Health Resource Stewardship@BHS Framework

September 2019

Ballarat Health Services
Putting your health first

Preface

Hospitals and settings for health care delivery in Australia are diverse in size, location, services provided, communities served, funding models and workforce mix. However, regardless of their case mix and core business, hospitals and other health care agencies must develop capacity to confront the looming perfect storm in health care sustainability: ever increasing demand for increasingly expensive services, in an environment of budget constraints and a lack of community enthusiasm to contribute more through taxes or direct payments to the costs of funding health services.

There is great opportunity to better steward the resources we do have to ensure we maximise the services we can provide to our community and our patients. Ballarat Health Services (BHS) has embarked on a service-wide program of health resource stewardship, across clinical and non-clinical areas. The framework includes training staff to be health resource stewards and using a robust evaluation framework to capture and value our health resource stewardship efforts.

This framework document sets out the approach taken at BHS in a way that will permit a reader to learn, adapt and use the structures, approach, and the training tools and resources in their own setting, no matter how large or small that might be.

The *Health Resource Stewardship@BHS* program framework has been prepared by the HRS team:

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If you wish you can provide feedback to the HRS team at any time

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Abbreviations

ACSQHC	Australian Commission on Safety and Quality in Health Care
AMS	Antimicrobial Stewardship
BBH	Ballarat Base Hospital
BCV	Better Care Victoria
BHS	Ballarat Health Services
CMO	Chief Medical Officer
CNMO	Chief Nurse and Midwifery Officer
DHHS	Department of Health and Human Services
I & IP	Improvement and Innovation Program
ICT	Information and computer technology
IIA	Innovation and Improvement Advisor
IIRS	Improvement and Innovation Resource Stewardship
HAI	Healthcare Associated Infection
HREC	Human Research Ethics Committee
HRS	Health Resource Stewardship
HRS@BHS	Health resource stewardship at Ballarat Health Services
HRSC	Health Resource Stewardship Committee
Kms	Kilometres
LETTERS	Leadership, Engaging, Training, Tools, Evaluation, Reporting, Sustainability
NSQHSS	National safety and quality health service standards
OHRSM	Operations and Health Resource Stewardship Manager
OHRSO	Operations and Health Resource Stewardship Officer
PESCOM	Product Evaluation and Standardisation Committee
QEC	Queen Elizabeth Centre
RE-TRed	Resource Efficiency Through Re-design
SCV	Safer Care Victoria

1 Introduction

1.1 Background

Hospitals and settings for health care delivery in Australia are diverse. However, regardless of their case mix and core business, hospitals and other health care agencies must develop capacity to confront the looming perfect storm in health care resources: ever increasing demand for increasingly expensive services, in an environment of budget constraints and a lack of community enthusiasm to contribute more to the costs of funding health services through taxes or direct payments. Ballarat Health Services (BHS) has developed *de novo* and is implementing an organisation-wide health resource stewardship (HRS) program to develop capacity to address this and other challenges.

The body of work undertaken as part of the HRS@BHS program aligns to all four of BHS's strategic pillars given that it concerns stewarding precious health resources to deliver to our community and consumers world-class healthcare by well-trained staff doing their work expertly, safely and efficiently. HRS@BHS builds on the work being done every day by BHS staff to make the care we provide better, safer, more timely and less complex to navigate. The HRS program will capture and quantify these activities, as well as support our staff to acquire skills to translate concerns when they see resource waste into changing how we do work or the work we do.

1.1.1. Ballarat Health Services

The city of Ballarat is located approximately 115kms west of Melbourne, the capital city of Victoria. With a population of more than 105,000 it is Australia's third largest inland city.

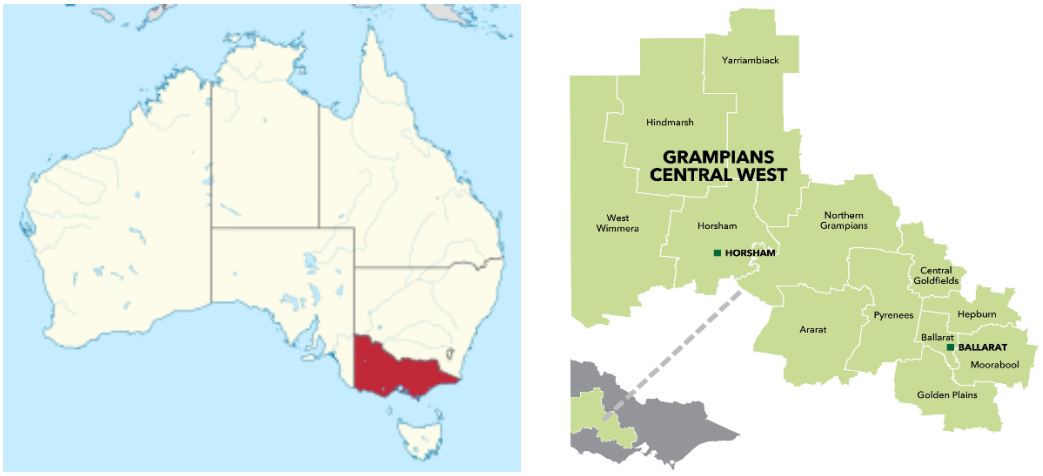

Figure 1 Maps of Australia, the state of Victoria, the Grampians region and Ballarat

Ballarat's public health care needs are served BHS. Services include the Ballarat Base Hospital, the Queen Elizabeth centre (for sub-acute services), and 10 Residential Aged Care facilities. BBH is the largest hospital in and the principal referral hospital for the Grampians region, which extends from 50kms east of Ballarat to the South Australian border 340kms to the west (an area of 48,000 square kilometres). Approximately 240,000 people, or 4.4% of the population of Victoria, live in the Grampians Region.

Ballarat Health Services employs more than 4,000 staff to ensure optimum care is provided for all patients, clients, families and visitors. It is the regional centre for general and sub-specialty medicine, general and sub-specialty surgery, paediatrics, maternity and gynaecology services, emergency, mental health, aged care, rehabilitation, palliative care and community services, as well as the Ballarat Regional Integrated Cancer Centre. With the scale of services comes both complexity of processes to deliver care and accompanying opportunity to examine and optimise efficiencies in the way we organise ourselves and deliver our care. This opportunity is now translating into the HRS@BHS approach, which has been

evolving since first discussed in 2017 as set out in Table 1 Key milestones to date in the evolution of Health Resource Stewardship at BHS.

Table 1 Key milestones 2017-2019 in the evolution of Health Resource Stewardship at BHS

Date	
May-June 2017	• Health resource stewardship program for BHS discussed among leadership team; agreed to further explore concept
October 2017	• BHS Improvement and Innovation Advisor (IIA) appointed
November 2017	• Discussion commenced regarding IIA role in training and education of staff in an HRS program
March 2018	• Submission to BCV to participate in Victorian Choosing Wisely project • CMO and IIA present LETTERS model for sustainable program planning and implementation at BCV Innovation Forum
April 2018	• Choosing Wisely project commences at BHS funded by BCV
April –Sept 2018	• Planning and recruitment for Health Resource Stewardship training program (Resource Efficiency Through Re-Design; "RE-TRed") underway with Sharon Sykes (IIA) as Program Convenor • RE-TRed Steering Group established
October 2018	• First cohort of RE-TRed trainees commences
November 2018	• CMO Operations and Health Resource Stewardship Manager position created
February 2019	• CMO Operations Health Resources Stewardship Manager commences
March 2019	• First RE-TRed cohort graduates • Second RE-TRed Cohort Commences
August 2019	• Second Cohort Graduates • Third cohort commences
September 2019	• HRS framework report written

1.1.2. Learning from the literature

The idea of seeking to learn from others to incorporate best practice evidence-based solutions is not new. Beyond the health sector the concept of perfecting processes to optimise efficiency has long been a fundamental to manufacturing. However, the HRS@BHS program combines evidence from improvement science, clinical practice, and the health services research literature into an approach which is relatively new in the public health services delivery sector in Australia.

Central to the concept of HRS is the critical belief that health resources are precious and finite, and that effort to not waste these resources must be normal and core to business of health care. These resources include human, financial, infrastructure, intellectual factors.

Inefficiency in health care service delivery has garnered great attention for decades. As demands upon health systems have increased, and hospitals have strained to cater for many more patients seeking increasingly complex processes of care, process engineering technologies pioneered in manufacturing industries, such as the Lean Management system, have been introduced and applied to health services and systems; Radnor et al (2011)[1] has charted the emergence of Lean in health care, first appearing in the

[1] Radnor ZJ et al. Lean in healthcare: the unfilled promise? Social Science and Medicine 2011; 74: 364-371

UK National Health Service in 2001, and in the USA in 2002. Lean in health care aims deliver quality processes and outcomes (Rotter et al 2019)[2]. However, research examining the effectiveness of Lean as a change management approach to quality outcomes has shown that while Lean can improve healthcare operational effectiveness, implementation is highly localised with small success (Radnor et al 2011, Anderson 2015, Hallam et al 2018)[3] despite a large literature describing pragmatic strategies for adopting a lean approach, as well as enablers and barriers to successful implementation (Antony J et al 2019).[4]

In the absence of a universally accepted and implemented engineering approach to quality and efficiency, and with few examples reported of Australian approaches confronting these challenges in comprehensive ways, highly regarded commentators have attempted to characterise the size and nature of the "problem". More specifically, authors Berwick and Hackbarth (2012), Bennett (2013) and Duckett (2014, 2015) all agree that "waste" pervades the health system. Berwick and Hackbarth suggested that 21% of healthcare spending could be attributed to failures of care delivery and co-ordinated care, overtreatment, administrative complexity, and fraud and abuse.[5]

Strategies to confront the challenges have been suggested by Australian authors: Bennett as chair of the 2009 National Health and Hospitals Reform Commission set out numerous strategies to tackle inefficiency and waste, including addressing service gaps which prevented efficient care, duplication and low value care.[6] Duckett and Breadon have advocated for maximising practice scope of professionals,[7] liberating dollars to the health system if all hospitals were as cost-efficient in doing procedures as the most efficient hospitals,[8] and if people did not receive ineffective or low value treatment.[9] In Australia actions to inform clinicians and consumers about opportunities to reduce resource waste have been taken by standards and health care organisations.

In its *Australian Atlases of Healthcare Variation* (2015, 2017, 2018) the Australian Commission on Safety and Quality in Healthcare (ACSQHC) argued that much of the variation in patterns and therefore costs of care was likely to be unwarranted, and that managing variation was critical to improving the quality, value and appropriateness of health care.[10] The ACSQHC's reports also provide some evidence about strategies to reduce variation. Similarly the Australian *Choosing Wisely* campaign has partnered with 35 health provider organisations to assist consumers to understand and question their providers about low-value health care.[11] Choosing Wisely commenced in north America approximately 10 years ago, and in the past five years has become well-known in Australia; in joining to increase the capacity of consumers to understand the health care they are being offered, specialist training colleges and other organisations

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[2] Rotter T et al. What is lean management in health care? Development of an operational definition for a Cochrane systematic review. *Evaluation & the health professions* 2019; 42(3): 366-390

[3] Hallam CRA et al. Lean healthcare: scale, scope and sustainability. *Int J Health Care Quality Assurance* 2018; 31 (7) 684-696

Andersen H. Lost in translation: a case-study of the travel of lean thinking in a hospital. *BMC Health Serv Res.* 2015; 21(15):401

[4] Antony J et al. A systematic review of Lean in healthcare: a global prospective. *Int J of quality and reliability management*. 2019; Vol. ahead-of-print No. ahead-of-print. https://doi.org/10.1108/IJQRM-12-2018-0346

[5] Berwick DM, Hackbarth AD. Eliminating waste in US Health Care. *Journal American Medical Association* 2012; 307(14): 1513-1516

[6] Bennett, C. Are we there yet? A journey of health reform in Australia. *Medical Journal of Australia* 2013; 199(4) 251-255

[7] Duckett S, Breadon P. *Unlocking skills in hospitals: better jobs, more care*. Grattan Institute Report No 2014-8, April 2014. Melbourne: Grattan Institute

[8] Duckett S, Breadon P. *Controlling costly care: a billion-dollar hospital opportunity*. Grattan Institute Report No 2014-2, March 2014. Melbourne: Grattan Institute

[9] Duckett S, Breadon P. *Questionable care: avoiding ineffective treatment*. Grattan Institute Report No 2015-7, August 2015. Melbourne: Grattan Institute

[10] ACSQHC Australian Atlas of Healthcare Variation. 2015, 2017, 2018 Sydney: ACSQHC

[11] Choosing Wisely Australia *Tests, treatments, and procedures for healthcare providers and consumers to question* http://www.choosingwisely.org.au/recommendations

work with their members to reduce over-treatment in patients (for the most part not requesting pathology and imaging without a sound clinical reason for doing so).

Increasing concern about the risks of ignoring the imperative to manage waste led to anti-microbial stewardship (AMS) being embedded as an under-standard in the 2012 edition of the ACSQHC National Safety and Quality Health Service Standards (NSQHSS). AMS provides useful models for the implementation of other stewardship initiatives that a comprehensive all staff and patient approach is required to optimise stewardship of all health resources, not just antibiotics. Resource stewardship in health care in Canada is promoted by the Royal College of Physicians and Surgeons of Canada, and taught in some medical schools including at the University of Manitoba, where the curriculum trains students in AMS together with learning about the *Choosing Wisely* approach to low-value health care.[12]

In Australia, Queensland Health, NSW Health and the Australian Healthcare and Hospitals Association (AHHA)[13] have commenced programs to introduce *value-based health care* - determined through a process of measuring costs and resources to deliver care per unit benefit (eg in quality or years of life) to consumers. In 2018 the Victorian Clinical Council discussed value based healthcare as a driving concept.[14] These and other strategies are in response to wide agreement that inefficiencies pervade health care. While strategies have been implemented to address to more efficiently deliver quality care while reducing resource waste, although such strategies are promising in some settings, evidence is lacking for broad organisation-wide sustained improvement.

While many health services and professional organisations internationally and in Australia[15] have participated in the *Choosing Wisely* program to eliminate low-value health care (especially concerning clinical ordering and clinical practice decision-making), and may have implemented other programs such a LEAN approach to control waste and maximise efficiencies in the health, to our knowledge no health organisation in Australia implemented such a wide-ranging and far reaching sustainable approach to health resource stewardship with potential for application across all clinical and non-clinical areas.

HRS@BHS is a comprehensive staff-enacted approach to stewarding all health resources to reduce waste, including across clinical and non-clinical areas. HRS@BHS seeks to translate the knowledge about wastefulness of resources in health care into actions available to anyone seeking to better steward and preserve these precious resources. For our community we know that the highest quality care is the most efficient care, and BHS aims always to provide the highest quality world-class healthcare.

1.1.3 **Sources of waste in health care**

From the literature, consultation and experience of BHS staff the sources of waste can be attributable to the following causes as set out in Table 2.

[12] See http://www.royalcollege.ca/rcsite/canmeds/resource-stewardship-e
http://umanitoba.ca/faculties/health_sciences/medicine/education/pgme/core_curriculum.html
[13] NSW Health 2018 https://www.health.nsw.gov.au/Value/Pages/default.aspx
Queensland Health 2016 https://www.health.qld.gov.au/__data/assets/pdf_file/0028/442693/qcs-meeting-report-201603.pdf
AHHA https://valuebasedcareaustralia.com.au/
[14] Victorian Clinical Council 2018. https://www.bettersafercare.vic.gov.au/sites/default/files/2018-11/VCC%20Communique%20Meeting%203%202018.pdf
[15] See http://www.choosingwisely.org.au/home

Table 2 Sources of health resource waste in health care

Source	*Relevance to staff and health services*	*BHS actions to prevent these sources of waste*
Variation (Unwarranted)	Routine care deviating from best practice without reason	Surgeons agreeing together on one approach to a condition in order to standardise care pathway and reduce risk of complications
Adverse events	Any adverse event complicates care and may delay discharge	Falls risk assessment done repeatedly as a person's condition or environment changes
Supply	Concerns the cost of a product and how it is used: blood and blood products, consumables, devices, diagnostic imaging, drugs and therapeutics, pathology, prostheses, technology	Antimicrobial stewardship program Patient blood management Process for introducing new interventions
Teamwork failure	Uncoordinated or disjointed care or out of sequence task processing	Work to optimise clinical handover and documentation
Bed-day overuse	Patients in beds for care which is not necessary or is better provided in another setting	VIP (very intensive patient) program. Long-stay patient review
Re-do	Duplication of effort or not doing it right the first time	Work to perfect labelling on pathology request forms
Over-diagnosis and over treatment	Undertaking tests or without sound clinical reason, unnecessary or futile treatment, not respecting patient wishes	Having end of life wishes discussions with patients *Choosing wisely* implementation
Overstaffing	More senior or more expensive or more staff than necessary doing the task	Recruiting and rostering to maximise permanent staff working "normal" hours
Delays	Delays in the process or progression of care	ED navigators working to ensure patients get care and treatment on time
(not) Preventing disease or progression of disease	Healthier people use less health resources; sicker people use more resources	Identifying risk and preventing patient deterioration such as *Think Sepsis Act Fast* program
Opportunity	Doing one thing at the cost of using the time for another purpose	BHS Surgery 2018 template re-design Regular review of committee membership and terms of reference
Safety shortcuts @ work	Unsafe work practices can be very costly to staff, patients and visitors	Mandatory staff training to ensure adherence to safety protocols
Time	Patients, clinicians, carers, managers - being made to wait in a number of ways	Specialist Outpatient Clinic re-design work
Inequalities	Health services or programs which worsen health outcome disparities or inequality require avoidable future spending	Subjecting health programs to a health equity lens or equity-focused health impact assessment (EFHIA) at planning stage to reduce risk of widening equity gap
Money	Spending without checking or rationale	Eliminating costs incurred without deliberate consideration regarding benefit
Environmental waste	Using energy, water and materials wastefully	Sourcing lower cost fuel and using less; replacing disposable products with multi-use equivalents

1.2 The LETTERS approach

The overarching strategy for HRS@BHS is being planned across several elements, each requiring action simultaneously over time. Known as the LETTERS model,[16] each element comprises key steps and actions upon which further actions are built as set out in Table 3. Section 2 of the HRS@BHS framework will describe actions at BHS to enact these elements, and Section 3 comprises a time-chart (Gantt) to demonstrate the simultaneous consideration and implementation of program actions.

Table 3 Brief description of each LETTERS element (the structure to guide HRS@BHS implementation)

Leadership and Governance	Sets out the actions, governance structures, documents, and risk assessment which underpins to decision to commence and continue with the HRS@BHS program. Includes identifying at the outset the person who will continue to have carriage of the tasks irrespective of short-term resourcing
Engaging with people and processes	Sets out the steps to identify stakeholders and experts, characterise aligned work underway, understand existing structures for engagement, action, approvals and opportunities to add value rather than re-invent; establish partnerships for action; includes engaging with consumers
Training and Education	Determine the training needs and most effective strategies for training the right people, taking into account different settings, learning styles, content required, levels of existing knowledge and capacity, and platforms for delivering training
Tools and Resources	Adapt or develop tools to deliver training and to equip people to do what is being asked of them in the program; these may include templates or programs for planning, engaging, analysis, evaluation, soliciting feedback, reporting, monitoring, and training others.
Evaluation and audit	Identify ethical measures of desired outcomes (eg time, events, safety, dollars, product savings, opportunity), and how to measure using opportunistic, qualitative, quantitative methods for processes, impacts and outcomes
Reporting and communication	From the start identify who needs to know what and how often using what media or method (will be informed by identifying stakeholders and understanding their preferences or requirements)
Sustainability/ sustaining the new norm	Build in sustainability from the start by asking who will be doing each of the above in the future and having them at the start

1.3 Aims

The HRS@BHS program aims to

- have evidence about health resource stewardship and strategies to address inefficiency in healthcare (drawn from quality, quality assurance, stewardship and health management literature) inform the HRS@BHS program implementation
- review and identify sources of health resource waste at BHS to permit better stewardship of these resources
- train staff as health resource stewards with capacity for training others
- reduce, reuse, recycle[17] where possible, without reducing the quality of care provided to our patients.
- Undertake robust evaluation to understand the impact on and value to our community, consumers, staff and services of our efforts to steward our precious health resources.

[16] The LETTERS model was developed in Newcastle NSW in 2010, and is a tool which can be used to embed sustainability from the start. See Aldrich Sykes 2018 Better Health Victoria

[17] Schreiner, R. (2013). The Morality of Resource Stewardship in Healthcare. Retrieved from http://www.drrobschreiner.com/medical-leadership/the-morality-of-resource-stewardship-in-healthcare/ 19.6.2019

2 LETTERS for Health Resource Stewardship

2.1 Leadership and Governance

Leadership and governance actions include establishing an overarching steering and clear governance and accountability structures, identifying mechanisms for sustainability from the start, ensuring the structures for progress are implemented and supported, and ensuring that risk is evaluated and managed.

2.1.2 Health Resource Stewardship Steering Committee (HRSC)

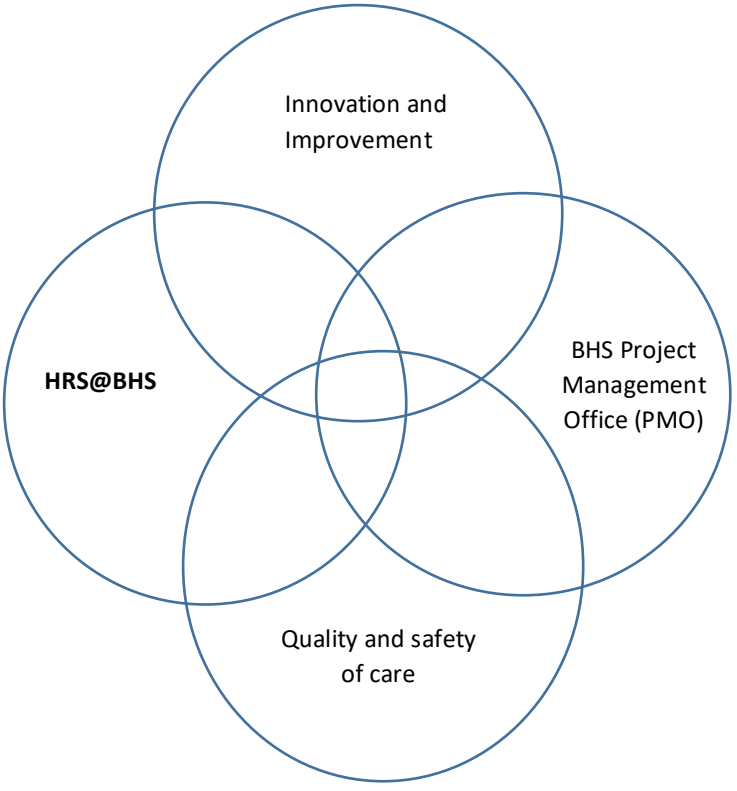
DRAFT Terms of Reference for the HRSC are found in Appendix 1. Chaired and co-sponsored by the Chief Medical Officer, together with the Executive Director of Resources and Planning, the Committee aims to

- Oversee the progress of the implementation of the HRS framework and plan of work
- Ensure or support others to ensure that risks to and from the program are managed
- Monitor the outcomes of the implementation of HRS@BHS
- Monitor the return on the investment of the implementation of HRS@BHS
- Be satisfied that the program is benefitting our community and consumers directly or indirectly
- Make recommendations where appropriate to individuals or other committees.

2.1.3 Integrating with other BHS governance and improvement activities

The HRS@BHS program does not function in isolation from other portfolio programs of work to effect continuous improvement for the benefit of our community, as illustrated in Figure 2 below.

Figure 2: HRS@BHS in relation to other closely aligned BHS Improvement functions



Note: not all HRS work takes the form of a project; not all HRS work will require involvement of the Innovation and Improvement team, and not all HRS will focus directly on quality and safety.

2.1.4 Risk Management

As part of the BHS integrated Risk Management Framework, the HRS committee will scope and identify, review, monitor and evaluate risks arising from the committee's areas of responsibility. The committee will ensure or support others to ensure that action occurs to prevent or reduce the impact of risks and will appropriately refer and escalate serious risk as appropriate.

2.1.5 Structures

The strength of the HRS@BHS program is that it is not creating a separate structure to "do the work" of health resource stewardship, but instead relies on staff, managers and leaders to incorporate HRS approaches into their daily functions. The ambition is not to create additional processes for working around inefficient ones, but to substitute a poor process with a better one, building in the new norm in ways that rapidly embed the change.

In terms of sustainability from the start, the key managerial components of the program are now part of the daily work of two key teams: the health resource stewardship manager and officer, and the Innovation Improvement Advisor (who is the convenor of RE-TRed). Part of the sustainability plan is to invest stewarded financial resources into funding directorate resource stewardship officers who can effect a positive on investment using their skills to identify opportunities for resource efficiency.

2.1.6 Policy context in Victoria and Australia

Locally HRS@BHS is situated within each Directorate's quality and financial improvement plans, given that high quality care is the most efficient care we can provide. An understanding of the potential sources of revenue and drivers of costs (as set out in Appendix 2) will inform health resource stewardship approaches. Ballarat Health Services' Statement of Priorities provides a context for work to meet quality, strategic and financial targets.

In Victoria the DHHS *Strategic Plan*, published in July 2019,[18] describes the 'value Imperative' stating that

> '…The recurrent and projected increases in health and human services expenditure is creating an urgent need to maximise the value of our expenditure and minimise systemic waste to enable us to equitably deliver positive, long-term health and well-being outcomes for all Victorians…
>
> '…A sustainable and efficient use of funds therefore means that investments must deliver the best possible outcomes for people in order to demonstrate value for money and return…' (p21-22)

Nationally, the ASQHC has led work on the need to address unwarranted clinical variation as a source of waste. Additionally researchers at Universities which train health professionals and peak health professional organisations such as the medical specialist colleges have evaluated and strongly supported efforts to reduce episodes of low-value health care.[19] It is clear that the HRS@BHS program is well aligned with local, state and national resource policy priorities aiming as it does to engage with clinicians, other staff and our community to identify opportunities to steward our precious health resources together.

2.2 *Engaging with people and processes*

The HRS program's success in effecting resource stewardship depends a number of factors including engaging with staff who both are concerned to reduce waste and are wanting to learn how they can make a difference within their daily role. It does not necessarily require a sustained large or increasing injection

[18] See Department of Health and Human Services strategic plan 2019

[19] Badgery-Parker T, Pearson S, Chalmers K, et al. Low-value care in Australian public hospitals: prevalence and trends over time *BMJ Quality and Safety* 2019; 28(3) https://qualitysafety.bmj.com/content/28/3/205

of additional resource because, if well planned, a usual way of business or providing care is underpinned always by health resource stewardship considerations.

Accordingly, engagement with people and a solid appreciation of the processes and therefore opportunities for change is critical to the success of an HRS approach, and as such each HRS initiative, iof any size, relies on appropriate stakeholder engagement and consultation.

Strategies to effect this include

- characterise aligned work underway
- understand existing structures for engagement, action, approvals and opportunities to add value rather than re-invent
- establish partnerships for action, including by creating communications connections to various BHS committees where
- deliberate strategies to engage with and listen to consumers

The HRS@BHS engagement plan comprises Appendix 3

In addition to planned engagement with BHS staff members and with consumers, the CMO Directorate Operations and Health Resource Stewardship Manager (OHRSM) will also liaise with other BHS meetings which consider resource efficiency, to ensure shared communication around HRS activities As set out in the DRAFT terms of reference, the Health Resource Stewardship Committee will have representatives from each Directorate which will assist in the engagement and communication of HRS projects.

Health Resource Stewardship program staff (comprising the CMO Directorate OHRSM and Operations and Health Resource Stewardship Officer- OHRSO) will engage with a number of BHS committees to ensure input from corporate, clinical and information technology perspectives. Liaison with meeting members and attendance at selected committees will ensure that all BHS HRS-focused projects are captured into a register of HRS projects. It is important to note however that not all HRS work is project based. Table 4 sets out the BHS Committees and meetings with potential for communication connections around HRS@BHS.

Table 4 Potential HRS stakeholder committees, meetings and forums for HRS liaison

Stakeholder group	Level of communication and connection	Objectives	Method	Frequency
Who	*Inform/Consult/Involve/Collaborate/Empower*	*What key message and what do you want to achieve*	*How will you get the message to them (letter, emails, public forum, meetings, website etc)*	*How frequently will you do it?*
PESCOM	Collaborate	To capture all HRS Projects at BHS, and to obtain further information on efficiencies	Meeting/Agenda	
ICT Governance	Collaborate	To capture all HRS Projects at BHS, and to obtain further information on efficiencies	Meeting/Agenda	
Environmental Sustainability	Collaborate	To capture all HRS Projects at BH, and to obtain further information on efficiencies	Meeting/Agenda	TBA *(Meeting are currently on hold)*
World Class Health Committee	Collaborate	To capture all HRS Projects at BH, and to obtain further information on efficiencies	Meeting/Agenda	
RE-TRed participants and alumni	Involve	To support them in their journey to accomplish their projects and continued evaluation	Attendance at final session/ Presentation of projects	Each group

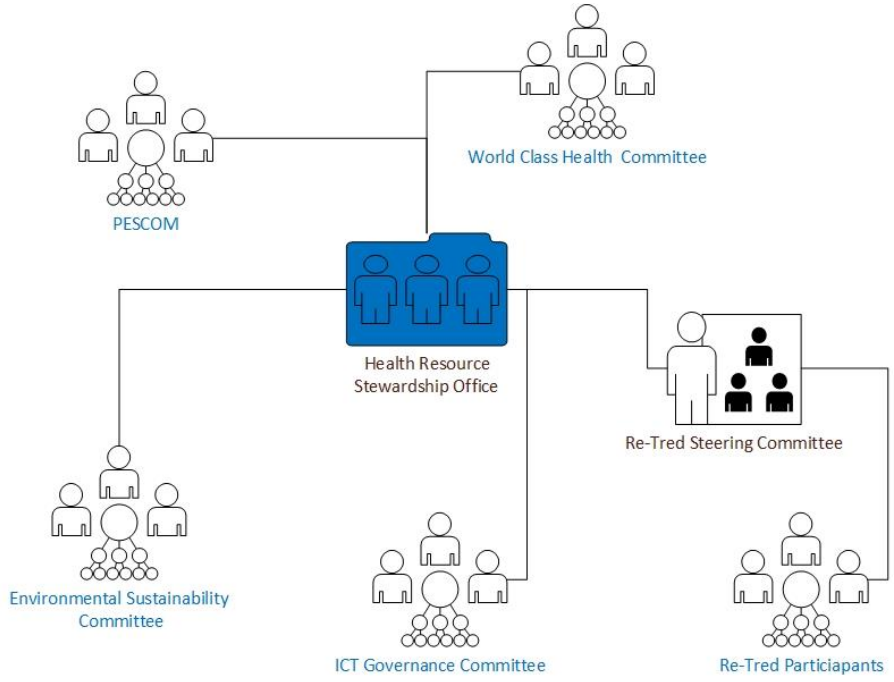
RE-TRed Steering Committee	Involve	To ensure we stay on track with the objectives of RE-TRed	Meeting/Agenda	Bi-Monthly
Resource Committee	Inform	To advise of the projects and efficiencies across the organisation that have been identified	Meeting/Agenda	
All Staff	Inform	To inspire staff to want to implement a HRS project in their area. To advise of the great work we are currently doing	• Quarterly staff meetings • Pulse • Flyers	Quarterly basis
Potential RE-TRed participants	Inform	To inspire staff to want to implement a HRS project in their area. To advise of the great work we are currently doing	• All staff meetings • Pulse	Quarterly following each Re-Tred Program

For the purposes of growing engagement it is critical that the program has a profile. Reporting the projects underway and efficiencies as a result of those outcomes is vital in work to

- capture and quantify the benefits from the HRS-focused projects across the organisation, and
- communicate the value of HRS to our community, staff and patients,

The Reporting plan and schedule for HRS@BHS is described in Section 2.6 of this report. Figure 3 sets out the 'dotted-line' communication relationships between various stakeholders and the HRS@BHS program team.

Figure 3 Engagement and communication links between HRS@BHS Program team and other BHS staff



2.3 Training and education

2.3.1 The RE-TRed Program

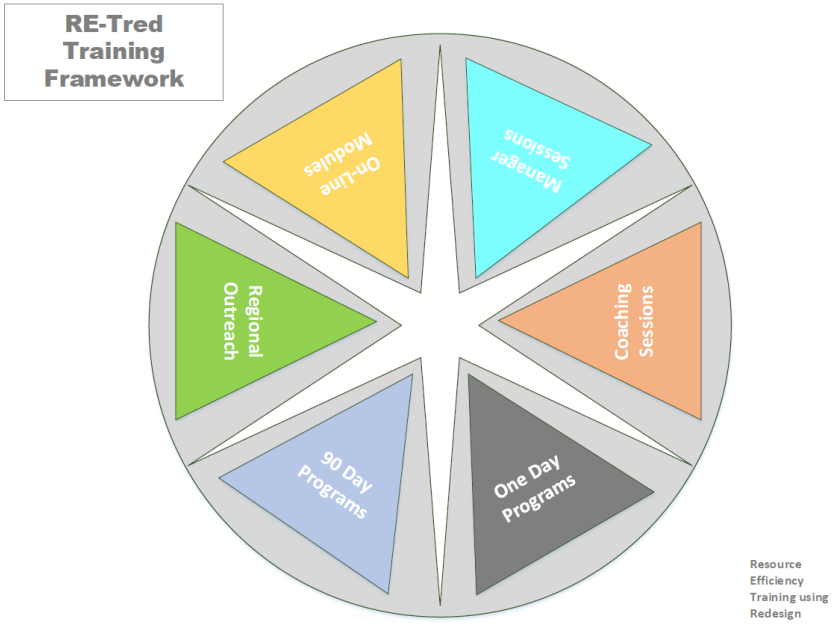
The Education arm of the HRS (Health Resource Stewardship) Program is delivered through the RE-Tred (Resource Efficiency Training using Redesign). Initially this has consisted as a 90 Day program as a seeding approach that will develop into a suite of training opportunities over 2020-2021 (see Figure 3 below).

The RE-TRed training suite will assist the HRS Program to

- Assist staff to better promote better use of resources at BHS
- Support staff in using a consistent and proven methodology for change
- Increase the profile of HRS at BHS
- Increase HRS positive change opportunities and Return on Investment
- Increase staff skills in effective change management

The RE-TRed (Resource Efficiency Training using Redesign) Program commenced at BHS in October 2018. On commencement the Program consisted of the 90 Day RE-TRed and Re-TRed Coach Programs. These Programs have been refined over the first 12 months of operation with a focus on their quality and effectiveness. The 2020-2021 plan for RE-TRed will see the diversification of Programs to also include Manager Training, One day Program, Online Training and the scoping of a regional delivery of the programs.

Figure 4 The RE-TRed Training framework



2.3.2 The 90 Day RE-TRed Program

The 90 Day RE-TRed Program aims to use the knowledge and experience of staff involved in service delivery to identify and reduce health resource waste at BHS. Staff undertaking the program nominate an opportunity for improvement in their area and are supported through a 4 month change management process aligned to the BHS process improvement/redesign methodology, which supports a structured approach to achieving their improvement goal. . Using a combination of theory and practice to support participants to bring in the improvement, participants attend four workshops to step them through the redesign process covering four key phases of process improvement.

The *RE-TRed* Program aimed to support staff to:

- Develop their skills in a proven approach to change management using their chosen change project
- Use process improvement techniques to identify the best way to approach the change in their area
- Train people to think critically about what they do, why they do it, how they do it, and whether there is an alternative way which better utilises our resources.

The LETTERS framework for sustainable improvement was used through the development of the RE-TRed Program and promoted for use by participants of the program. The Process Improvement methods used within the RE-TRed Pilot Program focuses on the use of the "Six Sigma" and "Lean Thinking" approaches embedded in a redesign framework.

The Program is available to staff across BHS from clinical & non-clinical services and involves improvements in direct service delivery. Participants are selected through an Expression of Interest process where staff identify their ideas and case for change. The 90 Day RE-TRed (Resource Efficiency Training using Redesign) Program commenced at BHS in October 2018. Since that time 2 programs have been undertaken with 25 participants, 17 of which completed the program.

The development of the program was overseen by a Steering Group who effectively advised and shaped the program. An evaluation of the first 12 months of the 90-Day RE-TRed Program cycle was undertaken in September 2019 (Summary Report Appendix 4). Future strengthening of the 90 Day RE-TRed Program as a result of the evaluation will enhance its effectiveness. This will include a greater focus on Return for Investment offered through the HRS Program.

2.3.4 RE-TRed Coach concept

The RE-Tred Coach Program aims at supporting the Participants of the RE-Tred Program to assist in gaining the best results in the 90 Day RE-Tred Program. RE-Tred Coaches provided guidance and assistance to Participants of the RE-Tred program by developing a one on one coaching relationship. Each participant is assigned their own RE-TRed Coach/Mentor who supported them as they progressed through their projects.

Coaching relationships have a proven effect on performance and personal growth, making them one of the most popular forms of professional development. It has significant benefit for both the coaches and Participants in the adult learning environment.

The RE-Tred program used a "Technical Coach" model for the program. This Model was chosen as a model designed to help Coaches transfer what is learned in a workshop environment into the service delivery area. It requires effective communication that is honest and open and based on an unbiased attitude and a willingness to help others grow professionally.

An evaluation of the 90 Day RE-TRed Program has included evaluation of the RE-TRed Coach Concept has confirmed its value to both the Coaches and the 90 Day RE-Tred Program participants recommending enhancements to the Program. Future strengthening of the Program is planned for 2020.

Training and Education of employee at Ballarat Health Services will be implemented through the RE-Tred training framework. Employees will have a number of options to participate in the best program that suits them.

2.4 Tools and Resources

A comprehensive suite of tools to support the HRS@BHS program has been developed, to assist with planning, project selection, re-design elements of diagnosis, implementation and reporting, and evaluation. Some of the tools developed are listed in Table 4 below.

Resources and templates are available on Sharepoint and will be available via the HRS@BHS webpage This will include the following documents:

- Health Resource Stewardship Program: Application and Guidelines
- Program and Project Status Reports (templates)
- Audit templates (information required templates)

Submissions for Health Resource stewardship projects can be via two ways.

1. Submission form directly to the HRS Committee

2. Submission request to RE-Tred Program

A summary of all projects currently in progress or completed and contact details of the project lead will also be available.

Table 5 Examples of tools and resources developed for the HRS@BHS program

	Category	Examples
Leadership and Governance	Resource	HRS Fact Sheet Sources of Waste Sources of Revenue and drivers of costs
	Templates	Agenda Minutes Risk assessment LETTERS Gantt chart (Word, excel, MS Project0
Engaging with people and processes	Resources	HRS contact people
	Templates	Invitations to participate in hrS activities including RE-TRed
Training and Education	Resources	RE-TRed program specific: • Fact sheet • Poster • HRS Badge artwork • Application guidelines
	Templates	• Expression of interest • A3 redesign
Tools and Resources	Resources	Tools and resources library on Sharepoint
Evaluation and audit	Resources	Guidelines for HRS program development Guidelines for Ethics Application (on HREC office site) HRS project register
	Templates	RE-TRed final results template (Word, PPT) Staff and consumer efficacy survey templates Cost benefit analysis Inputs and outputs assessment HRS project triage and assessment tool Evaluation planning tool HRS audit too
Reporting and communication	Templates	Final reports HRS reporting PPT template HRS reporting ISBAR template HRS reporting Fact Sheet Template HRS Pulse story template
Sustainability/ sustaining the new norm	Resource	HRS program checklist for sustainability@ 6 and 12 months -

2.5 Evaluation and Audit

The HRS@BHS program will be underpinned by a robust timely evaluation schedule capturing process, impact and outcome measures of inputs and outputs, using specifically collected or opportunistically

sourced qualitative and quantitative data, spanning quality and safety, workforce, performance and financial metrics.

There are two components to the evaluation and audit program

- Evaluation of the HRS@BHS model and program – spread, effectiveness, engagement, usefulness, gains
- Evaluation of specific HRS-focused activities, including those developed and implemented through the RE-TRed program (the HRS Resource Efficiency through redesign training program)

This section describes approaches to the evaluation of the HRS model and program; the detailed evaluation framework, including specific metrics remains in development. Appendix 4 sets out an evaluation of the first 12 months of the RE-TRed program.

.

2.5.1 Health Resource Stewardship Evaluation Model

The HRS evaluation model covers the development and implementation of the HRS Framework and the delivery of our Re-tred training program captured in Table 3. The qualitative and quantitate measures of the HRS Framework are captured in Table 4 in three areas of process measures, impact measures and outcome measures.

Table 6 HRS Evaluation Model

Elements	Evaluable outputs
Leadership and governance	• Leadership and engagement of Executive Sponsor • Develop Governance framework • Terms of reference • Quarterly meetings of group (Mar, June, Sept, Dec) • Monthly oversight meetings by Re-tred steering group • Report to Resource Committee
Engaging with people and processes	• Communication plan generated • Sharepoint portal development • Newsletter information • RE-TRed Presentation at key staff forums • Attendance at feeder committee meetings
Evaluation and Audit	• Refer Appendix 4 RE-TRed Evaluation Summary; the quality of the evaluation for any initiative will be reviewed iteratively and periodically and elements of the framework improved in response to evidence
Training and Education	• Re-Tred Program • Promotion of different varieties of training and education available
Tools and resources	• Re-Tred Participant workshop guide development • Re-Tred Toolkit development • Re-Tred Coaching program developed • Re-Tred Identification of suitable coaches • Re-Tred Coach workshop developed • Re-Tred Coach workshop held • Re-Tred Coach information provided • Re-Tred Coach – Participant agreement developed • Other tools and templates developed for the HRS@BHS program

Reporting and communication	• Regular reporting to steering group • Preparation of posters and publications • Final Re-Tred presentations at staff forum • Inclusion in BHS strategic plan
Sustainability	• Evaluation reporting

With respect to the timing of Status reports will be completed in the following timing

- Quarterly status reports on all active projects

Audits - following completion of project

- 6 months
- 12 months
- 2 Years
- 5 Years

Please note for audits following completion of project, it would be good to see how progress has been made in some areas, although it will also be likely that for some projects in two or five years time, BHS has evolved in health resources stewardship that projects are not recognisable in their previous state for an appropriate comparison and review

2.5.2 HRS@BHS efficiency assessment and evaluation

An HRS@BHS efficiency assessment and evaluation tool is in development that will both assess the likely impact of a proposed body of work per unit effort (ease of implementation x scale of resource stewardship gain) and quantify the HRS gains made through specific project initiatives against the 16 areas of waste. An evaluation tool has been created based on Barwon Health's project complexity tool.

2.6 Reporting and communication

Reporting and communication will include outputs for the information and response where required across BHS, including for Executive, Committees, managers, participants, all staff, Board, and external stakeholders such as DHHS and agencies, our patients and our community.

Internally program and project status will be reported to the HRSC, as well as progress against planned milestones and any obstacles or challenges the program is addressing.

Key Performance Indicators for the HRS Committee will be the Number of

- Applications (Direct or Through Re-Tred program)
- Staff trained in one of the RE-Tred Training framework areas
- Active projects
- Completed projects
- Audits completed

With respect to internal communication, snap shot presentations on HRS projects will be developed and communicated to all staff to help raise the awareness of the program to embed health resource

stewardship across BHS. In addition reporting can occur to other committees as determined by those committees.

Externally, HRS@BHS can form part of the suite of financial improvement strategies being reported to DHHS. It is possible that agencies such as Better Care Victoria will be keenly interested in the program.

Additionally it is likely that the HRS@BHS program will deliver opportunities for positive stories in our community

A comprehensive HRS@BHS communication plan will be developed during the 19-20 year.

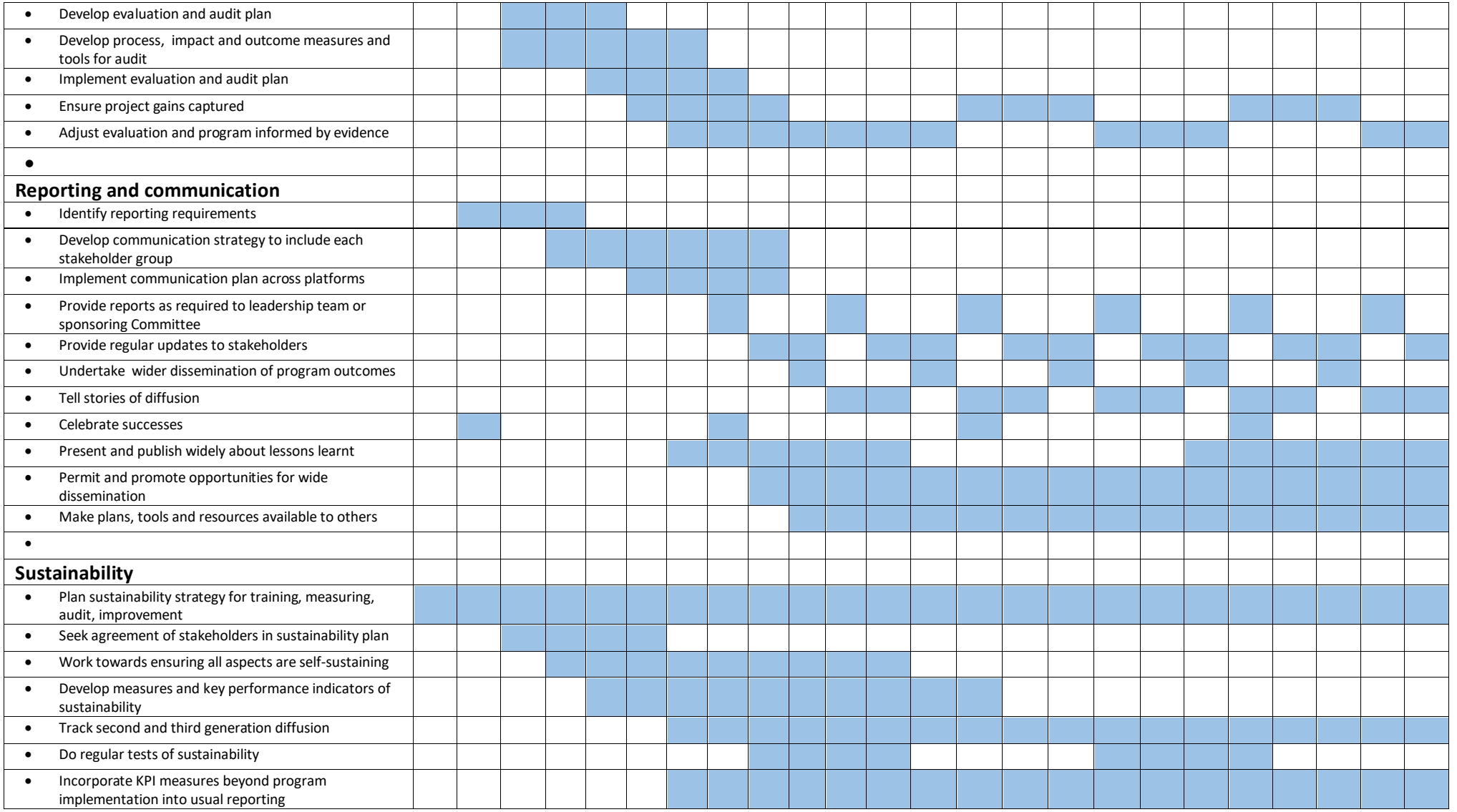
2.6 Sustainability and sustaining the new "norm"

To ensure sustainability of Health Resources Stewardship program across BHS we will:

- Ensure that the people responsible for carriage of the outcome into the future are involved in the program at the start
- Review our KPIs on an annual basis
- Review HRS work underway across the 16 sources of waste and their evaluation strategies to ensure they are effectively quantifying any resource savings and other gains
- Cultivate ownership and promotion of projects across each division
- Continue to provide training and education across the organisation
- Link HRS projects with our Strategic pillars

3 HRS@BHS 2019-2021 LETTERS plan

2019-2021	J	A	S	0	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J
Leadership and governance																								
• Identify leadership team including consumer members																								
• Establish accountability and governance structure (+/- Terms of Reference)																								
• Draft program aims																								
• Identify core or guiding policies and procedures																								
• Evaluate key risks and develop risk management plan																								
• Develop and refine strategy/ program plan with stakeholder input																								
• On-going review of aims and strategies																								
Engaging with people, processes and evidence																								
• Identify stakeholders & develop engagement plan																								
• Identify and review evidence to inform HRS strategy																								
• Seek consumer and stakeholder input into strategy planning																								
• Undertake gap analysis																								
• Map known processes (diagnostics) regarding alignment around strategy aims																								
• Identify process changes required																								
• Identify barriers and enablers to success (local and literature)																								
• Identify strategies to overcome barriers and strengthen enablers																								
• Identify processes for continuing engagement and input																								
• Evaluate relevant existing processes																								
Training and education																								
• Identify training needs																								
• Develop training plan for sustainable training using variety of strategies and platforms																								
• Implement training plan																								
• Plan evaluation of training plan																								
• Evaluate and adjust training plan																								
• Adjust and expand training strategies as needed																								
	J	A	S	0	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J
Evaluation and audit																								
• Identify auditable process elements of program																								


Develop evaluation and audit plan
Develop process, impact and outcome measures and tools for audit
Implement evaluation and audit plan
Ensure project gains captured
Adjust evaluation and program informed by evidence
Reporting and communication
Identify reporting requirements
Develop communication strategy to include each stakeholder group
Implement communication plan across platforms
Provide reports as required to leadership team or sponsoring Committee
Provide regular updates to stakeholders
Undertake wider dissemination of program outcomes
Tell stories of diffusion
Celebrate successes
Present and publish widely about lessons learnt
Permit and promote opportunities for wide dissemination
Make plans, tools and resources available to others
Sustainability
Plan sustainability strategy for training, measuring, audit, improvement
Seek agreement of stakeholders in sustainability plan
Work towards ensuring all aspects are self-sustaining
Develop measures and key performance indicators of sustainability
Track second and third generation diffusion
Do regular tests of sustainability
Incorporate KPI measures beyond program implementation into usual reporting

4 Appendices

Appendix 1

DRAFT BHS Health Resource Stewardship Committee - Terms of Reference

Ballarat Health Services (BHS) has developed *de novo* and is implementing an organisation-wide health resource stewardship program to ensure optimal use of its human, intellectual, financial, infrastructure and other resources. The Health Resource Stewardship@ BHS program will be governed by the Health Resource Stewardship Committee

The body of work overseen by the HRS committee aligns to all four of BHS's strategic pillars given that it concerns stewarding precious health resources to deliver to our community and consumers world-class healthcare by well-trained staff doing their work expertly, safely and efficiently.

1. Purpose of the Committee

To

- Oversee the progress of the implementation of the HRS framework and plan of work
- Ensure or support others to ensure that risks to and from the program are managed
- Monitor the outcomes of the implementation of HRS@BHS
- Monitor the return on the investment of the implementation of HRS@BHS
- Be satisfied that the program is benefitting our community and consumers directly or indirectly
- Make recommendations where appropriate to individuals or other committees.

2. Membership

Members	Position	Role
1.	Chief Medical Officer	Chair and co-Sponsor
2.	Executive Director Resources and Planning	Co-Sponsor
3.	Chief Nurse and Midwifery Officer (or delegate)	Member
4.	Executive Director Infrastructure and Redevelopment (or delegate)	Member
5.	Manager CMO Operations and Health Resource Stewardship	Member
6.	RE-TRed Program Convenor	Member
7.	Environmental Sustainability Officer	Member
8.	Senior representative from each Directorate	Member
9.	Health Resource Stewardship Officer	Secretariat
10.	Consumer(s)	Member

3. Secretariat

To be provided by the BHS CMO Operations and Health Resource Stewardship Officer (or delegate)

4. Frequency of Meetings

The Committee shall meet on a bi-monthly basis.

5. Attendance

Apologies are to be submitted to the secretary prior to the meeting

6. Invitees and Co-opted Members

At the discretion of the Committee Chair the Committee may invite or co-opt additional individuals as appropriate. Members may send a delegate if they are unable to attend.

7. Decision making and Quorum

Decision making will be made by consensus. A quorum will consist of half the membership.

8. Review

The Committee will perform an evaluation of its performance at least annually to determine whether it is functioning effectively by reference to performance against functions and current best practice. The Terms of Reference of the Committee shall be reviewed within the first 12 months and then every 3 years or earlier if indicated. Any changes to the Terms of Reference of the Committee shall be presented to the *Our Community* Committee for consideration and endorsement.

9. Agenda

An agenda shall be circulated at least four working days before the meeting.

10. Minutes

Minutes will be kept according to the Ballarat Health Services Meeting Minutes standard. Minutes of the Committee shall be distributed within 10 working days and endorsed at the next scheduled meeting.

11. Accountability

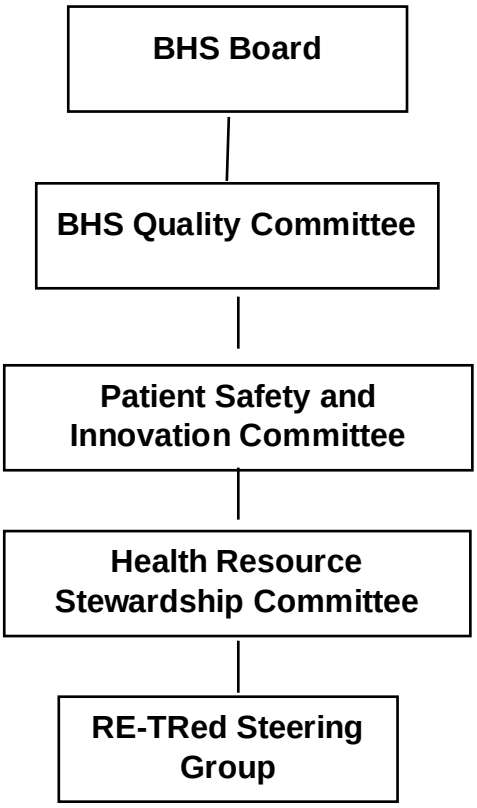
The Health Resource Stewardship Committee reports to the Patient Safety and Innovation Committee. Governance structure shown in Figure A below.

12. Key performance indicators

Key performance indicators will be linked to the functions of the committee (Section 8) and the BHS Business Plan 2017-2021.

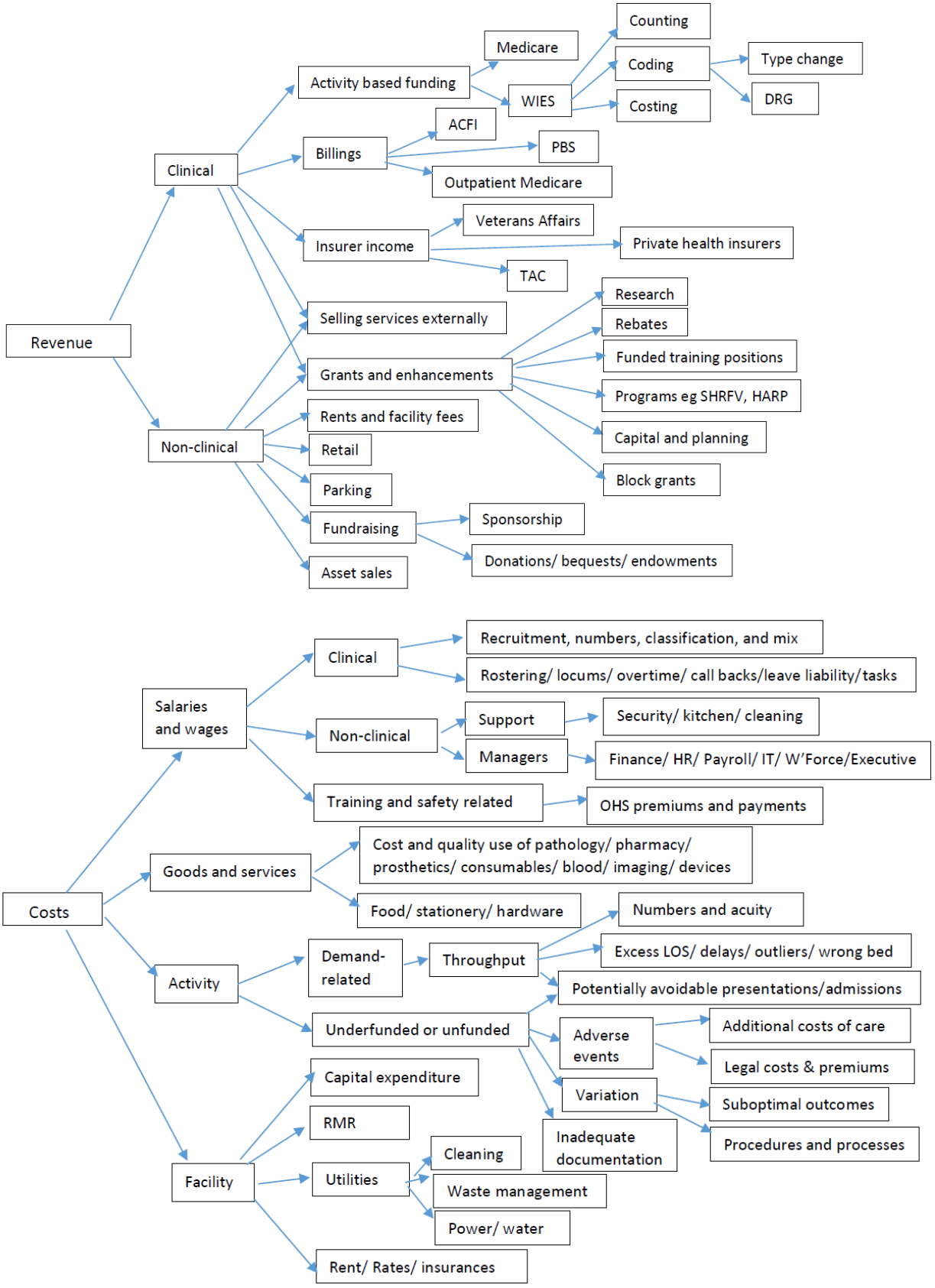
Authorisation of TOR:	**Date Drafted September 2019:**
Authors: CMO	**Review date:**
Related documents: • BHS Strategic Plan: 2017- 2021 • BHS Business Plan: 2017- 2021 • Victorian *Public Health and Wellbeing Act 2008* • Victorian Department of Health and Human Services *Strategic Plan* July 2019	**Related strategic goals:** • Your Health • World Class Health Care • Our Staff • Our Community

Figure A. HRS@BHS governance structure



Appendix 2

Sources of revenue and drivers of costs at Ballarat Health Service



Resource Efficiency Training using Redesign
RE-TRed

Program Evaluation
Summary
September 2019

Sharon Sykes
Improvement & Innovation Advisor
Ballarat Health Services

Ballarat Health Services
Putting your health first

A3 Executive Summary

This report documents the introduction of the RE-TRed (Resource Efficiency Training using Redesign) Program introduction at Ballarat Health Services and evaluates the program to date to inform the future direction of the Program at the Health Service.

Ballarat Health has launched the organisation-wide Health Resource Stewardship Program in 2018 to steward precious health resources to deliver high quality care while ensuring the health budget is spent efficiently on effective clinical service delivery. The Improvement and Innovation Program commenced at BHS in October 2017. Funded through Better Care Victoria to build improvement and innovation capability benefitting BHS the Program also focuses on strengthening BHS performance, developing a framework for innovation and enhancing improvement culture.

The RE-TRed Program concept was developed in July 2018 as a result of discussions between the two programs. The RE-TRed Program aims to meet the aim of both programs by providing the training arm of the Health Resource Stewardship and the capacity building agenda of the Improvement and Innovation Program.

The RETRed (Resource Efficiency Training using Redesign) Program commenced at BHS in October 2018. Since that time 2 programs have been undertaken with 25 participants, 17 of which completed the program. Participant feedback on the whole was positive. Feedback gained during the programs resulted in several changes to the program as it developed.

This Program Evaluation has resulted in the following additional recommendations:

- The development of the Health Service Resource Evaluation Framework to better capture the financial and quality benefits of the RE-TRed Projects.
- The need to diversify the options for delivery of the program allow greater spread of the program increasing update and profile of the HRS approach.
- Increased offline support for participants to progress projects
- Review of governance of the RE-TRed program to an Advisory Group reporting through to the World Class Health Service Strategic Pillar at BHS
- Increased offline support for participants to progress projects
- Future scoping to accredit the program
- Scope Regional delivery of the program

A3 Acknowledgements

The successes of RE-TRed program could not have happened without the contribution of the many committed staff members who were excited to share the vision of empowering staff to better use resources. It would also not have been possible without the support of the Ballarat Health Services Executive team under the leadership of Dale Fraser.

Members of the RE-TRed Steering Group were instrumental in development of the program and are to be commended for their vision and creativity. The executive leadership of Associate Professor Rosemary Aldrich and active participation in the group of Leonie Lewis, Sally Kruger, Samantha Gent, Ross Wheatland, Sharon Sykes, Emma Newman, Fiona Murphy, Lisa-Jane Moody and Prue Orchard underpinning the work done.

Sally Kruger and Sharon Sykes developed and delivered the program. Both with a background in theory and practice of system redesign and change management they took the journey together. Their work

was informed and inspired by colleagues at Eastern Health, Royal Melbourne Hospital and the NSW Agency for Clinical Innovation.

Participants in the two programs came to the program with a will to make a difference in their workplace and willingness to experience something new. Outstanding in their support for the Participants were a team of Coaches drawn from BHS staff.

A3.1 Introduction

Costs of and demands upon the Australian health care system and health care services are ever increasing, and maximising efficiencies requires vigilant attention to how our time, effort and money is used. Ballarat Health launched the organisation-wide Health Resource Stewardship (HRS) program in 2018 to steward precious health resources to deliver high quality care while ensuring the health budget is spent efficiently on effective clinical service delivery. The BHS Health Resource Stewardship program was conceived in May and June 2017 and sits within the Chief Medical Officer Directorate of BHS and reports through to its Executive Sponsor A/Professor Rosemary Aldrich.

The Improvement and Innovation Program (IIP) commenced at BHS in October 2017. Funded through Better Care Victoria to build improvement and innovation capability benefitting BHS the Program also focuses on strengthening BHS performance, developing a framework for innovation and enhancing improvement culture. The BHS IIP sits within the Chief Nursing and Midwifery Officer Directorate of BHS and reports through to its Executive Sponsor Ms Leanne Shae.

The RE-TRed Program concept was developed in July 2018 as a result of discussions between the HRS and IIP programs. The RE-TRed Program aims to meet the aim of both programs by providing the training arm of the Health Resource Stewardship and the capacity building agenda of the Improvement and Innovation Program. The RE-TRed Program uses the knowledge and experience of staff involved in service delivery to implement potential positive changes in their services.

This evaluation report describes the development and delivery of the first two RE-TRed Programs delivered at BHS to evaluate the effectiveness of the program to date and to inform the future development of Program. The aims of this evaluation are to

- Gain learning from the development and delivery of RE-TRed Program
- Evaluate the effectiveness of the program to date
- Inform the future development of Program

1.1 Background

1.1.1 Health Resource Stewardship

Hospitals and settings for health care delivery in Australia are diverse. However, regardless of their casemix and core business, hospitals and other health care agencies must develop capacity to confront the looming perfect storm in health care resourcing: ever increasing demand for increasingly expensive services, in an environment of budget constraint and political disinclination to raise direct taxes to fund the rising costs. In cancer care alone the cost/ capacity imbalance is increasingly increasing, due to such factors as

- the population is ageing: given that the incidence of cancer increases with age more cancer is diagnosed as over time more people move into at risk age groups
- Globalisation of clinical trials means that evidence-based protocols are available for most cancers
- New pharmacotherapeutic agents are coming into use, and are increasingly expensive.

- People once diagnosed and treated are surviving longer, increasing the number of check-ups. If people relapse there are more lines of therapy available, and more support available to care for very unwell patients undergoing chemotherapy
- Expensive imaging, especially PET scans, to measure progress of care is now standard of care in many chemotherapy trials

Authors Berwick and Hackbarth (2012), Bennett (2013) and Duckett (2014, 2015) all agree that "waste" pervades the health system. Berwick and Hackbarth suggested that 21% of healthcare spending could be attributed to failures of care delivery and co-ordinated care, overtreatment, administrative complexity, and fraud and abuse.[20] Bennett as chair of the Rudd Government's Health and Hospitals Reform Commission set out numerous strategies to tackle inefficiency and waste, including addressing service gaps which prevented efficient care, duplication and low value care.[21] Duckett and Breadon have advocated for maximising practice scope of professionals,[22] liberating dollars to the health system if all hospitals were as cost-efficient in doing procedures as the most efficient hospitals,[23] and if people did not receive ineffective or low value treatment.[24] In its *Australian Atlas of Healthcare Variation* the Australian Commission on Safety and Quality in Healthcare (ACSQHC) argued that much of the variation in patterns and therefore costs of care was likely to be unwarranted, and that managing variation was critical to improving the quality, value and appropriateness of health care.[25] The ACSQHC's report also provided some evidence about strategies to reduce variation.

1.1.2 Sources of Resource Waste

Table 2 in the main body of the HRS@BHS framework sets out the 16 sources of health resource waste which may afflict BHS today.

It is important to note that some work to steward precious resources has already commenced in health across Australia. For example, all facilities which seek national accreditation to function under the National Safety and Quality Health Service Standards must comply with standard 3.14 antimicrobial stewardship. Other work underway in various facilities includes system or hospital-wide whole of health programs to better manage demand, flow and community links (with varying degrees of success). The National Prescribing Service is auspicing *Choosing Wisely*, a campaign mirroring experience in North America to identify and eliminate low-value interventions.

1.1.3 Improvement and Innovation Program

The Ballarat Health Services commenced its involvement in the DHHS Funded Redesigning Hospital Care Program in 2013. As a recommendation of the Targeting Zero Report into hospital safety and quality assurance in Victoria, October 2016, the Better Care Victoria (BCV) Department was formed and took the leadership role for the Redesigning Healthcare Program. BCV integrated with Safer Care Victoria (SCV) in July 2017 to broaden the scope of BCV and drive the further integration of the improvement and quality agenda across Victoria. The System Improvement, Innovation and Leadership Branch of SCV oversee the Improvement and Innovation Program. The aim of the program is to deliver measurable improvements in the quality, safety, efficiency and effectiveness within BHS and across the Victorian health system.

The Improvement and Innovation Program at BHS commenced in October 2017 and sits within the Chief Nursing and Midwifery Officer Directorate of BHS reporting through to its Executive Sponsor Ms Leanne

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[20] Berwick DM, Hackbarth AD. Eliminating waste in US Health Care. *Journal American Medical Association* 2012; 307(14): 1513-1516
[21] Bennett, C. Are we there yet? A journey of health reform in Australia. *Medical Journal of Australia* 2013; 199(4) 251-255
[22] Duckett S, Breadon P. *Unlocking skills in hospitals: better jobs, more care*. Grattan Institute Report No 2014-8, April 2014. Melbourne: Grattan Institute
[23] Duckett S, Breadon P. *Controlling costly care: a billion-dollar hospital opportunity*. Grattan Institute Report No 2014-2, March 2014. Melbourne: Grattan Institute
[24] Duckett S, Breadon P. *Questionable care: avoiding ineffective treatment*. Grattan Institute Report No 2015-7, August 2015. Melbourne: Grattan Institute
[25] ACSQHC. 2016 Australian Atlas of Healthcare Variation. Sydney: ACSQHC

Shea. The Program is guided by an overall Logic Model of four Domains aimed at delivery of a considered and comprehensive program that will meet the needs of BHS.

Figure One – Improvement and Innovation Program Overview

1.2 RE-TRed

The RE-TRed Program aims to use the knowledge and experience of staff involved in service delivery to identify and reduce health resource waste at BHS. Staff undertaking the program nominate an opportunity for improvement in their area and are supported through a 4 month change management process aligned to the BHS process improvement/redesign methodology, which supports a structured approach to achieving their improvement goal. . Using a combination of theory and practice to support participants to bring in the improvement, participants attend four workshops to step them through the redesign process covering four key phases of process improvement.

The *RE-TRed* Program aims to support staff to:

- Develop their skills in a proven approach to change management using their chosen change project
- Use process improvement techniques to identify the best way to approach the change in their area
- Train people to think critically about what they do, why they do it, how they do it, and whether there is an alternative way which better utilises our resources.

The Process Improvement methods used within the RE-TRed Pilot Program focuses on the use of the "Six Sigma" and "Lean Thinking" approaches embedded in a redesign framework.

The Program is available to staff across BHS from Clinical & Nonclinical services and involves improvements in direct service delivery. Participants are selected through an Expression of Interest process where staff identify their ideas and case for change.

Benefits initially identified by the Steering group include:

Participants will:

- Identify a potential issue in their work area and be supported to "do something about it"
- Gain support for participation from their Manager
- Be supported through a local change project using proven process improvement methods

- Be supported by a BHS based Process Improvement Coach with process improvement and redesign experience, knowledge and success
- Be helped through the Program to measure and celebrate improvements
- Learn as they go so that they can support others in similar processes in the future

Managers will:

- Benefit from staff increasing their change management skills and knowledge
- Benefit from the positive outcomes of the project in their area
- Benefit from a positive change culture in their areas
- Support good communication around the project to staff

1.2.1 Key features of the RE-TRed program

1.2.1a The LETTERS Framework

The LETTERS framework for sustainable improvement (which builds in sustainability from the start) was used through the development of the RE-TRed Program and promoted for use by participants. LETTERS represents seven key tasks which need simultaneous attention through the short or long life of the project, and each of which can be set out broadly or in detail as needed.

Figure Two: LETTERS Framework

1.2.1b Redesign Methodology

The *RETRed –Program* utilised a process redesign approach to promote successful outcomes. A proven Redesign methodology ensures an effective approach to review and improve the quality, effectiveness and efficiency of services. The Redesign Methodology used at BHS uses four stages using a practical toolkit to guide staff to implement successful change.

The four stages include:

1. Commissioning – Identifying the gap between current and ideal performance and setting a practical target for improvement.

2. Diagnostics – Understanding the current state through data collection and analysis and process mapping, asking people delivering, involved in and receiving services for their opinions. This phase uses Process Improvement tools to identify problems and establishes a baseline performance to compare with when a change is put in place.
3. Solution Design and Implementation – Engaging staff to identify and priorities improvements to address the identified causes of problems. Creation of an action plan to create the agreed changes.
4. Evaluation & Sustainability – Monitor the process to confirm that the improvement is achieved, effective and sustained.

1.2.1c Process Improvement

The Process Improvement methods used within the RETRed Pilot Program focused on the use of the "Six Sigma" and "Lean Thinking". Lean Thinking is primarily concerned with the creation of flow in processes, and the removal of wasteful activities that do not directly improve patient care and that waste the precious resource of staff time and capacity. This is achieved by determining what is of value to the customer. Six Sigma is a data-driven methodology that focuses on identifying and reducing variation in a process, thereby eliminating defects. A defect is defined as anything outside of customer specifications

1.2.1d RE-TRed Coach concept

The RE-Tred Coach Program aims at supporting the Participants of the RE-Tred Program to assist in gaining the best results in the program. Coaching relationships have a proven effect on performance and personal growth, making them one of the most popular forms of professional development. It has significant benefit for both the coaches and Participants in the adult learning environment.

The RE-Tred program used a "Technical Coach" model for the program. This Model was chosen as a model designed to help Coaches transfer what is learned in a workshop environment into the service delivery area. It requires effective communication that is honest and open and based on an unbiased attitude and a willingness to help others grow professionally.

RE-Tred Coaches provided guidance and assistance to Participants of the RE-Tred program by developing a one on one coaching relationship. Each participant was assigned their own RE-TRed Coach/Mentor who supported them as they progressed through their projects.

A3.2 Evaluation methods

The evaluation of RE-TRed has been undertaken against the LETTERS model, each element with planned activities and outcomes. These seven elements covered

Leadership and Governance
Engaging with people and
processes **T**raining and Education
Tools and Resources
Evaluation and audit
Reporting and communication, and
Sustainability

3.1 Scope of evaluation

The evaluation covers the development and delivery of the RE-TRed program for the first two programs. It focuses on impact for Participants, Coaches and the Steering Group. Area Manager and Executive staff at BHS have not been included.

Appendix 3 Table 1 Actions taken of RE-TRed program across the LETTERS elements; evaluation measures

Leadership and governance		**Quant**	**Qual**
Leadership and engagement of Executive Sponsor Aldrich Develop Governance framework Develop steering group terms of reference Fortnightly setup meetings of steering group August 2018 to October 2018 Monthly oversight meetings by steering group October 2018 to May 2019	Process Impact Outcome	• Steering Group measures • Meetings held; Participation at meetings • Business as usual plan	• Adherence to Gantt chart • Steering group feedback
Engaging with people and processes			
Consultation with staff on RE-TRed concept Communication plan generated Draft messages Expression of interest, FOQ & Information package Logo design Advertising posters Postcard development & circulation Sharepoint portal development Newsletter information Presentation at key staff forums	Process Impact Outcome	• Communication plan development and implementation • Expressions of interest received • Retention of participants • Badges presented • Final presentation of projects	• Requests for program regionally • Attendance at presentation sessions
Training and Education			
Expression of interest process design Expressions of interest process implemented Development of workshop content Workshop bookings Email lists developed Teaching materials developed Four Workshops per group Evaluation form developed Evaluations collated	Process Impact Outcome	• Workshops developed and held • Participant attendance Outcomes from projects • Return on investment • Benefits realisation	• Evaluation of Workshops • Participant feedback • Coach feedback

Tools and resources			
Participant workshop guide development Toolkit development Coaching program developed Identification of suitable coaches Coach workshop developed Coach workshop held Coach information provided Coach – Participant agreement developed	Process Impact Outcome	• Toolkit developed • Coach program developed	• Feedback on toolkit • Evaluation of Coach sessions
Evaluation and Audit		• Customised according to each initiative	
Reporting and communication			
Regular reporting to steering group Preparation of posters and publications Final presentations at staff forum Inclusion in BHS strategic plan	Process Impact Outcome	• Reporting to Patient Safety and Innovation • BHS Operational Plan	
Sustainability		•	
Staff capability for Knowledge Implement skills Teach skills Evaluation report	Process Impact Outcome	• Evaluation report completed • Evaluation report recommendations implemented	

A3.3 Results

Appendix 3 Table 2: RE-TRed evidence of implementation

Elements	Actions	Evidence
Leadership and governance	Leadership and engagement of Executive Sponsor Aldrich Develop Governance framework Develop steering group terms of reference Fortnightly setup meetings of steering group August 2018 to October 2018 Monthly oversight meetings by steering group October 2018 to May 2019 Report to Patient Safety and Innovation Committee	Steering group created Terms of reference Gantt chart Meeting met quorum 67% April 2019 minutes & decision log
Engaging with people and processes	Consultation with staff on RE-TRed concept Communication plan generated Draft messages Expression of interest, FOQ & Information package Logo design Advertising posters Postcard development & circulation Sharepoint portal development Newsletter information Presentation at key staff forums	Communication examples: Expression of Interest FAQ Information Advertisement female Advertisement male Newsletter Postcards
Training and Education	Expression of interest process design Expressions of interest process implemented Development of workshop content Workshop bookings Email lists developed Teaching materials developed Four Workshops per group Evaluation form developed Evaluations collated	Workshops created Overview Agenda example Slides example Evaluation
Tools and resources	Participant workshop guide development Toolkit development Coaching program developed Identification of suitable coaches Coach workshop developed Coach workshop held Coach information provided Coach – Participant agreement developed	Toolkit created (toolkit) Coaching program developed (information sheet and agreement) Coaching workshops x 2 held (workshop presentation
Evaluation and Audit	Process and impacts described as above Outcome evaluation continuing with some time and financial savings demonstrated	Choosing Wisely: halved requests for venous blood gases Increased proportion of doctors commencing with BHS Provider numbers
Reporting and communication	Regular reporting to steering group Preparation of posters and publications Final presentations at staff forum Inclusion in BHS strategic plan	Presentations held Presentation Certificate Badge Inclusion in BHS strategic priorities BHS Priorities

A3.4 Discussion

The RETRed (Resource Efficiency Training using Redesign) Program commenced at BHS in October 2018. Since that time 2 programs have been undertaken with 25 participants, 17 of which completed the program.

The development of the program was overseen by a Steering Group who effectively advised and shaped the program. Feedback from members of the Steering Group reflected the group had been successful in its aim.

Participant feedback on the whole was positive. Feedback gained during the programs resulted in several changes to the program as it developed. One theme of feedback was the need for higher accountability to complete work by participants. As a result the program has been restructured to require documentation of progress at each of the four phases of the program. This documentation is in the form of A3s which are approved by the participant manager. This strategy should help progress the projects and better engage the mangers.

Another theme is the lack of dedicated time for participants to progress their projects. This experience varied for individual participants. The allowance of a project day for each phase of the project offered by participants from the Emergency Department promoted a higher level of success of projects in this area. This theme will continue to be monitored and reviewed.

The program will also benefit from development of the Health Service Resource Evaluation Framework to better capture the financial and quality benefits of the RE-TRed Projects. This will promote the sustainability of the program and the value add to the organisation. It is also anticipated that there will be a positive impact on BHS culture and reputation as a result.

The need to diversify the options for delivery of the program are highlighted in the recommendations. This will allow greater spread of the program increasing update and profile of the HRS approach.

A3.5 Recommendations

Appendix 3 Table 2: Recommendation arising from RE-TRed evaluation

Elements	Recommendation	Timing
Leadership and governance	• Replace RE-TRed Steering Group with RE-TRed Program Advisory Group meeting quarterly • Align the RE-TRed Program Advisory Group with the World Class Healthcare Pillar	• Short • Short
Engaging with people and processes	• Publish article/conference presentation • Quality awards submission	• Medium • Short
Evaluation and Audit	• Further evaluation at intervals *after* conclusion of implementation to include participants, managers, coaches and executives. • Development of further RE-TRed evaluation framework in collaboration with HRS team • Seek input from HRS team re evaluation measures for each HRS piece of work	• Medium • Short
Training and Education	• The RE-TRed Program to be run twice a year • Scope value of full day workshops and dedicated project days • Further development of Coach program to expand knowledge and skills • Diversify training to offer a suit of courses including : Manager's session, project on a page, • Development of education passport • Accreditation of course aligning with RTO and linking with tertiary studies	• Short • Short • Short • Medium • Long • Long
Tools and resources	• Review of toolkit • Online training on A3 recording • Online redesign training • Online course materials] • Refine HRS project implementation reporting template to include clear description of the resource stewardship gain	• Short • Short • Medium • Long
Reporting and communication	• Development of virtual project management office	• Short
Sustainability	• Regional delivery of program • Embed in education calendar • Engagement of additional presenters/course administrators • Dedicated position to maintain program	• Medium • Short • Medium • Medium