need. These patients can be determined through existing information from clinical trials and local need.

- Where a patient is unable to participate with risk screening due to cognitive impairment or other speech or neurological conditions, the patient's carer or next of kin may be able to answer. This is consistent with current practice.
- Some patients may have previously been screened, that is, pre-admission clinic. This should be accepted as compliance with this performance indicator.

Future Directions

- This performance indicator should be considered a starting point. It forms the basis for developing more comprehensive indicators for the future.
- The timeliness can be re-defined as performance improves. Different time frames can be established based on the type of admission. Another option is the completion of a risk screen at the time of admission.
- The content can be supplemented with additional explicit criteria relevant to risk screening.
- The application of the Thomas and Associates risk-screening tool for children is arguable and a different tool may need to be used. For the short term, it is proposed that HCOs with a major responsibility for paediatric patients submit a risk screen to the Department of Human Services that is relevant to their needs. In the long term the Department should work with the relevant stakeholders/peak bodies to determine a minimum set of content criteria for this performance indicator. HCOs with the greatest number of paediatric separations (Royal Children's Hospital, Monash Medical Centre (Clayton) and Sunshine Hospital) should be invited to take a leading role in determining a risk screen applicable to this group of patients.
- Ideally this indicator should be collected as planned prospective data with a turnaround time of three months; this may be something to move toward in the future.

Conclusion

This is a useful indicator. It consolidates existing efforts. There is substantial supporting evidence for the validity of this process measure. Due to the nature of processes of care indicators the data is not immediately available from existing databases.

Recommendation—Proposed Indicator One

Risk Screening: This performance indicator is ready to undergo pilot testing prior to statewide implementation.

2. Commencement of Preparation of a Discharge Plan

Discharge Planning Phase Category: Planning

Rationale

Effective discharge planning includes preparing a plan for discharge. This process identifies and documents discharge strategies as part of an integrated planning process. Some important components of a discharge plan include the estimated date of discharge, the destination of the patient on discharge, nominated discharge coordinator and documentation of actions, which parallel the components of the risk screen.

It is a commonly held view that all patients should have an estimated date of discharge and documentation of their discharge destination, however, there is little evidence, particularly with unplanned admissions, that an estimated discharge date and destination is documented. In the findings of the First Hospital Record Audit conducted by KPMG, only 18 per cent of the records reviewed contained an estimation of the discharge date and only 19 per cent contained a discharge destination [2]. In this particular category the better performers were sub acute services. Estimating a discharge date is important for setting a timeframe to develop and implement an individualised patient discharge plan. Furthermore, indicating a discharge destination assists in the planning and delivery of care, and allows patients and families to plan for the discharge.

National Demonstration Hospital Project [11] key criteria for estimating a discharge date includes:

- An estimated date of discharge is documented for all patients within 24 hours of admission to hospital.
- A patient's estimated date of discharge is confirmed by medical staff.
- The estimated date of discharge is updated as clinical care progresses.
- The estimated date of discharge is agreed to with the patient and their carer.
- The estimated date of discharge should be easily communicated to all clinical staff. A common method is to use a ward's white board.
- The estimated date of discharge is entered into a database accessible to staff responsible for managing hospital beds.

An important issue in discharging patients on the estimated day of discharge is the ability of the GP and other community providers to provide care to the level of the patients' needs. It is important to consider the practical implications of a discharge in respect to these elements. Consider the following questions: Is the GP and/or community provider able to meet the post discharge needs of the patient? Does the timing of the discharge correspond to the business hours of the community provider and the GP? Is the GP and/or community provider aware of the date and time of discharge? The discharging hospital needs to be cognisant of these simple considerations for discharge planning to be effective.

It is generally accepted that a multidisciplinary team is required for successful, effective discharge. Positive discharge planning studies have commonly used a model of 'discharge coordinator', a nominated person with clinical knowledge, assessment skills, organisational skills and good communication [7, 12, 13]. The role of the discharge coordinator is to coordinate the discharge planning process, reinforce the roles and responsibilities of the team members, ensure team members are committed to the discharge planning process and incorporate the discharge plan into the patient's regular care. In short, the coordinator is responsible for ensuring that each patient has a discharge plan and that the discharge requirements are fulfilled [11].

The patient will come in contact with various health professionals throughout an inpatient episode of care. In most instances throughout

the literature examined, a nurse has been the discharge coordinator, however, there are no set standards which determine who should be the discharge coordinator. It is important that each organisation consider the following: Who is responsible for coordinating the discharge plan? What is the role of a discharge coordinator? What are the skills required by the coordinator? An evaluation mechanism is required internally for determining the effectiveness of the coordination [11].

The discharge planning process is simply a series of well-defined steps with associated tasks and actions; the planning phase of discharge follows the risk screen and assessments. To demonstrate that a planning phase has occurred there needs to be documentation of actions, which parallel the outcomes of the risk screen. As an example, if the patient scored a positive response to 'likely to have self-care problems', then there should be documented evidence of the action taken to plan for this risk screen question. An action may be that the patient is referred to an appropriate community provider that could fulfil this need on discharge. Planning thus becomes inextricably linked with implementation and there is often overlap between these two phases.

Of paramount importance is the ability to evaluate and collect the data associated with an indicator. By using the initial risk screening to highlight possible problem areas and correlating the areas indicated in the screen with areas in the planning phase, a negative/positive relationship is evident and can be readily collected.

Definitions

To achieve compliance with this indicator, there is a mandatory requirement to adhere to the timeliness component and all criteria in the content component.

Timeliness Component

Commencement of preparation of the discharge plan for sub-acute services should be completed by Day Two following the admission date.

Definition: Day Zero is the date of admission as collected for the VAED.
Day Two is the date two days following date of admission.

This means that HCOs have a minimum of 48 hours and a maximum of 72 hours to commence the preparation of the discharge plan.

Example: A minimum of 48 hours exists if a patient is admitted at 11:59 pm on 1/1/2000 (Day Zero)—preparation of the discharge plan must have commenced by 11:59 pm 3/1/2000 (Day Two). A maximum of 72 hours exists if a patient is admitted at 12:01 am 1/1/2000 (Day Zero)—preparation of the discharge plan must have commenced by 11:59 pm 3/1/2000 (Day Two). Day one would therefore be 2/1/2000 (Day One).

Variation for patients with a hospital length of stay of three days or less to timeliness component.

The timeliness criterion becomes redundant with patients who have a length of stay of three days or less, therefore the discharge plan must be completed by the day prior to discharge.
NB. Patients who are same day stay are excluded from this performance indicator.

Variation for sub-acute services to timeliness component.

Commencement of the preparation of the discharge plan for sub-acute services should be completed by day eight.

Content Component

The following is a list of the relevant explicit criteria for this performance indicator. To achieve compliance with this content component, there is a mandatory requirement to adhere to all of the criteria.

- Predicted discharge date.
- Predicted discharge destination.
- Response to risk screen minimum criteria.

Definition for Predicted Discharge Date: The notation should allow for the following possible responses: 'Date: determined as DDMMCCYY'. A possible response of 'unknown' is acceptable if this is followed by an explanation.[11]

Definition for Predicted Discharge Destination: The notation should indicate the likely discharge destination. A possible response of 'unknown' is acceptable if this is followed by an explanation.

Definition for response to address positive risk screen: There must be documentary evidence of additional assessment or referral for additional assessment. If there is no positive response to the risk screen then the documentary evidence required to fulfil the content criteria is 'Not applicable'. If there is a positive response but the clinician deems no further action is required this should be stipulated with an explanatory note.

Example: A response to address the positive risk screen could be a referral to another health professional (for example, the social worker).

Definition of compliance: Compliance requires documentary evidence of a response relating to each of the elements listed, that is, predicted discharge date, predicted discharge destination and response to risk screen minimum criteria.

It is important to have specific discharge plans that address local needs. HCOs are encouraged to expand their discharge plans beyond the minimum content criteria particularly as this criteria relates only to commencement of the preparation of the discharge plan. However, compliance with this performance indicator will be confined to the stipulated minimum content criteria.

Therefore, a HCO that uses a discharge plan with nine items (that is, the three minimum criteria and six additional items) will only need to report on the three minimum criteria.

It should be noted that the performance indicator refers to commencement of discharge planning and does not stipulate this is a binding plan. Many health professionals have expressed concern that by stipulating a date and destination they must adhere to the terms of the plan. This is not the intent of the performance indicator.

Data Requirements

The calculated rate for the performance indicator must incorporate both aspects of the indicator. Satisfactory compliance with the performance indicator requires adherence to both the timeliness and content.

The information needed to determine the commencement of the preparation of the discharge plan rate is:

Rate: Commencement of the preparation of the discharge plan.
Numerator: Number of separations adhering to timeliness and content criteria for the preparation of the discharge plan.
Denominator: Total number of eligible separations for the preparation of the discharge plan.

Data Elements

Timeliness Component

- Admission date : DDMMCCYY
- Date of discharge plan: DDMMCCYY

Content Component

- Documentation of content criterion.
- Adherence to content criterion determined by explicit review.

Inclusions

- All multi-day stay patients (elective and emergency)
- Transfer to non-acute psychiatric unit (rehabilitation/continuing care/other care)
- Transfer to other acute hospital/extended care/rehabilitation/geriatric centre
- Transfer to nursing home (unless prior residence)

11 It would be anticipated that changes would come from pilot testing the indicators, the pilot testing would inform clarification of what constitutes an acceptable explanation.

Exclusions

All patients are potentially eligible except for the following groups:

- Emergency department stay only
- Admission to intensive care unit within one day of admission to hospital
- Statistical separations
- Unqualified neonates
- Deaths
- Acute psychiatric separations
- Patients primarily requiring ongoing chemotherapy, radiotherapy or renal dialysis
- Patient who is unwilling to participate
- Patients who leave against medical advice
- Same day stay patients

Data Sources

- Hospital patient record, manual extraction of data required from HCO medical record.

Data Sampling Period

- Each 12-month period.

Data Gathering Personnel

- Personnel who have been trained to collect this performance indicator.

Calculation of Rates

The preparation of the discharge plan rate is calculated by dividing the number of separations adhering to timeliness and content criteria (numerator) by the total number of eligible separations (denominator) and multiplying the resulting quotient by 100.

There are two additional rates that can be calculated: timeliness component of the performance indicator and content adherence component of the performance indicator.

These additional rates could be used by each HCO to identify the aspects of care that require further attention. The calculation of these rates would be left to the discretion of the individual organisations.

Current Practice

The Effective Discharge Strategy identifies clearly the four stages of discharge as assessment, development, implementation and evaluation. Discharge plan development (care plan) is identified as part of the development phase. In the recent *Second Effective Discharge Patient Record Audit—Final Report [10]* conducted by KPMG, evidence relating to preparation of the discharge plan was documented suggesting moderate compliance [10]. This is indicative of the relevance this indicator has to current practice.

Special Comment

- This measure is applicable to a broad range of HCOs but a limited number of patient admission types. Efforts towards improving patient care would be more efficient if the performance indicator focused on the multi-day stay patients with the greatest need. These patients can be determined through existing information from clinical trials and local need.
- Another category is that of critically ill patients. It is often not appropriate to set a date or a discharge destination because the patient is not medically stable. Therefore, patients requiring admission to an intensive care unit have been excluded.
- Factors relating to the State average length of stay impact on the ability to comply with this indicator in the time stipulated. The State average length of stay is currently 3.76[12] days. However, if same day stay and overnight patients are excluded, the majority of patients are in hospital for a length of stay of 8.15[13] days.
- Identifying a health professional as the designated discharge coordinator/liaison is not currently feasible. The task of naming the individual in the hospital patient record allows for compliance with the indicator but this does not ensure the intent of the indicator criterion is met.

- The purpose of having a designated discharge coordinator/liaison is to ensure there is a common source of information for all relevant stakeholders as well as having a mechanism to review discharge plans. The work practices in most hospital wards means it is difficult and perhaps inappropriate to have one person nominated as the central figure for discharge. Further concerns were raised that if an individual is designated as the sole person responsible for discharge practice, then duties may be inappropriately delegated. Finally, a designated discharge coordinator may detract from developing a systems-based approach to effective discharge.
- Many organisations and bodies adhere to the importance of having a named discharge coordinator by including this recommendation in their policies and standards for practice. For example; the National Health Service has recommended in their service standards [14] that a discharge plan should contain the name of a nurse who is responsible for the discharge.

Future Directions

- This performance indicator should be considered a starting point. It forms the basis for developing more comprehensive indicators for the future.
- Consideration should be given to the best method of identifying how a discharge plan should be implemented and how the necessary exchange of information should be performed and, if possible, measured. Alternative methods to determine whether the discharge planning is well coordinated may be gained from focus groups with ward staff, patients and community care providers.
- Ideally this indicator should be collected as planned prospective data with a turnaround time of three months. This may be a future focus of organisations collecting this data.

12&

13 Source DHS Acute Health: Data for the period July-Aug 1999

Conclusion

This is a useful indicator. It consolidates existing efforts in effective discharge. There is moderate supporting evidence for the validity of this process measure. Due to the nature of processes of care indicators, the data is not immediately available from existing databases.

Recommendation—Proposed Indicator Two

Commencement of the preparation of the discharge plan: This performance indicator is ready to undergo pilot testing prior to statewide implementation.

3. Timely Notification of Community Providers

Discharge Planning Phase Category: Implementation

Rationale

Effective discharge planning needs to be a partnership between the patient, their carers, the hospital, GPs and community providers. It is important that patient care be integrated into the community to ensure that the patient's ongoing needs are met. Early assessment of the patient's post-discharge needs required from a community provider, allow the agency to more efficiently and effectively organise their limited resources. Consideration and involvement of community providers is readily agreed upon as an important component of discharge planning. The issue of timely assessment and referral has also been noted in various reports [15].

In a recent report undertaken by the Aged Services Network [16], stakeholder interviews commented on the importance of communication with community providers as an element of discharge planning. It was stated that appropriate referrals were the result of communication and involvement between the hospital and the community providers. Timely access to community providers must consider the capacity of providers to give the care required immediately following discharge. The interviews conducted as part of this report emphasise the need for hospitals to consider this issue prior to discharging patients [16].

Timely notification of community providers is deemed to be within 48 hours prior to discharge. This is supported by Harris [16] who suggests that 48 hours is the minimum time in which referrals should be made prior to discharge.

Definitions

To achieve compliance with this indicator, there is a mandatory requirement to adhere to the timeliness component and all criteria in the content component.

Timeliness Component

- Notification occurs at least two days prior to patient separation date.

Definition: Date of separation is the date of separation as collected for the VAED.

Two days prior, is the date two days prior to the date of separation.

Variation for patients with a hospital length of stay of three days or less to timeliness criterion

The timeliness criterion becomes redundant with patients who have a length of stay of three days or less, therefore notification of community providers must be completed by the day prior to discharge.
NB patients who are same day stay are excluded from this performance indicator.

Content Component

The following is the list of the relevant explicit criteria for this performance indicator. To achieve compliance with this content component, there is a mandatory requirement to adhere to all of the criteria.

If a referral contains all the content criteria stipulated then it is acceptable.

Notification of Community Providers

Definition of community providers:
Community providers are district nursing services, community nursing services, community health, HACC providers, PAC and residential care inclusive of aged residential care and community residential units.[14]

Definition of notification: Notification refers to contacting the community providers by email, fax, telephone call or face-to-face.

Documentary evidence of notification must be present if direct communication (phone or face-

14 In a recent audit of PAC services the four top service types purchased were: community nursing 29%, home care 30%, delivered meals 10% & personal care 9%, DHS acute health 2000.

to-face) with community providers occurs. It is sufficient in this instance to provide a statement including:

- The community provider (such as RDNS).
- The method of notification (for example, telephone call).
- Notification has been received by the community provider, including contact name (for example, RN Mary Smith from RDNS accepted referral from RN Jane Smythe from the HCO).

If notification is not through telephone or face-to-face communication then the documentary evidence required to fulfil the content criteria is:

- The name of the community provider.
- The method of notification.
- The demographic information that has been given. that is, the patient's name, hospital identifier and date of birth.
- The details of a nominated health professional, hospital or delegate responsible for any further information to the community provider.
- The predicted discharge date.

Definition of compliance: Compliance requires documentary evidence of a response relating to each of the elements listed. For example, if a community provider has been directly contacted and there is confirmation of receipt, then the hospital must provide documentary evidence of: (i) the community provider; (ii) the method of notification; and (iii) the notification by the HCO including contact name from the community providers. If there is no direct contact made then the hospital must provide documentary evidence of: (i) the community provider; (ii) the method of notification; and (iii) demographic information has been given. If a referral contains all the content criteria stipulated then it is acceptable.

It is important to have community provider consultation and for the hospital and the community provider to establish formal communication and referral channels that go beyond the content criteria listed in this performance indicator. However, compliance with this indicator will be confined to the stipulated minimum content criteria.

Data Requirements

The calculated rate for the performance indicator must incorporate both aspects of the indicator. Satisfactory compliance with the performance indicator requires adherence to both the timeliness and content criteria.

The information needed to determine this performance indicator rate is:
Rate: Patients for whom community providers were notified within timeliness component.
Numerator: Number of separations for whom community providers were notified within two days prior to the separation date.
Denominator: Total number of eligible separations with referral to community providers.[15]

Data Elements

Timeliness Component

- Separation Date: DDMMCCYY
- Community providers notification date: DDMMCCYY

Inclusions

All multi-day stay patients who required community providers at discharge.

- All multi-day stay patients (elective and emergency)
- Transfer to non-acute psychiatric unit (rehabilitation/continuing care/other care)
- Transfer to nursing home (unless prior residence)

15 There is a number of possible options for determining this denominator—each has its own limitations. Further information is required from pilot testing and discussion with stakeholders. A possible link with the risk screening tool should be investigated during the pilot testing.

Exclusions

Patients who did not require community providers at discharge and the following groups:

- Emergency department stay only
- Admission to intensive care unit within one day of admission to hospital
- Statistical separations
- Unqualified neonates
- Deaths
- Acute psychiatric separations
- Patients who leave against medical advice
- Patients primarily requiring ongoing chemotherapy, radiotherapy or renal dialysis
- Patient who is unwilling to participate
- Same day stay patients
- Transfer to other acute hospital/extended care/rehabilitation/geriatric centre
- Transfer to non-acute psychiatric unit (rehabilitation/continuing care/other care)

Data Sources

- Hospital patient record, manual extraction of data required from HCO medical record.
- Community providers patient health care records.

Data Sampling Period

- Each 12-month period.

Data Gathering Personnel

- Personnel who have been trained to collect this performance indicator.

Calculation of Rates

The 'community services were organised with two days notification' rate is calculated by dividing the number of separations adhering to timeliness and content criteria (numerator) by the total number of eligible separations (denominator) and multiplying the resulting quotient by 100.

Current Practice

Currently in Victoria there is a number of projects both within the acute health care setting and in the community that emphasise the importance of improving communication between community health care providers. In addition to the GPDV integration project there are the PAC services which also aim to augment the links between hospitals and other health and community providers. The *Second Effective Discharge Patient Record Audit-Final Report [10]* found a moderate level of documentation compliance for notification of community providers. This is indicative of the relevance this indicator has to current practice.

Special Comments

- This measure is applicable to a broad range of HCOs and admission types. However, a large number of patients do not require community services. Efforts towards improving patient care would be more efficient if the performance indicator focused only on patients who require these services.
- An important issue that will impact on the application of this indicator is the availability of community providers to meet the referral from the HCO. Even if the community provider receives notification that services are required two days in advance, it does not automatically secure services for the patient. There are complex multi-factorial reasons for this that is beyond the scope of this project.
- Community providers do not operate within the same hours as the hospital system that is responsive 24 hours a day, seven days a week. This disparity creates a problem with communication between the different organisations. Weekends are problematic, as often the community providers are not available.
- There is a myriad of community providers who provide a number of services. Hospitals are not always aware of how these services can be accessed or even of their existence

and role in the community. This leads to another issue of each community provider having separate referral forms dependant on the type of service required. The development of the Primary Care Partnerships will mean better coordination of services and fewer referral forms. In addition, some community providers may not require two days notice and hence the timeliness component for this indicator may not be as relevant.

- There is a distinction between patients receiving services prior to the admission (pre-existing services) and patients requiring a new referral. In many instances however, the admission will alter the service needs of the patient. If the same services are simply reinstated then the existing services may not necessarily be meeting the needs of the patient. In cases where patients have existing services it is important that the community provider is notified. This serves a dual-purpose: it prevents unnecessary resource wastage and enables the community providers to be active partners in the planning for discharge.
- Reliability check: A mechanism to ensure hospitals are conforming to this indicator could be to use the community provider record, and to link with the hospital record to crosscheck compliance.
- Defining the denominator for this indicator is problematic. A perfect denominator is unable to be determined. Some of the problems associated with defining the denominator are:
  - There is an underlying assumption that all patients requiring services are being referred, this cannot be crosschecked by the present denominator and is a limitation of this indicator.
  - As previously mentioned there is a large number of community providers that HCOs refer to. It would be difficult and not feasible to collect data from all these providers to check indicator compliance. It would be useful in the first instance to use a small defined number of community providers during the pilot testing. This would also enable a more easily interpreted denominator.
  - A patient could quite easily have more than one referral for more than one service. This complicates the calculation of the denominator.

Future Directions

- This performance indicator should be considered a starting point. It forms the basis for developing more comprehensive indicators for the future.
- Ideally this indicator should be collected as planned prospective data with a turnaround time of three months. This may be a future focus of organisations collecting this data.

Conclusion

This is a useful indicator. It consolidates existing efforts. There is substantial supporting evidence for the validity of this process measure. Due to the nature of processes of care indicators the data is not immediately available from existing databases.

Recommendation—Proposed Indicator Three

Timely notification of community providers: This performance indicator is ready to undergo pilot testing prior to statewide implementation.

Irrespective of the results of pilot testing, further work should be undertaken to determine the best approach to improve the interaction between HCOs and community provider groups.

4. Provision of a Timely and Informative Discharge Summary

Discharge Planning Phase Category: Implementation

Rationale

Another important component of implementing the discharge plan is the preparation and provision of the discharge summary to the GP. Completing a discharge summary is seen as the endpoint of documentation relating to an in-patient episode of care. The summary provides essential information to inform the GP about the patient's health status on discharge from hospital and provides information needed to manage their ongoing care [11].

The timeliness of the transfer of information affects its value to GPs. In a document circulated by the GPDV on the Minimum Requirements for the Transfer of Information between hospitals and GPs, a number of factors are considered imperative and are described in detail in this paper [17]. The headings are:

Participation by GPs: GPs through Divisions participate in the planning and implementation of admission and discharge notification specifications in hospitals.

Timeliness of Information Transfer: Admission and/or discharge notification is sent by hospitals on the day of admission or the day of discharge. If the transmission of information is impossible on weekends due to the closure of the GPs' practices, then the information is sent on the next working day.

Criterion for notification: Hospitals notify all admissions, discharges and deaths. Same day procedures are notified by either admission or discharge except ongoing routine procedures such as dialysis and chemotherapy where notification is given at the start of the course of treatment.

Definitions

To achieve compliance with this indicator, there is a mandatory requirement to adhere to the timeliness component and all criteria in the content component.

Timeliness Component

The discharge summary is dispatched to the patient's nominated GP within one day following separation.

Definition: Date of separation is the date of separation as collected for the VAED.
One day following separation is the next date following the date of separation.

Content Component

The following is the list of the relevant explicit criteria for this performance indicator. To achieve compliance with this content component, there is a mandatory requirement to adhere to all of the criteria.

The discharge summary contains information as listed below:

- Basic demographic information. This includes: (i) the patient's name, hospital identifier and date of birth; (ii) the hospital name, unit and the contact number of doctor for further information; and (iii) the GP's details.
- Relevant clinical information (the discharge diagnosis, admission and discharge dates, discharge destination, and relevant list of investigations).
- Complete list of current medication.
- Follow-up (that is, unreported pathology results, scheduled outpatient appointments, specific instructions or requests for the GP to action).

Definition of dispatch: Dispatch is the release of the discharge summary to the nominated GP by the HCO within the stipulated timeliness component. The dispatch mechanism can be by

facsimile, email, or post (either internal or external). Dispatch includes the date and the mechanism by which the discharge summary was forwarded.

Definition of compliance: Compliance requires documentary evidence relating to each of the elements listed.

Variation for small rural and remote settings

In small rural and remote settings where the GP is the visiting medical officer and the doctor responsible for ongoing care, the discharge summary is considered dispatched if the summary has been signed by the GP. That is, the discharge summary must have the same name and title of the medical practitioner who is signing the discharge summary. The discharge summary must still contain the content criteria as stipulated above. It is expected that this is kept in the hospital patient record.

Variation in the event a general practitioner is not nominated

In the situation where a patient has not nominated a GP, a discharge summary is considered dispatched if it is given to the patient.

Data Requirements

The calculated rate for the performance indicator must incorporate both aspects of the indicator. Satisfactory compliance with the performance indicator requires adherence to both the timeliness and content criteria.

The information needed to determine this performance indicator rate is:
Rate: Timely and informative provision of a discharge summary to a patient nominated GP.
Numerator: Number of separations adhering to timeliness and content criteria for the provision of a timely and informative discharge summary.
Denominator: Total number of eligible separations for the provision of a timely and informative discharge summary.

Data Elements

Timeliness Component

- Separation date: DDMMCCYY
- Discharge summary dispatch date: DDMMCCYY

Content Component

- Documentation of content criterion.
- Adherence to content criterion determined by explicit review.

Inclusions

All patients are potentially eligible.

- Same day stay patients
- All multi-day stay patients (elective and emergency)
- Transfer to nursing home

Exclusions

The following patient groups are excluded:

- Emergency department stay only
- Admission to intensive care unit within one day of admission to hospital
- Statistical separations
- Unqualified neonates
- Deaths
- Acute psychiatric separations
- Patients who leave against medical advice
- Transfer to other acute hospital/extended care/rehabilitation/geriatric centre
- Transfer to non-acute psychiatric unit (rehabilitation/continuing care/other care)
- Patients primarily requiring ongoing chemotherapy, radiotherapy or renal dialysis
- Patient who is unwilling to participate—ie does not provide consent

Data Sources

- Hospital patient record, manual extraction of data required from HCO medical record.

Data Sampling Period

- Each 12-month period.

Data Gathering Personnel

- Personnel who have been trained to collect this performance indicator.

Calculation of Rates

The provision of a timely and informative discharge summary rate is calculated by dividing the number of separations adhering to timeliness and content criteria (numerator) by the total number of eligible separations (denominator) and multiplying the resulting quotient by 100.

There are two additional rates that can be calculated: the timeliness component of the performance indicator and the content adherence component of the performance indicator.

These additional rates could be used by each HCO to identify the aspects of care that require further attention. The calculation of these rates would be left to the discretion of the individual organisations.

Current Practice

In Victoria there is a number of projects both within the acute health care setting and in the community that emphasise the importance of improving communication between GPs and hospitals, particularly admission and discharge. Recently, GPDV released a number of papers as part of a GP Hospital Integration Project. The second paper, *Minimum Requirements for the Transfer of Information between Hospitals and GPs* is a result of wide GP consultation and is particularly useful as a resource for the views of GPs on minimum requirements for discharge [9, 17–19]. In the *Second Effective Discharge Patient Record Audit—Final Report [10]*, a moderate to high level of documentation compliance was found for using a discharge summary, however only 52 per cent of records contained evidence that information was provided on the day or before the day of separation [10].

Special Comments

- This measure is applicable to a broad range of HCOs and admission types. There have been some exceptions noted which refer to the nature of patients receiving ongoing care for treatments such as chemotherapy, radiotherapy and dialysis.

Future Directions

- This performance indicator should be considered a starting point. It forms the basis for developing more comprehensive indicators for the future.
- The content can be supplemented with additional explicit criteria, such as 'legibility' of the discharge summary.
- A major issue for this indicator is data reliability—the discharge summary needs to be time/date stamped on arrival at the GP's clinic.
- Ideally this indicator should be collected as planned prospective data with a turnaround time of three months; this may be a future focus of organisations collecting this data.

Conclusion

This is a useful indicator. It consolidates existing efforts. There is substantial supporting evidence for the validity of this process measure. Due to the nature of processes of care indicators the data is not immediately available from existing databases.

Recommendation—Proposed Indicator Four

Discharge Summary: This performance indicator is ready to undergo pilot testing prior to statewide implementation.

5. Follow-Up of Discharge

Discharge Planning Phase Category: Evaluation

Rationale

There is a lack of supporting evidence in the literature on mechanisms to evaluate the effectiveness of the hospital discharge planning processes, even though it is widely considered a fundamental component of discharge planning [7, 12, 13, 20]. Generally, the involvement of the patient and carer includes the provision of information both written and verbal on the following components:

- The anticipated course of treatment and the discharge date.
- Ongoing health management.
- An appropriate post discharge contact to answer queries and address concerns.
- Medications.
- The use of aids and equipment.
- Follow-up appointments.
- Community-based service appointments.
- Possible complications and warning signs.
- When normal activities can be resumed [21].

Evaluating the patient's response to the discharge planning process is one mechanism for ensuring the phases of discharge have been completed. This would be best done once the patient has left the physical boundary of the hospital, as this would diminish the potential for bias. Furthermore, the instigation of community provider support would most likely have commenced and patients and carers would more likely be aware of their physical and social limitations.

Contact should occur with the patient three days post hospital discharge. There is support in the literature for post discharge follow-up contact by the hospital. In the model used by Naylor, the nurse specialist initiates a minimum of two telephone calls, one within the first 24–48 hours and the second within 7–10 days post discharge. The rationale for the contact is to address any questions, reinforce instructions, monitor patient and carer progress and modify the plan where appropriate [7]. Rich et al. provided follow-up treatment through telephone contact by the treatment team. The follow-up goals were similar to that of Naylor; to reinforce patient education, ensure medication compliance, and to identify recurrent symptoms amenable to outpatient treatment [20]. It is recommended that a minimum requirement of questions be considered for inclusion in evaluating the involvement of patient and carer in the discharge planning process.

Definitions

To achieve compliance with this indicator, there is a mandatory requirement to adhere to the timeliness component and all criteria in the content component.

Timeliness Component

Contact is made with the patient within 10 days following the day of separation.

Definition: Day of separation is the date of separation as collected for the VAED.

Days following separation are counted from the date of separation, that is, the day following separation is day one and so forth.

Content Component

Ideally the content criteria should address the areas over which the HCO has primary responsibility and control.

In principle the content criteria may include:

- Documentation of contact telephone number/address to follow-up patient.
- Determination of whether all the elements of the discharge plan were implemented as planned.
- Determining whether the patient requires further assistance.

Definition of contact: Documentation of the patient's response to the questions will be deemed as evidence of contact. In the situation where there is no response to the telephone call, two approaches can be considered. One would

be to make no further attempt to contact the patient and document the time and date of the telephone call. The other is for two further attempts to be made (that is, a total of three calls) before cessation.

Definition of compliance: Compliance requires documentary evidence relating to each of the elements listed.

Data Requirements

The calculated rate for the performance indicator must incorporate both aspects of the indicator. Satisfactory compliance with the performance indicator requires adherence to both the timeliness and content criteria.

The information needed to determine this performance indicator rate is:
Rate: Timely and informative contact with patient following hospital separation.
Numerator: Number of separations adhering to timeliness and content criteria for contact with patient following hospital separation.
Denominator: Total number of eligible separations for contact with patient following hospital separation.

Data Elements

Timeliness Component

- Separation date: DDMMCCYY
- Follow-up contact date DDMMCCYY

Content Component:

- Documentation of content criterion.
- Adherence to content criterion determined by explicit review.

Inclusions

- Same day stay patients
- All multi-day stay patients (elective and emergency)
- Transfer to non-acute psychiatric unit (rehabilitation/continuing care/other care)
- Transfer to other acute hospital/extended care/rehabilitation/geriatric centre
- Transfer to nursing home
- Transfer to non-acute psychiatric unit (rehabilitation/continuing care/other care)

Exclusions

All patients are potentially eligible except the following groups:

- Emergency department stay only
- Admission to intensive care unit within one day of admission to hospital
- Statistical separations
- Unqualified neonates
- Deaths
- Acute psychiatric separations
- Patients who leave against medical advice
- Patients primarily requiring ongoing chemotherapy, radiotherapy or renal dialysis
- Patient cannot be contacted: no telephone
- Patient who is unwilling to participate—ie does not provide consent to be contacted

Data Sources

- Hospital patient record, manual extraction of data required from HCO medical record.

Data Sampling Period

- Each 12-month period.

Data Gathering Personnel

- Personnel who have been trained to collect this performance indicator.

Calculation of Rates

The 'timely and informative contact with patient following hospital separation' rate is calculated by dividing the number of separations adhering to timeliness and content criteria (numerator) by the total number of eligible separations (denominator) and multiplying the resulting quotient by 100.

There are two additional rates that can be calculated: timeliness content of the performance indicator and content adherence content of the performance indicator.

These additional rates could be used by each HCO to identify the aspects of care that require further attention. The calculation of these rates would be left to the discretion of the individual organisations.

Current Practice

The follow-up on patients post discharge is a relatively new phenomenon in Victorian hospitals. The merit of this process is generally accepted, however, the logistics of accomplishing the task on a daily basis remain a major obstacle. Many HCOs are already providing a 'follow-up' service, meeting the requirements of this indicator. The organisations vary in application of the follow-up process; some hospitals are conducting it for the majority of patient types (for example, The Alfred) while other organisations do not include it as part of their discharge processes. In many day surgery institutions, patient follow-up has long been a 'standard' and is practised widely.

Regular, ongoing monitoring and reporting of patient satisfaction in key areas of service delivery in Victorian public hospitals will occur through the monitoring of patient satisfaction. It is important that current practice is considered to avoid possible duplication of indicator collection.

Special Comments

- This measure is applicable to a broad range of HCOs, however, a large number of patients do not require this type of follow-up. Efforts towards improving patient care would be more efficient if the performance indicator focused on the patients with the greatest need.
- Some other issues that require further consideration include the follow-up of patients who are deaf, have a speech disorder, suffer from dementia or patients from a non-English speaking background.
- There are additional complex issues that require examination, these relate to: (i) hospital boundaries of care; (ii) possible duplication of follow-up services, if community providers are in place this may confuse the patient; and (iii) the issue of invasion of privacy/unwanted telephone call.
- Compliance with the intent of the criteria is difficult to ascertain. The hospital should provide supporting documentation to know that the patient has been contacted and that a discussion involving the content criteria was performed.
- There is little evidence to indicate whether this strategy is cost-effective. Certainly, patients appreciate a follow-up contact but it is unclear if the contact identifies problems that the hospital can remedy.

Future Directions

- This performance indicator should be considered to be in a formative stage of development.
- The timeliness can be re-defined as performance improves aiming towards two separate contacts at day three and day ten post-discharge.
- Ideally this indicator should be collected as planned prospective data with a turnaround time of three months—this may be a future focus of organisations collecting this data.

Conclusion

The feasibility of this indicator requires clarification. It is unclear whether the benefit from this indicator is significant enough to warrant statewide implementation at this stage. Additionally there would be considerable cost implications associated with this performance indicator if it is to be implemented for every patient discharged from hospital. Further investigation needs to be undertaken to determine the patient type that would receive the most benefit from this indicator. A detailed analysis would be worthwhile to assist in determining a way forward with this particular indicator.

There is moderate supporting evidence for the

validity of this process measure. Due to the nature of processes of care indicators the data is not immediately available from existing databases.

Recommendation—Indicator Five

Follow-up of discharge plan: This performance indicator requires further investigation before pilot testing is considered. The investigation should be designed to answer the following questions:

- Is it logistically feasible?
- What are the resource requirements for HCOs to implement?
- What are the costs and benefits of this process of care?

Implementation of Performance Indicators

This section presents some discussion on a number of implementation issues that have been explored. These are significant issues regarding the application of the performance indicators in practice. In particular, how the performance indicators may improve patient care, how to collect the data, how to ensure data reliability and how to minimise the burden of collection.

It is pointless having the ideal performance indicator if the data cannot be collected in an accurate and realistic manner. The frequency of reporting the performance indicators, the presentation of the results, and a mechanism to review the impact of the data reporting and interpretation on practice within the HCOs need careful consideration. Finally, a mechanism is required to evaluate whether the performance indicator delivers the stated objectives.

Role of Performance Indicators

The performance indicators are intended for all public HCOs in Victoria. The use of performance indicators provides stimulus for improving patient care through the following mechanisms: staff education, routine review of performance, financial rewards to the organisation or other external influences.

- The intent of these performance indicators is to provide another tool to reflect on current practice and improve discharge practice. The performance indicators must be viewed in the context of: Integration of the performance indicators into the global strategy for providing an effective discharge.
- Recognition that performance indicators are one aspect of evaluating the patient care provided by HCOs.

Performance Indicators and the Global Strategy for Effective Discharge

Performance indicators are one component of an overall strategy to improve patient care. Structural changes and specific projects directed towards improving patient care are numerous and exist in most HCOs. Some brief descriptions of the types of projects and their aims highlight the environment in which these indicators will be integrated.

Health services, hospitals, sub-acute services and MPS developed discharge improvement plans as part of the Effective Discharge Strategy. The discharge improvement plans aim to improve current discharge processes and practices and constitute a significant part of the strategy.

In 1998–99, initiatives such as the GP/Hospital Integration Project conducted by GPDV was introduced. This project aimed to increase communication between GPs and hospitals and related specifically to admission and discharge requirements. The development of a statewide GP database, which is currently being piloted, is another example of a more global strategy for effective discharge.

The expansion of the PAC services to statewide coverage supports the Effective Discharge Strategy by providing additional opportunity for patients discharged from acute public hospitals for post acute services.

There are methods that may improve the interaction between HCOs and community providers other than the proposed performance indicator. These methods focus on inter-sector collaboration and integration of community providers within the hospital processes. The construction of the Metropolitan Health Services Boards and the Primary Care Partnerships will provide opportunity through the Primary Care and Population Health and Community Advisory Committees to enable inter-sector collaboration to be managed in a formalised way.

Finally, the performance indicators cannot possibly cover the unique circumstances required for each individual patient. The performance indicators have been specifically designed to be as non-prescriptive as possible, and to allow considerable flexibility for each HCO to tailor their discharge processes to the needs of their patients.

Performance Indicators as a Suite or Individually

The indicators have been selected to represent the different phases of effective discharge. Ideally, the performance indicators would complement each other and the suite of performance indicators would complement existing quality activities. The performance indicators would not only monitor performance but also educate health professionals about effective discharge practice. The suite would reinforce what constitutes effective discharge practice. The use of a single indicator is reflective of one phase of effective discharge, the use of two or more indicators would represent a more complete reflection.

The indicators recommended for the next phase cover the majority of patient groups and situations. Some of the indicators recommended are more relevant to patient sub-groups, for example indicator number three 'timely notification of community service' is only relevant for those patients that require community services post discharge. The majority of patients have been accounted for by indicators one, 'timely and informative risk screening', two 'commencement of preparation of a discharge plan' and four 'provision of a timely and informative discharge summary'. These indicators also reflect three out of the four phases of discharge planning covering assessment, planning and implementation.

Performance Indicators Are One Aspect of Evaluating Patient Care

The performance indicators can assist health care providers by providing a focus on some of the key processes to improve patient care and to identify some of the critical links between the stakeholders. The performance indicators are designed to reflect one aspect of a HCO's overall approach to providing an effective discharge.

These performance indicators should not be used in isolation, instead the information from these indicators should be complemented with surveys of patient experience and other types of information about quality of care available to clinical staff and HCOs.

There are surrogate outcome measures, such as patient satisfaction, community provider satisfaction and GP satisfaction, which provide valuable information to individual HCOs. The Department of Human Services 'Patient Monitor' is an instrument that can be used to provide information about quality of care. The Patient Monitor survey has a specific set of questions relating to effective discharge. Similarly, hospital accreditation surveys and local initiatives undertaken by individual HCOs are other common sources of quality information.

Recommendation—Monitoring of Patient Satisfaction

These performance indicators should be used to complement existing performance measures such as the monitoring of patient satisfaction.

These performance indicators will raise just as many questions as they do answers about effective discharge strategies and the links between the different stakeholders. The data from the performance indicators provide an opportunity to negotiate and discuss some of the underlying resource issues and inter-sector interactions.

Recommendation—Indicators in Context

These performance indicators should be considered as one component of a global strategy to improve effective discharge practice in Victoria.

Attention should be given to determine the relative merits of HCO performance based on the different components within the global strategy, and the performance of HCOs should not be judged solely on these performance indicators.

An important component of any quality measurement using these performance indicators is the establishment of a forum or an alternative mechanism to ensure the indicators are meeting their intended purpose to improve patient care.

Recommendation—Indicator Review

These performance indicators should undergo regular annual review by a group representative of the key stakeholders to determine:

- If the performance indicators are achieving their primary purpose—that is, improving patient care.
- If the performance indicators require modification to ensure they remain relevant and acceptable for the next data collection cycle.
- If the HCO groupings used in the benchmarking process are appropriate.

Data Collection

A number of different possibilities exist for data collection. Ideally, data gathering should be specific, planned and prospective with audits to verify the accuracy and reliability of data. This allows for collection of the most appropriate information in a standardised format and reduces the common problem of missing data. The prospective data collection system could be either paper or electronically based. Ideally, the performance indicators should be obtained from planned prospective collection of the necessary data.

Recommendation—Data Collection

The data collection methods and the collected data should be regularly audited to ensure the reliability and validity of the data.

The use of an existing data gathering mechanism would both limit the burden of collection and be financially feasible. At present these process of care performance indicators cannot be easily or efficiently extracted from existing administrative databases. There is a number of options available for the data collection including the use of the medical record or real time data collection which refers to entering the data at the point of completing the process, that is, entering the response to the risk screen on admission. When viewing these two mechanisms it becomes clear that using the medical record as the primary source of information regarding the hospitalisation of a patient is usually unavoidable. There are few readily available suitable alternatives. However, some aspects of care are not possible to document (such as interpersonal interactions).

The point of collection remains a major issue. The data collection point will influence the type of performance measures that can be used for two reasons. The different data collection points influence the type of data available and the reliability of the data. The three major data collection points are:

- The patient and/or their carer
- The HCO
- Community providers.

The HCO is probably the most conveniently situated data collection point to gather information from the patient, community services and itself. Ideally, the different data collection points should be used to complement and crosscheck each other.

Two further options need to be considered and that is whether the HCO collects the data internally or whether an external organisation is used. This raises a number of additional issues; firstly the cost implications of these two

methods vary significantly. The external data collection would be a yearly event and would be less expensive than hospitals collecting their own data.

An alternative is that hospitals collect their own data. The advantage is that hospitals can use the information for assessing their own quality improvement practices. There are cost limitations, as it would be resource intensive to set up systems within each HCO to enable this information to be collected.

Regardless of the system used to gather the data, a method to check the reliability of the data is mandatory. The majority of reputable performance measurement programs mandate reliability checks of their data collection systems. This becomes even more vital if valid comparisons are to be made between HCOs.

A balance is required between the following factors related to the reporting of any performance indicator: comprehensiveness, frequency of reporting, timeliness and ensuring relevance to clinicians and institution.

Data analyses and reporting the results of the performance measures would begin as an annual event.

If the data is to be collected by an external organisation then the data should be made available to the HCO before public release and before any action is to be taken. The interpretation of the data by HCOs should lead to specific recommendations to improve care.

If participation to institute these performance indicators is mandated throughout Victoria, the logistical burden of data collection, analyses and interpretation need to be overcome. The amount of data collection required can be simply reduced by sampling hospital patients.

Recommendation—Data collection and Reporting
The medical record is the primary data source.
Data collection is undertaken by personnel trained to collect the performance indicator using explicit review.
Random external auditing of the data collection is undertaken to ensure reliability.
Reporting of performance occurs annually.

A mechanism to review the impact of the performance indicator data reporting and interpretation on practice within the HCO is desirable. Another mechanism is required to evaluate whether the performance indicators delivered the stated objectives. This is important to ensure that the performance indicators remain relevant. A performance indicator may become irrelevant because of changes in clinical practice or changes in the needs of the stakeholders.

Data Interpretation

There is a number of complex considerations when attempting to interpret the data from a suite of performance indicators. Achieving valid and reliable data collection and interpretation requires rigorous application of measurement issues. These techniques are often co-dependant and each one needs to be considered in light of its counterpart. Issues that need to be explored are: hospital categorisation, benchmarking performance, and the scoring and weighting of the indicators. This section will explore these issues and provide some insights into the main concepts and possible application for the interpretation of these indicators.

It is important to trial these indicators in the field to identify any limitations or potential improvements before broader application. The pilot testing includes data collection, analysis and interpretation. All of these stages must be completed as each has different and specific implications.

Hospital Categories

To achieve valid comparisons between HCOs, a method to identify and classify the different organisations is required. This classification system would ideally group HCOs to account for all the different variables that influence an effective discharge that are not related to the quality of care. Currently in Australia there is no single classification or grouping system that has been universally accepted. The classification of HCOs has changed significantly during the 1990s in Victoria.

Comparisons between HCOs may be more reliable if there is further stratification within each tier. The additional stratification would be based on selected characteristics of the different patient groups. The patient groups could be divided according to admission source, the admission type, the patient complexity and clinical condition.

Attention needs to be given to comparing hospitals that do not have a peer organisation within Victoria that would enable a valid comparison. These are discussed in the next section. Stratification of patient populations provides a relatively simple means of attempting to correct for patient differences impacting on process indicator data [22]. Stratification usually requires a greater volume of data collection and a more strategic approach to the data collection method, this invariably makes it more costly to collect.

The classification system recently used by the Department of Human Services for both patient record audits on discharge planning is probably an adequate start for the needs of the proposed performance indicators [1].

Rankings of the performance of the hospitals were compared with like hospitals. The ranking was determined by comparing performance in the following categories. The categories are based on institution type and the number of separations.

Metropolitan Hospitals

Metro 1 Tertiary and specialist hospitals
Metro 2 Metropolitan community hospitals with greater than 20,000 separations
Metro 3 Small metropolitan community hospitals with less than or equal to 20,000 separations

Rural Hospitals

Rural 1 Regional referral hospitals with greater than 20,000 separations
Rural 2 Base and sub-regional hospitals with 4,000–20,000 separations
Rural 3 District hospitals with 1,000–3,999 separations
Rural 4 Small rural hospitals with less than 1,000 separations

Sub Acute Services

Multi Purpose Services

Any inter-hospital comparison of performance will require clarification of peer groups.

Recommendation—Data Interpretation

The HCO groupings[16] used by the Effective Discharge Patient Record audits should be considered as a starting point for comparisons between organisations.

Specialist HCOs

In Victoria there are a number of specialist hospitals that do not have a peer equivalent with which to compare performance. Examples of hospitals within this category are The Royal Victorian Eye and Ear Hospital, The Royal Children's Hospital and Peter MacCallum Cancer Institute. These hospitals need to be considered on an individual basis as each organisation addresses different and specific clinical areas.

16 Refers to the groupings used for the Effective Discharge Patient Record Audit [1]

There is a number of options available for comparing performance within the specialist hospital category. These include:

- Internal comparison.
- Interstate comparison.
- International comparison.

Internal comparison involves the organisation analysing and comparing their own performance from one year to the next. Another option may be to look to other States within Australia for similar specialist organisations and patient mix and use these hospitals as a comparative partner. International comparisons may also be used in a similar way. A serious limitation would be that the interstate and international hospitals would not be likely to be collecting the same indicator information and thus a valid comparison would be difficult to achieve.

Although all three options have some limitations it is recommended that the first option of hospital comparison between annual performance is probably the best available method at this particular time.

Recommendation—Data Interpretation Specialist Hospital Groupings

The Royal Victorian Eye and Ear Hospital, Peter MacCallum Cancer Institute and The Royal Children's Hospital should be considered on an individual basis.

The individual HCOs in consultation with the Department of Human Services should develop objectives regarding performance.

Benchmarking

Benchmarking is described as:

> the systematic process of searching for best practices, innovative ideas and highly effective operating procedures that lead to superior performance [23].

Benchmarking has been developed in the industrial sector, however, the principles can be translated to the health sector. It involves searching for best practice and identifying effective operating procedures that lead to improving performance. Valid, reliable and standardised performance measurement is fundamental to the benchmarking process.

It has been well documented within the Australian and New Zealand manufacturing industry that benchmarking as a concept is not well understood and that industries fail to translate newly acquired knowledge and insights into improving and informing best practice [24]. A mechanism to promote inter-hospital education would be useful in identifying and sharing the processes of effective discharge that achieve high performance.

Levels of Benchmarking

Benchmarking typically comprises five basic phases. The five phases are:

- Phase One—Benchmark Preparation

In which the following are determined: 'What to benchmark?' and 'Who or what to benchmark against?' The proposed process of care indicators would be used to benchmark the performance of the various HCOs in effective discharge.

The range of options for 'whom to benchmark against' includes; each HCO could compare their performance with a HCO that provides a similar service, or a HCO could compare their own performance over different time periods. Collecting the performance measures about patients who have similar care needs could refine this process of benchmarking.

The issue for 'what to benchmark against' is more problematic. A valid and reliable method of judging performance based on a minimum standard of practice or by the ranking of HCO is not currently possible. If this approach is to be considered, additional development is required for the performance measures and the methods of data collection.

- Phase Two—Comparison of results with benchmarking partners

This phase requires the activities of the HCO to be compared with other HCOs. For this to succeed there should be standardisation of data collection with external auditing to ensure data reliability, otherwise time and effort is spent translating how the different definitions in the performance measures and data collection methods effect the comparison between organisations.

- Phase Three—Investigation

This involves the identification of practices and processes that result in superior performance. This can vary from a simple discussion to a formal on-site placement.

- Phase Four—Implementation

This involves adapting or modifying practice towards best practice.

- Phase Five—Evaluation

The new practices are monitored to ensure continuous improvement and, if necessary, the whole cycle is repeated.

Benchmarking in the health sector requires consideration of a number of factors:

- Measures in place may not be the same as those used by benchmarking partners.
- The measurement of health care quality is multi-dimensional and can relate to more than one aspect of care. Further, some aspects of care do not occur during a hospital stay (this is particularly relevant for discharge planning).
- There are few precedents in Australia for setting desired performance levels.
- Political, psychological and sociological factors associated with an organisation not achieving benchmark performance levels.
- The difficulty in defining and measuring the art and science of performance in a health care setting.
- Table 1 provides some examples of the benchmarking levels and has included some health care organisational examples for inclusion.

Table 1: Levels of Benchmarking (adapted from Bogon, 1995.[23])

	Level	Manufacturing Example	Health Example
Simple ↑ **Higher level Benchmarking** ↓ **Complex**	Ad hoc observations of competitors' products	Attend trade shows Chance field observations	Health forums e.g. Discharge Planning Statewide Conference
	Comparison against previous budgeted performance of site	Year–on–year comparison of defect rates	Internal comparison of readmission rates
	Comparison against other business units or divisions within company	Frozen food site compares with sister food site in another state	Comparison of discharge planning protocols amongst different wards
	Detailed comparison against parent, associates, competitors in like industries	Motor vehicle plant compares key performance indicators to parent plant	Comparison of discharge planning protocols with (HCO) policy and procedure manual
	Detailed comparison of processes and outcomes against world's best, whether within or outside the industry	Metal manufacturer compares inventory system to leading retail chain	HCO compares risk management system with that of an airline

A benchmarking group with representatives of stakeholders within each hospital category may be an ideal forum to share and discuss mechanisms and opportunity for improvement. This group may be voluntary and work on the notion of sharing best practice between like organisations.

Benchmarking as a Quality Tool

Current techniques for encouraging quality improvement mandate a non-punitive approach, with the focus of improvements on the point of care rather than mandatory compliance. A benchmark performance level, on a process indicator, should be viewed as a tool to improve performance, rather than identifying the provider as a poor performer in relation to the indicator [25].

Benchmarking needs to be used to make the transition from measurement of performance to performance improvement. Many quality improvement projects use data in the forms of benchmarks and averages to assist in this transition and to facilitate change. According to Kiefe et al. [26] there are a number of key criteria for establishing sound benchmarks:

- Benchmark levels should represent a level of excellence, for example, benchmark levels should always exceed mean performance.
- Benchmark levels should be attainable, that is, clinically realistic, for example, if data-driven methodology leads to a benchmark level on a given indicator which corresponds to perfect performance, consideration should be given to the indicator becoming a more rigid standard rather than a flexible guideline.
- Providers with high performance should be selected from providers in a predefined statistically and clinically sound way.
- All providers with high performance on a process of care indicator should contribute to the benchmark level for that indicator. The benchmark level should reflect best practice and provide a catalyst for motivation.
- Providers with high process-of-care indicator performance but small numbers of cases should not unduly influence the level of the benchmark (although even small number providers should contribute to the benchmark, if they exhibit high performance) [26].

The first two criteria described are extremely important to ensure that benchmarking will encourage continuous quality improvement. The other criteria described are important to ensure the validity and objectivity of the benchmark. These criteria assume that the indicator data is being collected and will be more relevant in the pilot-testing phase of these indicators. It is, however, important that the criteria detailed are addressed.

As mentioned, the benchmarking of process indicator data is a tool to improve the quality of provider performance. If providers were ranked with significant tangible consequences (for example penalties for low performance), addressing potential random variation would be important. Attempts to apply a rigorous statistical method often conclude that meaningful ranking is extremely difficult [25, 26]. Benchmarking between hospitals of similar patient mix may be useful in identifying successful strategies for improving care. However, differences in the indicator rates should be interpreted with caution.

Should the indicators be implemented for statewide collection, the application of benchmarking techniques for this suite of indicators needs consideration from the stakeholders. It is recommended that a specific group be formed to review the data collected and to comment before the data is publicly released or acted upon. This group may also act as an advisory group to make recommendations about how the data could serve within the organisation. This would allow appropriate internal feedback and facilitate practice change. These strategies highlight the importance of the effects indicator

implementation will have on the health care system. The process of what to do with the data once collected and how to distribute it will need careful management.

Recommendation— Data Interpretation

A forum of benchmarking partners be established between the stakeholders.

The rates reported for the performance indicators should be interpreted within the limitations of the data collection methods. Ideally consensus guidelines should be developed between the key stakeholders regarding the accepted use and limitations of the performance indicator data.

Scoring/Weighting Criteria of the Indicators

The complex issue of determining a weighting/scoring criteria for the indicators involves a multitude of factors. There are an infinite number of scoring/weighting methodologies and it would not be feasible to examine each one in detail.

This section, however, will highlight some of the concepts of scoring and weighting in respect to the proposed suite of indicators and will use examples to illustrate the concepts.

While some of the options are able to be presented and commented on it will not be clear at this stage which will provide the best interpretation. Pilot testing the indicators will provide the best blueprint for ensuring the data interpretation methods meet the needs of the HCOs, the Department of Human Services and the public.

Some of the complexities of weighting and scoring performance data are highlighted in the following examples.

In determining a weighting or scoring method for the indicator, a number of aspects need to be considered:

- The individual indicator, for example 'Risk Screen'.
- The timeliness and content component of the indicator, for example 'timeliness is within one day, content is adherence to content criteria'.
- The sub-component of the timeliness and content of the indicator, for example 'the Thomas and Associates four minimum questions (content component)'.

Each of these components—the individual indicator, the timeliness and content component of the indicator, or the sub-component of the timeliness and content component of the indicator—could be weighted and or scored. The question to determine which one is to be weighted/scored more heavily than the other requires careful consideration. Determining the scoring and weighting is best done with a combination of actual data and expert opinion.

Scoring enables a score to be attached to reflect the importance of each component. Scoring is useful for presenting aggregated data as it can be easily represented. Scoring can be equally weighted or could have unequal weighting. For example, the four minimum questions by Thomas & Associates [8] could see the question 'is the patient likely to have self care problems?' scored as two and the question 'does the patient live alone?' scored as one.

There are options or variations in the way in which weighting/scoring may proceed, for example, the weighting of the indicators could change each year. For year one, the emphasis may be on the first indicator (risk screening) and it is weighted at 50 per cent for year one, 25 per cent for year two, and so on. The second indicator is weighted at 25 per cent for year one and 50 per cent for year two. This is repeated for all the indicators with a different weighting depending on the year. The effect this has on the indicators is unclear, however, it may be that the indicator is only viewed individually depending on the relative emphasis. The danger is when the emphasis changes then so too does the importance of the indicator in the HCO. This type of weighting also hampers the

interpretation of annual trends in performance.

What has not been considered is that this example relates to the entire indicator, the timeliness and content component and the sub-components of the timeliness and content have not yet been weighted.

Variation for different hospitals is another factor. Do all the indicators have the same relevance to all the HCOs? For example, the first indicator, risk screening, may not be as important in sub acute services as the second indicator about preparation of the discharge plan, as patients are usually considered 'at risk' simply by admission to a sub acute facility. Conversely, the first indicator, risk screening, may be the most important indicator in an acute setting to inform the rest of the discharge planning processes. Therefore, to weight these indicators according to hospital type is also relevant and worthy of careful consideration.

As demonstrated there are multiple factors to consider when deciding the best mechanism to weight indicators, perhaps the most important factor is the presentation of the data and how this is to be interpreted by the stakeholders.

The stakeholders for whom the data on performance measures are relevant to are the HCOs, the Department of Human Services, and consumers/general public. The presentation of data to these groups needs to be considered. The common element that must remain consistent is that stakeholders understand the information presented to them, and that the information is valid and reliable.

The data could be presented in a number of ways depending on who the data is to be released to.

HCOs: A recent review [27] in HCOs that have been exposed to publication of performance data produced a mixed response to the use of the information. Some organisations have used the data for benchmarking, to promote collaboration across sectors and for internal monitoring, while some organisations have criticised the validity of the data and the resource implications to act upon it [27].

The HCOs would benefit from receiving both raw and summary data. It would be important that the HCOs receive data on an individual indicator level, this would 'flag' the area which is performing well and identify the area which may need more attention.

The funder: From the perspective of the health funder, the data may be about ensuring accountability of the provider organisations, and as a mechanism to promote quality improvement by informing purchasers or encouraging providers to focus on quality problems [27]. Ideally the use of aggregate data to view the performance of hospitals as a whole would enable a statewide 'snapshot' of hospital performance on effective discharge.

The consumer: There is growing evidence that consumers want more information about health care provider performance. However, it is also suggested that this information has limited impact on consumer decision making [27]. Some of the reasons why consumers don't use performance data is the difficulty in understanding the information, disinterest in the nature of the information and lack of trust in the data [27].

Data presented for the intended use by consumers or the general public would ideally be aggregated summary data, in plain language statements. An advantage of this type of data presentation is simplicity, both for reading and understanding. Potential disadvantages may be that summary data does not truly reflect the performance of the HCO processes on effective discharge.

Education of the stakeholders to interpret the performance indicator data would be valuable for maximising the effect of the performance indicators. A number of clinical indicator programs internationally, for example the Cleveland Quality Choice Program and the

MHA Quality Indicator Program [28], advocate the release of indicator reports once the provider has attended an educational program by qualified professionals in data interpretation.

Due to the complexities and implications of scoring and weighting and the release of performance data, the project team advocate for the involvement of a multidisciplinary team (that is, clinician, administrator, bio-statistician and epidemiologist) to assist in advising on the best methods for presenting the data. This phase should be conducted during the pilot testing of the indicators.

Recommendation— Data Interpretation

A multidisciplinary team is involved in determining how to represent and interpret the performance indicator data.

Education of stakeholders to interpret the data reports accurately.

It is difficult to separate the application of 'bonus funding' which has been used in both the recent Department of Human Services Effective Discharge Patient Record Audits and hospital groupings and benchmarking, as they are inextricably linked. For the purpose of this report the concepts of benchmarking and hospital groupings have been presented. The financial incentives for meeting a specific level of performance have not been part of this project brief.

The demand for accountability by health care providers must be balanced by responsible evaluation to ensure valid conclusions. Conclusions should be drawn from data that take into account bias, confounding and statistical power. This ensures greater data accuracy and enables valid comparisons and recommendations to be made [26].

The Way Forward

The presentation of the following recommendations concludes this phase of the project and achieves the objectives as set out in the tender document. This section presents a clear way forward that identifies the developed performance indicators for effective discharge and recommends the selected performance indicators to proceed to the next phase.

The following performance indicators are recommended to proceed to pilot testing:

1. Provision of Timely and Informative Risk Screening

Recommendation—Proposed Indicator One

Risk Screening: This performance indicator is ready to undergo pilot testing prior to statewide implementation.

2. Commencement of Preparation of the Discharge Plan

Recommendation—Proposed Indicator Two

Commencement of the preparation of the discharge plan: This performance indicator is ready to undergo pilot testing prior to statewide implementation.

3. Timely Notification of Community Providers

This performance indicator requires specific attention during the pilot phase to determine the best method for application of this indicator.

Recommendation—Proposed Indicator Three

Timely notification of community providers: This performance indicator is ready to undergo pilot testing prior to statewide implementation.

Irrespective of the results of pilot testing further work should be undertaken to determine the best approach to improve the interaction between HCOs and community provider groups.

4. Provision of a Timely and Informative Discharge Summary

Recommendation—Proposed Indicator Four

Discharge Summary: This performance indicator is ready to undergo pilot testing prior to statewide implementation.

5. Follow-up of the Discharge Plan

This indicator requires additional investigation. The next phase for evaluating this indicator can be broken down into a number of stages. The proposed stages are:

- An initial costing exercise.
- Further research.
- The indicator is ready for pilot testing.

Recommendation—Proposed Indicator Five

Follow up of the discharge plan: This performance indicator requires further investigation before pilot testing is considered. The investigation should be designed to answer the following questions:

- Is it logistically feasible?
- What are the resource requirements for a HCO to implement?
- What are the costs and benefits of this process of care?

The pilot-testing phase is vital for informing the issues regarding implementation of the indicators. The range of implementation issues have been discussed in the earlier section and the results of the pilot-testing will determine the best specific mechanisms for implementing the indicators on a statewide level.

The task of improving patient care is the responsibility of all stakeholders. This document focuses on the role of the HCOs that have the responsibility for data collection and changing practice. However, community providers need to be able to receive information when hospitals transmit it. The development of a central register of GPs (currently being piloted) and community providers would assist in monitoring patient care but this is beyond the scope of the HCO.

A final note of caution about what these performance indicators cannot do. These performance indicators cannot be solely responsible for improving patient care in isolation; nor can the performance indicators be comprehensive in every aspect of care for every stakeholder at every institution.

The performance measures are intended to direct the attention of health providers to important aspects of care, however, one may satisfy the stated criteria of the performance indicators without ensuring compliance with the spirit of the indicator.

The evaluation of a HCO's discharge strategy requires input from all participants—patients, carers, families, GPs, community providers, and hospital clinical and administrative staff.

Evaluating quality of care requires multiple complementary approaches. Performance measurement is only one aspect of a more comprehensive approach. This includes qualitative as well as quantitative data. Through the use of focus groups, and surveys of patients' experiences a more comprehensive understanding of quality of care is achieved. This is an enormous challenge and overlaps with other existing quality improvement initiatives.

Bibliography

Department of Human Services, *Effective Discharge Patient Record Audit—Final Report*, 1999, Melbourne.

Collopy B, et al., *Acute Health Clinical Indicator Project. Volume 1*, 1999, Department of Human Services, Victoria: Melbourne.

Palmer, H., 'Using health outcomes data to compare plans, networks and providers'. *International Journal for Quality in Health Care*, 1998. 10(6): p. 477–483.

Mant, J. and N. Hicks, 'Detecting differences in quality of care: the sensitivity of measures of process and outcome in treating acute myocardial infarction' [see comments]. *BMJ*, 1995. 311(7008): p. 793–6.

Department of Human Services, *Acute Health Performance Indicators: Strategy for Victoria A Discussion Paper*, 1997, Acute Health Division, Victoria, Melbourne.

Evans, R.L. and R.D. Hendricks, 'Evaluating hospital discharge planning: a randomized clinical trial'. *Medical Care*, 1993. 31(4): p. 358–70.

Naylor, M., et al., 'Comprehensive discharge planning for the hospitalized elderly. A randomized Clinical Trial'. *Annals of Internal Medicine*, 1994. 120(12): p. 999–1006.

Thomas, S., *Final Report to the Development of a Risk Screening Tool for Service Needs Following Discharge from Acute Care Project*, 1998, Department of Human Services, Victoria, Melbourne.

AIHW, *National Health Data Dictionary Version 8.0*, 1999, Australian Institute of Health and Welfare. Australian Government Printing Service: Canberra.

Department of Human Services, *Second Effective Discharge Patient Record Audit—Final Report*, 2000, Victoria, Melbourne.

NDHP, National Demonstration Hospital Program. *Managing Beds Better; Balancing Supply and Demand. The NDHP–2 Experience July 1997–1998*, 1999, Commonwealth Department of Health and Aged Care, Canberra.

Martin, F., A. Oyewole, and A. Moloney, 'A randomized controlled trial of a high support hospital discharge team'. *Age & Ageing*, 1994. 23(3): p. 228–34.

Naylor, M.D., et al., 'Comprehensive discharge planning and home follow-up of hospitalized elders' *Journal of the American Medical Association*, 1999. 281(7): p. 613–20.

Savage, M., *Service Standards for Discharging Patients from Acute General Hospitals*, 2000, National Health Service.

Kearney, J., *Removing the Boundaries: Hospital Discharge Practices and Older People Returning to the Community*, 1994, Council on The Ageing: Melbourne.

Harris, D., 1999, *The Aged Services Network,* Melbourne. PUBLISHER?

General Practice Divisions Victoria, 'Minimum Requirements for the Transfer of Information between Hospitals and General Practitioners', in *Integration Project Paper No 2*. 1999, Victoria.

General Practice Divisions Victoria, 'Audit of Current Practice' in *Integration Project Paper No 1*. 1999, Victoria.

General Practice Divisions Victoria, 'Development of a Statewide Database' in *Integration Project Paper No 3.* 1999, Victoria.

Rich, M.W., et al., 'A multidisciplinary intervention to prevent the readmission of elderly patients with congestive heart failure' [see comments]. New England *Journal of Medicine*, 1995. 333(18): p. 1190–95.

Department of Human Services, *Effective Discharge Strategy Background Paper: A Framework for Effective Discharge*, 1998, Melbourne.

Boyce, N., et al., *Quality and Outcome Indicators for Acute Healthcare Services. National Hospital Outcomes Program*, 1997, Commonwealth Department of Health and Family Services, Canberra.

Bogon, C. and M. Engli, *Benchmarking for Best Practice: Winning through Innovative Adaptation*, 1995, McGraw Hill.

AMC, *Leading the Way: A Study of Best Manufacturing Practices in Australia and New Zealand*, 1994, Australian Manufacturing Council: Melbourne.

Weissman, N., et al., 'Achievable benchmarks of care: the ABCs of benchmarking' *Journal of Evaluation in Clinical Practice*, 1999. 5(3): p. 269–81.

Kiefe, C., et al., 'Identifying achievable benchmarks of care: concepts and methodology' *International Journal for Quality in Health Care*, 1998. 10(5): p. 443–47.

Gibberd, R., 'The Public Release of Performance Data. What do we expect to Gain? A review of the Evidence' *Journal of the American Medical Association*, 2000. 283(14): p. 1866–84.

28. MHA-UK, *Maryland Hospital Association Quality Indicator Project.* 1999.

Appendix 1: List of Formal[17] Submissions

Surname	First Name	Position Title	Organisation
Barrie	Carolyn	EDS Project Officer	Grampians Region
Begg	Meg	MECWA Redicare	Victorian Association of Health and Extended Care-Policy Group
Bosco	Helen	Carer Support Worker	Carer Links West
Breckon	Maggie	Project Coordinator	Angliss Health Service
Callister	Val	Chief Executive Officer	Latrobe Community Health Services Inc
Coleman	Leonie	Co-Care Gippsland	Victorian Association of Health and Extended Care-Policy Group
Currie	Rob	Executive Director	North East Valley Division of General Practice
Delahunty	M.B	Chief Executive	Stawell District Hospital
Desmond	Paul	Medical Director	St Vincent's Hospital
Dowell	Cynthia	Clinical Director	St Vincent's Hospital
D'Rozario	Sharon		Victorian Association of Health and Extended Care-Policy Group
Dunn	Moira		Cohuna District Hospital
Elsworthy	R.	Chief Executive	East Grampians Health Service
Evans	Barbara	Clinical Services Manager	Latrobe Community Health Services Inc
Fabry	Yvonne	Quality Coordinator	Kerang & District Hospital
Frew	Craig	Unit Manager	Kerang & District Hospital
Hall	Trish	EDS Project Officer	Royal Victorian Eye & Ear Hospital
Hargreaves	Clare	Senior Policy Advisor	Municipal Association of Victoria
Hastie	Anne	EDS Project Officer	North Western Health Aged Care and Rehabilitation Business Unit
Hauser	Margaret	Chairman	Hume Region Effective Discharge Advisory Committee
Hayes	Barbara	Palliative Care Consultant	North Western Health
Hearn	Fiona	General Manager/ DON (Nth & West region)	Royal District Nursing Service
Hills	Sandra	City of Whitehorse	Victorian Association of Health and Extended Care-Policy Group
Houghton	Liza	EDS Project Officer	Royal Melbourne Hospital
Hughes	Allan	Chief Executive Officer	Ballarat Health Services
Keetelaar	Deanne	EDS Project Officer	Bendigo Health Care Group
Kelly	Neville	Manager PAC Program	Peninsula Health Care Network
Laverick	Janet	Uniting Church Community Options	Victorian Association of Health and Extended Care-Policy Group
Massuger	Wayne	EDS Project Officer	Peter MacCallum Cancer Institute
Mayberry	Moira	Villa Maria Society	Victorian Association of Health and Extended Care-Policy Group
McFarlane	Janelle	Nurse Unit Manager	Werribee Mercy
Nankervis	Julie	Policy Unit	Carers Association Victoria
Selvedge	Jannie	EDS Project Officer	Barwon Health
Siegloff	Lesley	Director of Nursing & Community Services	Inglewood & Districts Health Service
Sloan	Peter	Director of Clinical Services (Medical)	Box Hill Hospital
Warton	Bruce	Director of Medical Services	Western District Health Services
Webster	Jennie	Health Information Manager	Kerang & District Hospital
Williams	Jennifer	Chief Executive Officer	Austin & Repatriation Medical Centre
Williams	John		South Gippsland Division of General Practice

17 The term 'formal submissions' relates to the receipt of a written letter addressed to the project team in response to the discussion document or the workshops.

Notes

Notes