Centre for Clinical Effectiveness
Clinicians, Consumers, Evidence

Sustainability in Healthcare by Allocating Resources Effectively (SHARE)

Evaluation and Research Plan

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Evaluation and Research Plan for Sustainability in Healthcare by Allocating Resources Effectively (SHARE) Program

This plan outlines the design of the SHARE program and the questions and methods used to evaluate it. Also included are the principles underlying the evaluation, the scope, key audiences, and the link between evaluation and research.

What is SHARE?

SHARE, an acronym that stands for 'Sustainability in Healthcare by Allocating Resources Effectively', is designed to develop and implement rigorous processes for the assessment of new and existing health technologies and clinical practices (TCPs) within Southern Health. SHARE will support Southern Health decision makers to use research evidence and local data to make decisions about TCPs. Systematic evaluation will assess the rigour and quality of all processes. (All projects and services will be systematically evaluated.)

Strategies to restrict or remove TCPs shown to be ineffective, harmful or inefficient are called 'disinvestment' strategies. However, there is limited practical information on 'disinvestment' activities within a health service and many issues must be addressed before systems and processes for 'disinvestment' can be introduced widely across Victorian health services. SHARE will use an integrated strategy of research and evaluation to answer key 'disinvestment' questions with a plan to disseminate findings to other health services and government departments.

Sufficient skills and resources do not currently exist within Southern Health to enable evidence-based decision-making or change implementation. Gaps have also been identified in the systems and process of governance of decision-making. SHARE will work to fill this gap by developing, piloting, implementing and evaluating methods to support evidence-driven change and will provide information on costs and resource requirements for ongoing service delivery and support.

The SHARE program has several components designed to increase evidence-based decision-making within Southern Health. SHARE will provide the required knowledge and skills for staff to draw on research evidence and local data to make better decisions about the most effective technologies and clinical practices within Southern Health. It is envisaged that the selection of the safest, highest quality and most effective technologies and clinical practices will result in two key outcomes:

- Improved patient care
- Better allocation of resources within the health service

These outcomes will be achieved through improved decision-making processes and increased staff capacity in evidence-based practice and organisational change.

To realise these outcomes, a suite of components have been designed as part of a complex theory of change. Proposed components will pilot and refine systems and processes, identify the key factors for successful implementation and estimate the nature and extent of resources required for replication in other Victorian health services.

These components can be grouped in the following way:

- Program of organisation-wide decision-making systems and processes
- Support services to enable systems and processes
  - Evidence service
  - Data service
  - Evidence utilisation and capacity building service
  - Project support service
- Pilot projects in disinvestment activities

Core components of the SHARE program are briefly outlined below.

Establishing organisation-wide decision-making systems and processes for the effective allocation of resources related to TCPs

This program will address the current lack of consistent, systematic, integrated, evidence-based decision-making systems and processes regarding TCPs within Southern Health. SHARE seeks to increase use of existing resources for decision-making while building further processes and systems. These processes will be evidence-based, rigorous, and transparent and will have clear systems for governance. Use of the governance system will increase accountability with transparency and 'best-practice'.

Establishing and maintaining support services to enable the decision-making systems and processes (ie. Evidence Service, Data Service, Evidence Utilisation and Capacity-Building Service and Project Support Service)

In order for effective changes to be implemented, decision makers (clinicians, managers, policy makers) need access to evidence and data; skills to appraise it for quality and relevance; expertise in organisational and clinical practice change methods; and methodological, administrative and data support to undertake projects.

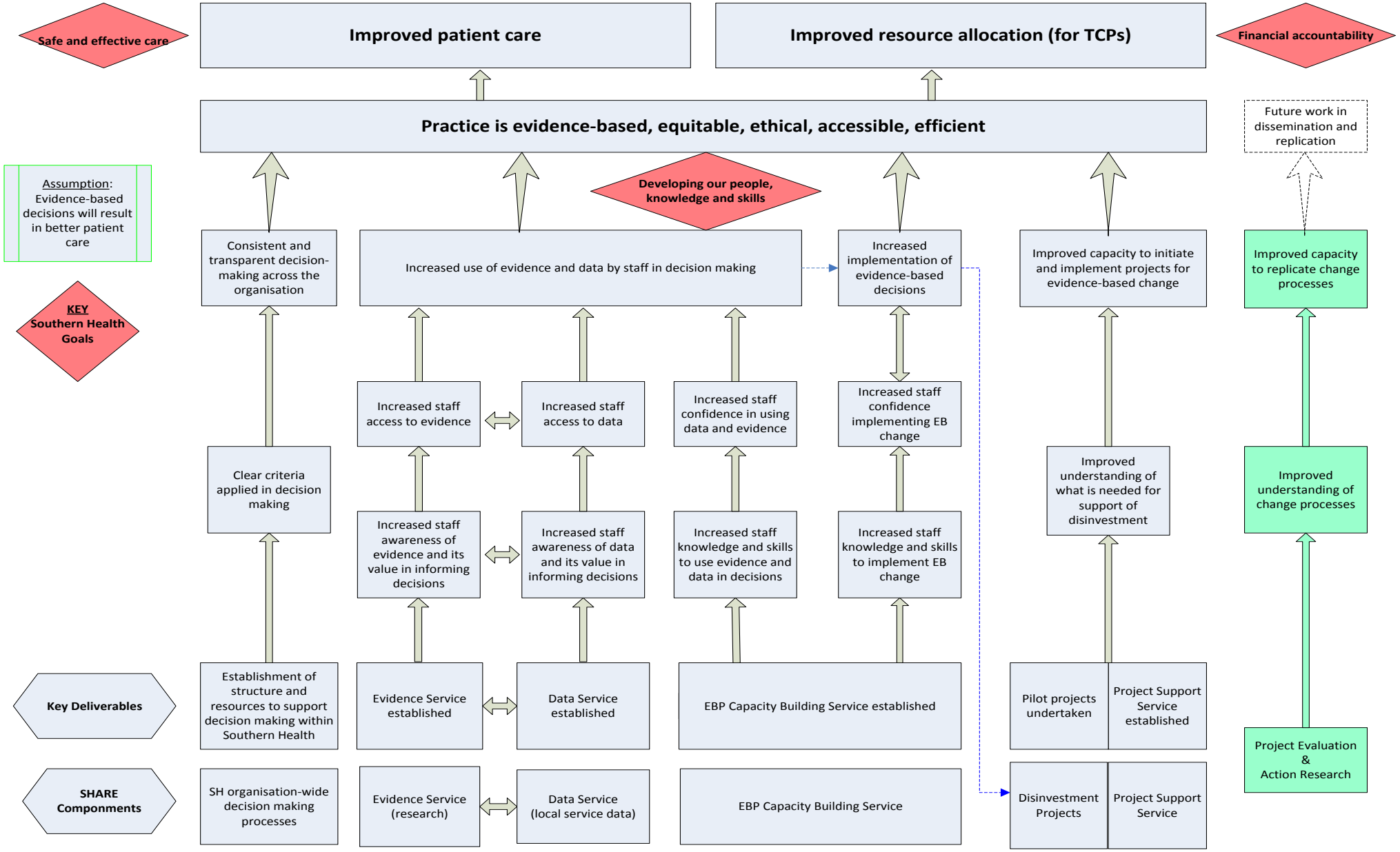
Undertaking pilot 'disinvestment' projects

These projects will pilot 'disinvestment' activities using best practice in evidence-based change. Disinvestment projects will be identified as the SHARE program progresses.

SHARE will be designed and implemented over a three-year timeframe, from 2009 to the end of 2011. The components of work are necessarily interdependent with learnings from implementation captured through an ongoing action research process. Detailed documentation of the process of change and perceptions of relevant stakeholders (e.g. clinicians, consumers, policy makers, health service managers) along with regular capture and utilisation of project team observations and learnings will provide insight into 'what works, what doesn't work, and why'. This action research process will provide information about the 'challenges of disinvestment' and will identify what will be required to replicate effective processes in other settings. The action research process together with more formal evaluation will enable improvements to be made during project implementation and contribute to a knowledge base about the role of resource allocation and disinvestment in patient care.

The following diagram illustrates the major components and their intended outcomes over the implementation timeframe. The diagram should be read from bottom to top; from components to long term outcomes.

Figure One. SHARE program Component and Outcome Hierarchy



Purpose of the Evaluation

The purpose of the SHARE evaluation is three-fold. These are to:

- assess the effectiveness of the program through outcome research and analysis, including economic evaluation of 'disinvestment' pilot projects
- assess implementation fidelity and factors contributing to sustainability and transferability
- contribute to the body of knowledge regarding 'disinvestment' and health service organisational change through the evaluation of disinvestment demonstration projects and identification of factors for successful change.

Evaluation domains

The evaluation focuses on four key outcome domains. These domains relate to both the processes and outcomes of implementation of SHARE across the three-year timeframe. Domains 1 and 2 are the top two boxes in the outcomes hierarchy above. Domains 3 and 4 represent a culmination of all outcome boxes at the level below 'practice is evidence-based, equitable, ethical, accessible and efficient'.

1. *Improved patient care (through implementation of safer, more effective and more cost-effective technologies and clinical practices)*

   Improved patient care is the ultimate outcome of evidence-based decisions about TCPs. It will not be possible to directly attribute the improvements in care to implementation or outcomes of the SHARE program. However, based on the assumption that improvements in decision-making will result in better patient care, data will be gathered about the impact of SHARE on decision making, and on the contributive value of these decisions to patient care. Perceptions of key stakeholders, the SHARE project team and the program Steering Committee will provide qualitative information about improvement.

   This domain relates to the Southern Health goal of *Safe and effective care.*

2. *Improved resource allocation of technologies and clinical practices (through improved decision-making and the implementation of safer, more effective and more cost-effective technologies and clinical practices).*

   It is recognised that many factors, both internal and external, affect resource allocation decisions, thus it will not be possible to directly attribute the improvements in resource allocation to the SHARE program. The contribution of changes in decision-making to this process will be explored in place of direct measures. Information about specific TCPs will be available from the pilot projects, including detailed economic evaluation of pilot projects.

   This domain relates to the Southern Health goal of *Financial accountability*

3. *Improved decision-making within Southern Health (in reference to technologies and clinical practices).*

   The SHARE program will influence decision-making through the establishment of improved decision-making systems and processes. Implementation of support services may contribute to their acceptability and use. Evaluating this outcome will require assessment of interacting elements including the models for decision-making, formal and informal decision-making structures and processes, and the decision-making processes involved with projects leading to resource reallocation.

4. *Improved staff capacity in use of evidence and data in decision-making and implementation of practice change (through improved knowledge, skills, attitude, behaviour and confidence).*

   This outcome domain is intended to be influenced by all components of the program, but in particular by the development of the Evidence Utilisation and Capacity-Building Service, and the Project Support Service.

   This domain relates to the Southern Health goal of *Developing our people, knowledge and skills*

There are three other evaluation domains of interest to Southern Health and DHS that relate to issues of project implementation and learning.

5. *Barriers and enablers*

   What features of the setting act as barriers or enablers to project progress and outcomes? Information has been identified in research literature and will be expanded upon and tested by seeking key stakeholder perceptions. This information will be collected in an ongoing fashion at key implementation stages to inform project modifications and improvements.

6. *Implementation fidelity*

   To what extent were project activities implemented as planned? What changes were made to implementation? What were the learnings from the process? Learnings will be collected in an ongoing manner from the SHARE project team and pilot project staff to be fed back into further planning. This domain will include assessing the implementation of the three support services (Evidence, Data and Capacity-Building).

7. *Sustainability and spread*

   What are the implications of SHARE for spread through departments, programs and sites, and other health care settings? What is required for sustainability? This domain will include data collected in other areas including the results of the final outcome and economic evaluation. Again, investigating sustainability and spread will require the combination of research literature and key stakeholder input.

These seven areas will be the focus of evaluation data collection and reporting. The evaluation has been designed up front so that information generated from the evaluation can inform implementation and produce a systematic evidence base about the impact of SHARE within Southern Health.

If this process is found to be effective within Southern Health, evidence from the evaluation will generate information to support the transferability to other health care settings. A key element of the evaluation will be a full description of the SHARE program including service models and pilot projects, as well as the identification of the organisational supports required to make it work.

Audience

The key audiences for the evaluation are the:

- Victorian Department of Human Services
- Victorian Policy Advisory Committee on Clinical Practice and Technology (VPACT)
- Southern Health Board
- Southern Health Executive Management Team
- SHARE Steering Committee

It is envisaged that these groups will use the progress and final evaluation reports to make decisions about the value and role of such projects in the future. There are a wide range of other stakeholders who will be interested in the outcomes of the SHARE program. These include Southern Health staff and consumers, other Victorian health services and health service researchers.

Principles underpinning the design

The development of this evaluation plan has been informed by a consideration of project proposals, discussion with SHARE project staff, the information needs of key stakeholders and the internal capacity of staff conducting the project. The following principles have informed the development of this plan.

A mix of data sources and collecting both qualitative and quantitative data

Qualitative and quantitative data will be gathered in the evaluation to provide a credible basis for claims about the processes and outcomes of the program. The triangulation of evidence across different evaluation domains, and with different stakeholder groups, will generate a comprehensive picture of both implementation and outcomes.

Use for improvement and accountability

The program has a number of feedback loops built into it through the inclusion of the action research process and formal evaluation. This will ensure that timely and useful information is provided to key audiences, including the Southern Health SHARE Steering Committee and staff implementing the program so that improvements or modifications can be made throughout the implementation timeframe and reduce the potential for duplication of effort.

A commitment to using existing data

Where possible, this program will draw on collation and analysis of routinely collected data by Southern Health. New data requirements are designed to have minimal burden on staff involved in its collection, however it is recognised that very little routinely collected data exists for the purposes of the SHARE program.

Linking evaluation and research

Information regarding program outcomes will be linked to the process evaluation conducted during investigation of domain six, implementation fidelity (outlined on page 3), and examined in relation to a theoretical framework of evidence-based change. Integrating data in this way will provide additional insight to the association between action and outcome. Analysis will involve looking for conceptual, methodological and contextual research insights.

The theoretical framework was developed by Harris (2006) as part of a NICS fellowship. This framework outlines areas for investigating the implementation of an evidence-based innovation, incorporating current literature and models on the determinants of effectiveness and processes of change.

Areas for investigation include

- Analysis of barriers and enablers
- Identification of other characteristics of determinants of effectiveness
- Ascertainment of perceptions of key stakeholders
- Assessment of sustainability and spread
- Outcome assessment

Detailed documentation of implementation and evaluation processes will constitute a resource for further investigation and potential replication in other health services.

A diagram outlining how the areas above are integrated with the theoretical framework is presented in Figure 2.

Generic lessons for design, conduct and evaluation of complex projects within a health service will evolve from the combination of all data. Consideration of methods and data together will result in a holistic understanding of the lessons generated by the program.

Figure 2. Research areas for investigation in SHARE, including disinvestment projects

Determinants of effectiveness	Process of change	Outcomes
Analysis of barriers and enablers	Ascertainment of perceptions of project participants, potential adopters and patients	Process, impact and outcome evaluation
Documentation of observable characteristics	Detailed documentation of implementation and evaluation process	Assessment of sustainability and spread
Reflective self-evaluation of project team's experience ('learnings')		

Scope

The evaluation will largely be undertaken internally with an external evaluator in the role of 'critical friend.' Aspects of disinvestment pilot projects concerning economic evaluation will be designed and run by a health economist experienced in researching disinvestment.

Exclusions/Limitations

- Findings from both quantitative and qualitative data derived from Southern Health staff (including decision-makers and service users), will provide a compelling and plausible evidence base for claims about the impact of the program on resource allocation and patient care. The evaluation has been designed to address key evaluation questions, but will not be able to establish an empirical causal relationship between implementation of SHARE and observed outcomes.
- While some elements of the SHARE program are expected to spread across the organisation, results of the evaluation cannot be generalised outside of Southern Health. However, it is expected that the principles and factors for spread elucidated by the evaluation will be used in assessing the transferability of SHARE by other health services. Evaluating the barriers and enablers to implementation will assess the contextual factors specific to Southern Health.
- Key to the success of SHARE will be its sustainability. While evaluation will begin early, is not planned to carry on past 2011. Therefore, it is beyond the scope of the program to measure ongoing components of SHARE in the long term. Despite this limitation, evaluation will provide a framework for investigating and implementing key factors for sustainability.
- The SHARE program focuses on processes and support systems, both new and existing, for evidence-based decision-making regarding resource allocation and disinvestment. While the investigation has an underlying aim of addressing resource allocation through decision-making and capacity building, resource issues such as time or a lack of computers are outside the scope of this program. It is acknowledged that in some cases, adhering to best-practice may exacerbate time or material resource difficulties. Such issues will be explored through the analysis of barriers and enablers.
- Due to the size and interconnectedness of SHARE, a full economic evaluation of the program is not possible. Economic evaluation will be limited to individual disinvestment pilot projects through case-study methodology and the economic appraisal of resources required for new systems and processes. This will provide rich information to the disinvestment knowledge base and contribute to measuring the value of the SHARE program.
- The evaluation will predominantly be undertaken by the SHARE project team. In all cases evaluation tasks will be undertaken in addition to existing implementation tasks. This will need to be taken into account in planning the evaluation scope and data collection requirements.

Methods

The following table summarises the key evaluation questions, methods of data collection, analysis, and approximate timeframe for collection.

Methods presented below are original intentions and are expected to change over time as the program evolves and staff gain further insight into what is need. Iterations and amendments will be added as necessary.

All baseline data will be collected prior to implementation.

Unless otherwise stated, dates represent 'post-test' stages of evaluation data collection.

Evaluation Plan

Outcome domain	Key evaluation questions	Measures/indicators	Source of data	Data collection	Analysis	When to be collected
Improved patient care	What changes in processes and in clinical practices were achieved? How have these changes influenced patient care?	Changes in processes to govern decision-making	Project Team Steering Committee	Survey	Thematic	Key 'post-implementation' stages End of Project
		Changes in clinical practice	Steering Committee Key Informants	Survey	Thematic	
		Perceptions of patient care	Steering Committee Key Informants	Survey	Thematic	
		Disinvestment projects	Dependent on disinvestment project	Dependent on disinvestment project	Dependent on disinvestment project	Dependent on disinvestment project
Improved resource allocation	What changes in resource allocation were achieved? How have these changes influenced resource allocation?	Perceptions of resource allocation change	Project Team Steering Committee Key Informants	Survey	Thematic	Key 'post-implementation' stages End of Project
		Disinvestment projects	Dependent on disinvestment project	Dependent on disinvestment project	Dependent on disinvestment project	Dependent on disinvestment project
Improved decision-making	What changes in decision-making processes were achieved?	Modification of processes for decision-making	Standing Committees Project Steering Committees Representatives of Depts, Programs, Sites, Groups Individuals	Dependent on exploration of six settings	Dependent on exploration of six settings	Dependent on exploration of six settings
		Use of explicit criteria to inform decisions within Southern Health	Standing Committees Project Steering Committees Representatives of Programs, Departments, Sites, Groups Individuals	Interviews	Content	2011
			Decision summaries Minutes	Audit	Comparative	2011
		Use of evidence and data explicitly in decisions across the organisation	Standing Committees Project Steering Committees	Interviews	Content	2011
			Information providers eg CCE, CIM	Audit	Frequency tables	End of Project
			New disinvestment projects due to use of evidence and data	Count	Frequency tables	End of Project
			Southern Health Managers	Survey (Needs Assessment Qs)	Content	End of Project
		Use of governance structure for decision-making	EMT/JPQSC Terms of Reference	Interview	Thematic	2011
		Documentation of decisions (transparency)	Published criteria, Websites, Terms of Reference	Audit	Quantitative (descriptive)	2011
			Standing Committees Project Steering Committees	Interview	Quantitative (descriptive)	2011
			Decision summaries Minutes	Audit	Quantitative (descriptive)	2011

Outcome domain	Key evaluation questions	Measures/indicators	Source of data	Data collection	Analysis	When to be collected
Improved staff capacity in use of evidence and data	What were the changes in staff awareness, knowledge and skills using evidence and data?	Awareness of using evidence and data	Southern Health Managers	Survey (Needs Assessment Qs)	Quant (descriptive) Content	End of Project
		Knowledge and skills using evidence and data	Capacity Building Service Users	Quantitative test e.g. Fresno MCQ	Quantitative (direct measure of K & S)	Pre/Post service use 3 month follow-up
	What were the changes in staff confidence using evidence and data?	Confidence using evidence and data	Southern Health Managers	Survey (Needs Assessment Qs)	Quant (descriptive) Content	End of Project
			Evidence, Data and Capacity Building Service Users	Survey (Needs Assessment Qs)	Quant (descriptive) Content	Pre/Post service use 3 month follow-up
	Was there a change in practice in accessing and using evidence?	Accessing and using evidence	Southern Health Managers	Survey (Needs Assessment Qs) Focus Groups	Quant (descriptive) Content	End of Project 2011
			Standing Committees Project Steering Committees	Interview	Content	2011
			Evidence, Data and Capacity Building Service Users	Survey (Needs Assessment Qs)	Quant (descriptive) Content	Pre/Post service use 3 month follow-up
				Achievement of learning objectives	Test	Pre/Post service use
	What were the changes in staff confidence implementing evidence-based change?	Confidence implementing change	Southern Health Managers	Survey (Needs Assessment Qs)	Quant (descriptive) Content	End of Project
			Evidence, Data and Capacity Building Service Users	Survey	Content	Pre/Post service use 3month follow-up
			Standing Committees Project Steering Committees	Interview	Content	2011
Barriers and enablers to success	What features act as barriers or enablers to project progress and outcomes?	Perceptions of barriers and enablers	SHARE project staff	Meeting records Focus Group	Thematic	Ongoing End of Project
			SHARE Steering Committee	Focus Group	Thematic	End of Project
			Disinvestment project staff	Focus Group	Thematic	Dependent on disinvestment project
		Unexpected outcomes	SHARE project staff	Focus Group (Most Significant Change?)	Thematic	End of Project
			SHARE Steering Committee	Focus Group	Thematic	End of Project
			Disinvestment project staff	Focus Group	Thematic	Dependent on disinvestment project
		Process success	SHARE documentation	Protocols and reports to Steering Committee	Analysis of factors for success and learnings	Key 'post-implementation' stages
			Project participants, potential adopters, patients	Interview	Thematic	End of project

Outcome domain	Key evaluation questions	Measures/indicators	Source of data	Data collection	Analysis	When to be collected
Implementation fidelity	To what extent were SHARE activities implemented as planned?	Implementation fidelity	Implementation Plan Final report	Description of plan and implementation (incl modifications)	Comparative	Process evaluation 2011
	What was learnt about implementation?	Staff perceptions	SHARE project staff	Meeting records (actions & learnings)	Thematic	Key 'post-implementation' stages End of Project
				Focus Group	Thematic	
		Response of staff to materials and resources	Key Southern Health staff	Focus Group and/or Survey	Thematic	2011
			SHARE Steering Committee	Focus Group and/or Survey	Thematic	2011
		Service Evaluation: access, satisfaction, reach	Evidence, Data and Capacity Building Service Users	Audit and/or Survey	Frequency Tables Thematic	Key 'post-implementation' stages
		Learnings of implementing disinvestment projects	Disinvestment pilot staff	Focus Group	Thematic	Dependent on Disinvestment Project
		Identification of characteristics of determinants of effectiveness	'Factors affecting SHARE' table	Collect ideas in table	Audit	Ongoing
		Key Southern Health staff Disinvestment project staff	Interview	Thematic	Ongoing	Key Southern Health staff Disinvestment project staff
Sustainability and Spread	What are the implications for spread of SHARE through departments, programs and sites, and other health care settings? Drivers for change, what worked, what didn't, why?	Cost and support required	SHARE project staff Representatives of Programs/Departments/ Sites	Resource audit (costing)	Economic appraisal	End of project
		Number of activities replicated beyond the SHARE program	Key Southern Health Staff Project reports Records of requests for assistance All committees	Audit and/or Survey	Frequency Tables Content	End of project
		Tools/methods were used to enhance the process of spread (replicate and transfer)	Key Southern Health Staff	Survey	Content	End of Project
		Staff perceptions of value of SHARE processes and outcomes for spread	SHARE project staff SHARE Steering Committee Programs/ Site Managers	Focus Group – Qs informed by literature	Thematic	End of Project
	What is required for sustainability?	Presence and role of structures, skills, resources, commitment and leadership (CCE framework)	Key Southern Health Staff	Survey (literature based)	Content	End of Project
		Number of changes that remain over time compared to initial number implemented (staged according to projects)	Records of 'spread'	Audit	Frequency Tables	End of project
			Key Southern Health Staff	Survey	Content	End of project
			Outcome evaluation	Interview Survey Audit	Content Frequency Tables	End of project

Resources

Project management, oversight, accommodation and infrastructure for the project team will come from existing Southern Health structures.

Funding for project costs and engaging external consultants (health economist, health program evaluator) to come from the Department of Human Services. This includes costs of training project staff.

Reporting

Monthly Reports

- Southern Health SHARE Steering Committee
- Victorian Department of Human Services

Quarterly Reports

- VPACT: Items in monthly reports plus summary of main activities
- Southern Health Executive Management Team

Annual Reports

- Southern Health Board

Interim Report Year 1

- Summary of activities and achievements
- Learnings from first year
- Recommendations for processes required for capture, dissemination and utilisation of evidence for assessment and management of TCPs

Interim Report Year 2

- Summary of activities and achievements
- Learnings from second year
- Methods for identification of potential targets for disinvestment
- Proposed criteria for prioritisation and decision-making for disinvestment choices

Final Report

- Recommendations for organisational systems and processes for assessment of TCPs
- Models for support services
- Education and training materials
- Models for disinvestment projects
- Summary of key factors for successful implementation of support services and disinvestment projects
- Estimates of nature and extent of resources required for replication in other Victorian health services
- Publications in peer reviewed journals and conference presentations

Reporting and Communication Plan

Stakeholder	Nature	Timing
Department of Human Services (DHS)	Monthly Reports Interim Report, Year 1 ▪ Summary of activities and achievements ▪ Learnings from first year ▪ Recommendations for processes required for capture, dissemination and utilisation of evidence for assessment and management of TCPs Interim Report, Year 2 ▪ Summary of activities and achievements ▪ Learnings from second year ▪ Methods for identification of potential targets for disinvestment ▪ Proposed criteria for prioritisation and decision-making for disinvestment choices Final Report ▪ Recommendations for organisational systems and processes for assessment of TCPs ▪ Models for support services ▪ Education and training materials ▪ Models for disinvestment projects ▪ Summary of key factors for successful implementation of support services and disinvestment projects ▪ Estimates of nature and extent of resources required for replication in other Victorian health services	Monthly, before each St Ctee meeting January 2010 January 2011 January 2012
SHARE Steering Committee	Committee meetings ▪ Reporting ▪ Decision making Final drafts ▪ Activity reports (eg. Committee mapping) ▪ Recommendations ▪ Evaluation plans	Monthly, second Wednesday of month As they arise
VPACT	Quarterly report ▪ Summaries of monthly DHS reports	Every three months beginning May 2009
Southern Health Executive Management Team	Quarterly report ▪ Summaries of monthly DHS reports in EMT format ▪ Recommendations for action (applications for decision)	Every three months beginning February 2009 As they arise
Southern Health Board	Annual report ▪ Summary of activities and achievements ▪ Learnings ▪ Outcomes	End of each year

Publications in peer reviewed journals and conference presentations: See publication matrix

Project timelines

SHARE	Year 1		Year 2		Year 3	
Preparation including establishment of Steering Committee	✓					
Decision-making systems and processes						
Program development (including evaluation methods)						
Piloting and refinement						
Implementation						
Pilot 'disinvestment' projects						
Identification of TCPs to disinvest						
Project development (including evaluation methods)						
Training and support in clinical practice change methods						
Implementation						
Evidence Dissemination Service						
Identification of potential sources of synthesised information						
Needs analysis of potential users						
Piloting and refinement						
Implementation						
Data Service						
Needs analysis of potential users						
Development of methods of capture and analysis						
Implementation						
Evidence Utilisation and Capacity Building Service						
Needs analysis of potential users						
Implementation						
Project Support Service						
Needs analysis of potential users						
Implementation						
Evaluation						
Program evaluation						
Economic evaluation						
Action research investigating factors for success						