EVALUATION OF THE NSW AGENCY FOR CLINICAL INNOVATION (ACI) CENTRE FOR HEALTHCARE REDESIGN DIPLOMA PROGRAM (2010 TO 2012)

June 2013

BMcD Consulting

This report was prepared by:
Dr Bob McDonald
Managing Director, BMcD Consulting
bmcdonald@bmcdconsulting.com
http://www.bmcdconsulting.com

With the support of:

Raj Verma
(Director, Clinical Program Design and Implementation, ACI)

Lea Kirkwood
(Program Manager, Centre for Healthcare Redesign, ACI)

Estelle Marque
(Centre for Healthcare Redesign Course Manager, ACI)

Radhika Rao
(Centre for Healthcare Redesign Support Officer, ACI)

Dr Nigel Lyons
(Chief Executive, ACI)

Acknowledgements

We would like to acknowledge our appreciation to all those who participated in the evaluation including those who gave up their very limited time to be interviewed, be involved in a focus group, or who completed a survey. Special thanks to the six Redesign Leaders who generously agreed not just to be interviewed for an extended period, but to help organise meetings and provide hospitality in their LHD. Special thanks also to those from outside of ACI involved in a workshop to help shape the report's recommendations – Judy Swan (Redesign Leader, HNE LHD), Margaret Chapman (Redesign Leader, SWS LHD) and Tim Sinclair (General Manager, Concord Hospital, SWS LHD).

Further Information on the evaluation or the Centre for Healthcare Redesign can be obtained from:
Ms Lea Kirkwood
(Program Manager, Centre for Healthcare Redesign, ACI)
Level 4, Sage Building, 67 Albert Avenue, Chatswood NSW 2067
PO Box 699 Chatswood NSW 2057
Tel +61 2 9464-4657| Fax +61 2 9464 4728
Lea.Kirkwood@aci.health.nsw.gov.au | www.aci.health.nsw.gov.au

Table of Contents

Executive Summary

Background

Recognising the need to build health workforce capability for healthcare redesign, in 2007 NSW Health started a program of building capability in redesign methodology through the Centre for Healthcare Redesign (CHR). Since then, the program has been delivered up to three times annually with over 240 health staff graduating. The three main goals of the current Diploma program are:

1. Professional development of the participant in understanding and applying project management and redesign methodology to innovate healthcare
2. Delivery of a redesign project with a scoped and signed off implementation plan
3. Development of the NSW Health workforce's capability to lead redesign projects

In view of some earlier changes to improve the Diploma program, along with the transition of the CHR to the NSW Agency for Clinical Innovation (ACI), it was considered timely to conduct an evaluation of the program to inform ongoing improvements. The evaluation was carried out between December 2012 and May 2013. It includes both elements of formative and summative evaluation approaches and focuses on the three years, 2010 to 2012. The evaluation does not include the Chronic Care Aboriginal Program (CCAP) because it used a different approach.

The primary evaluation questions, based on a program logic model, were:

1. To what extent have CHR participants met each level of Kirkpatrick's training evaluation model:
   i. Reactions
   ii. Learning
   iii. Behaviour
   iv. Results?
2. What were the benefits (tangible and intangible) of the Diploma program?
3. What are the key success factors, and barriers to achieving the Program's objectives?
4. How should ACI Networks engage with Redesign School projects and manage opportunities for spread of innovative practices?

These questions were answered using a mixed methods evaluation approach which included:

- Interviews and focus groups with 62 key stakeholders
- Web-based surveys with feedback from 93 former participants and 14 sponsors
- Collection and analysis of some existing quantitative data including participant assessments and feedback
- Collection of several illustrative case studies

Main Findings

(1) Kirkpatrick's four-level evaluation model

Kirkpatrick's four-level model (Kirkpatrick and Kirkpatrick 2006, 2009) was used for the evaluation as it is a well-recognised training evaluation model that has been widely used over a number of decades. The findings for each of the four levels are summarised below.

Kirkpatrick Level 1: Reactions - what participants thought and felt about the training

- Feedback from those who have undertaken the course, as well as their sponsors and other key stakeholders, has been extremely positive.
- In the survey of previous participants from 2010 to 2012 (n=93), an extremely high 95.7% said they were very satisfied with the course and 94.6% indicated they would recommend the course to others
- Participants felt 'special' and that their project was also special. Furthermore, they believed they were involved in something 'really important' for NSW Health by improving patient care.

Kirkpatrick Level 2: Learning - the resulting changes in knowledge, skills and attitudes

- Over 90% of previous participants saw that the course made a significant contribution to equipping them to implement change and manage projects to improve healthcare; two key targeted learning outcomes of the course.
- Across each of the eight inventory groups, major statistically significant ($p<0.001$) self-assessed improvements in knowledge, skills and confidence occurred during the 20-week course.

Kirkpatrick Level 3: Behaviour - how on the job behaviour has changed as a result of the learning

- There was general feedback from key stakeholders that attendance at the CHR course had not just resulted in increased knowledge, skills and attitudes, but that participants were generally able to apply a number of these during the diagnostic, solution design and implementation planning phases. The presence of an experienced Redesign Leader and sponsor/s provided important support for this.
- A major behavioural change was not to 'jump straight into [supposed] solutions' as had previously been the approach with many participants.
- A significant sub-group of graduates were not involved in project implementation following the course and thus missed out on a valuable opportunity to consolidate the learnings and to further develop and apply their skills in project and change management, and healthcare reform.

Kirkpatrick Level 4: Results - the outcomes achieved for the organisation as a result of the training

- While some projects from 2010 to 2012 had been fully implemented, at the time of the survey, most had been partially implemented and sustained with approximately two thirds of respondents saying that at least half their project goals had been achieved.
- The reasons for limited implementation varied but included an unrealistic project scope, a change in circumstances (for example, departure of key staff), and lack of local support.
- About half the survey respondents said the CHR could do more with the course to help participants and service providers to achieve successful project outcomes.
- While most healthcare leaders saw that the graduates were a valuable resource that should be used for other change management and healthcare reform projects, it was apparent that some were not being optimally used in a planned way for ongoing redesign.

(2) Perceived *Program Benefits*

A range of perceived direct and indirect benefits from the Program were identified by key stakeholders. The four main identified benefits were: (i) graduates equipped with an effective redesign methodology and a skillset of useful tools; (ii) change and project management knowledge and skills development; (iii) useful networks with other graduates for ongoing sharing of resources; and (iv) increased capacity and capability within the health system for improving health care delivery and outcomes.

(3) Key Success Factors

The key success factors identified for achievement of the program's objectives were:

(i) *Evidence-based training program:* This included the use of a range of adult learning principles, a flexible redesign methodology that has been demonstrated to work in a diversity of healthcare settings, experienced training staff with a track record in healthcare reform, and program and project evaluation.

(ii) *Right participants*: Key qualities identified were having credibility and trust, passion and drive, networking and interpersonal skills, and the potential to become future change leaders.

(iii) *Appropriate projects*: The selection of the right project was critical with it needing to be a local health priority with strong support from management and clinicians, as well as being well scoped with achievable goals.

(iv) *Effective sponsors*: Key attributes for an effective sponsor were that they were accessible to the participant and their team, understood the service and the fundamentals of redesign, and were a strong advocate and supporter for the project. For most projects, it was also recommended there should be both a senior manager sponsor and a clinical lead.

(v) *Ongoing strong local support:* This included participant release for the program, local team support particularly from medical staff and management, and support / coaching from an experienced and skilled Redesign Leader/s.

(4) Barriers and Challenges

Several barriers or challenges that impacted on program and project success were also identified. These included:

(i) *Insufficient preparation:* Occasionally there has been poor project, participant and

sponsor selection; service providers and participants not fully aware up front of the commitment required; inadequate orientation and preparation of sponsors; and limited project development prior to the course. This has led to some course withdrawals.

(ii) *Inadequate release time for some participants.*

(iii) *Some course limitations: For example,* limitations with the CHR e-learning platform GEM – this was mainly with use rather than content; lack of information on several topics eg project evaluation*;* some elements of AIM needed to be earlier in the course and more integrated; inadequate time for reflective learning*;* and some participant perception that the project is primarily for the Redesign School rather than the local health service.

(iv) *Inadequate partnership focus on project implementation*.

(5) Overall assessment of the effectiveness of the Diploma program

In Chapter 5, a broad assessment of the effectiveness of the program was made by:

- Assessing the degree to which the program's objectives (see above) have been achieved
- Comparing the results with evaluations of other healthcare improvement training programs

Based on these assessments the following conclusions were drawn:

- The program has been very successful in achieving the first two objectives (participant personal development and a redesign project with an implementation plan) but has had mixed results with the third (development of the NSW Health workforce's capability to lead redesign projects)
- One factor contributing to the latter result is that development of the capacity of the health workforce to lead redesign projects is dependent not only on the CHR but also on decisions made by the LHDs/SLNs. These decisions include those made before the course, as well as decisions relating to project implementation and how graduates are utilised in an ongoing way after completing the program.
- Compared with data in 39 published studies examined as part of a large systematic review of the effectiveness of teaching quality improvement to clinicians (Boonyasai et al, 2007), the CHR program compares very favourably on change in attitudes and the acquisition of new knowledge and skills.
- In comparison with a similar training program in Cincinnati reported by Kaminski et al (2012) that also used Kirkpatrick's evaluation model, the CHR program has been at least equally successful with participant reaction / satisfaction, and acquisition of new knowledge and skills, and changes in behaviour. The Cincinnati Centre, however, has a higher success rate of project completion and demonstrated positive outcomes. This is not surprising as it is a much smaller healthcare provider and has clearer accountability for implementation. While it needs to be tested with further research, it appears with the CHR Program that where there are rigorous LHD/SHN processes for participant, project and sponsor selection, along with good local support including an experienced Redesign Leader / Innovation Unit (see Chapter 4.2), then the rates of success, and the organisational impacts, would be at least comparable, if not better, than those at Cincinnati.

In summary, the CHR training program has been extremely successful in developing over 240 change leaders for the NSW Health system with many of the results being comparable with or better than a number of other training programs internationally. Graduates have been equipped with important project and change management skills that are critical for ongoing reform of healthcare delivery in NSW. Other than some fine tuning of the course, the main areas for improvement are around increasing the likelihood of project implementation success and more strategic involvement of graduates in ongoing health system reform and capability building. This will require a stronger partnership between the ACI/CHR and the LHDs/SHNs.

(6) Recommendations

To continue to build on the clear positives of the existing Diploma program, and at the same time to address the identified challenges, the following recommendations have been made.

Partnership approach

1. *Strengthen the partnership between the CHR and the LHDs/SHNs to build redesign and innovation capability* **(ACI and LHDs/SHNs)**. While there are different roles (CHR having a major role in capability development for clinical redesign with the LHDs/SHNs being responsible for other facets including project implementation), the Program's objectives can only be achieved with a strong partnership between the two with overall shared accountability. Partnership strengthening should occur at both CE / Executive and operational management levels. Strengthening should include enhanced communication, for example, about the resourcing and commitment required for successful outcomes.

Preparation and selection

2. *Improve project selection* **(LHDs/SHNs and ACI)**. In selecting projects for the Diploma Program, it is recommended that the following are included in the selection criteria by the LHDs/SLNs and the CHR: (i) be a local health service priority with strong support from management and clinicians, and (ii) be well scoped with achievable goals.

3. *Improve participant selection* **(LHDs/SHNs and ACI)**. To maximise benefit for both the health service and the participant, it is recommended there is a commitment to:
   a. Select participants who have: (i) local credibility and trust; (ii) passion and drive for health system reform; (iii) networking and interpersonal skills; (iv) potential to become future change leaders; and (v) have a stake in achieving a successful project outcome.
   b. Ensure participants have dedicated time that aligns with the project scope. Generally, this is recommended to be at least three days per week for the 20-week course and for solution implementation. The actual level of release may need to be varied across the different phases depending on project demands and the scope of the project.

   It is also recommended that all LHDs/SHNs consider the adoption / adaption of the revised Hunter New England LHD scholarship model as part of the selection process (see Appendix 6).

4. *Improve sponsor selection and preparation* **(LHDs/SHNs and ACI)**. For effective sponsorship, there is a need for sponsors that: (i) are accessible to the participant on a regular basis; (ii) understand the service and the fundamentals of redesign; and (iii) are a strong advocate for the project. For most projects, it is recommended there should be a senior manager sponsor and a clinical lead. In preparation for their role, the sponsor should be provided with an orientation package, accompany participants at the first day of the course, complete a GEM unit on sponsorship, participate with the project team in at least two teleconferences arranged by the CHR during implementation, and attend the participant graduation.

Course delivery

5. *Modify course content and structure* **(ACI)**. While important improvements to the course have been made over time, some small changes are necessary for further improvement. The recommended changes are:
   a. With the involvement of several previous course participants and an e-learning expert, review the usability and content of the e-learning tool, GEM.
   b. Review the course content in relation to the following (existing or new) topics suggested by key stakeholders as possible areas for change: (i) implementation; (ii) project evaluation; (iii) how to run a focus group and meeting; (iv) communication and engagement; (v) collecting and using data; (vi) how to be both rigorous and flexible (within the broad methodology) in applying the CHR redesign methodology.
   c. Review and modify the course structure with a focus on greater integration of AIM including more on sponsorship at the commencement of the course; increase the time for solution design; and add in a session for facilitated reflective learning exploring and sharing the participant's experiential learning on the last day of the course.
   d. Review and modify the approach taken with participant reports, streamlining the

report process to align with the project management diploma and sponsor requirements. To this end, it is recommended that consideration be given to the use of an 'A3' format.

Solution implementation

6. *CHR increase its input into participant skills development and learning during project implementation* **(ACI)**. In order to continue to invest in participant capability development, and to help sustain momentum with the transition from the 20-week course into implementation, it is recommended during the solution implementation phase that:
   a. Bimonthly telephone conferences be trialled with participants and sponsors involved in implementation. These teleconferences could be similar to those run during the course but with a focus on implementation.
   b. Support participants and Redesign Leaders through site visit/s by CHR staff.
   c. Support the development and growth of local communities of practice through the Redesign Leaders and other ACI resources.

7. *LHD/SHN increase their focus on implementation and reporting* **(LHDs/SHNs)**.
   a. If not already in place, local processes should be developed by the LHDs / SHNs for regular monthly reporting of CHR-related projects to the Executive Team. This report should include progress with solution implementation and the impact of this on the targeted levels of performance.
   b. A progress report be submitted to the CHR six months after completion of the 20-week course. A template for these reports to be developed and to include challenges and learnings encountered. Consideration be given to having these reports based on a one-page template.
   c. A 'close-off' session for reflective learning and review be held 12 months after the course is completed. This should be attended by the course participant/s, the sponsor/s and Redesign Leader/s, and a member of the CHR faculty. A final report should be provided to the CHR at this time.
   d. LHDs/SLNs consider how local expertise can be harnessed to support participants to build successful change management initiatives, for example, develop an AIM monthly learning set or an innovations workgroup for project discussion and learning.

8. *Develop an Award Scheme for outstanding CHR related projects* **(ACI)**.

Other

9. *Strengthen the relationship between the CHR Diploma Program and the ACI Networks* **(ACI)**. It is recommended that the linkage be strengthened by: (i) the appropriate CHR projects with state-wide potential are taken to the relevant network for their review as to the possibility of broader dissemination and implementation; (ii) the networks are involved in identifying broad priorities for possible CHR projects; and (iii) learnings from network and CHR project implementation are fed back to each other for mutual benefit.

10. *Conduct theme-based Diploma programs* **(ACI)**. Run and evaluate further theme-based redesign schools.

11. *Improve data collection and review processes* **(ACI)**. The data collected as part of the course (eg pre- and post-course self-assessments, readiness for change project assessment, achievement of project goals) be reviewed both for having the right data collected, as well as how it is stored and utilised for ongoing evaluation and review.

12. *Investigate how to further increase the capacity and capability of NSW Health for ongoing healthcare reform and the role of the CHR Program within this* **(ACI)**.

Chapter 1. Introduction

1.1 The Background

The Centre for Healthcare Redesign (CHR) was established in 2007 as a key strategy to support the growth of healthcare redesign programs.

To support its function, the CHR offers capability development programs and resources which includes the CHR Diploma program.

The CHR Diploma program has been delivered since 2007 and three times annually since 2010 with over 240 health staff graduating from the program. Most of these have been from NSW although several have attended from other states. The three main goals of the program are:

- Professional development of the participant in understanding and applying project management and redesign methodology to innovate healthcare
- Delivery of a redesign project with a scoped and signed off implementation plan
- Development of the NSW Health workforce's capacity to lead redesign projects

The delivery and format of the programs have evolved over the past five years with the major changes including:

- The transition from external consultants delivering the content to a mix of internal and external experts
- The development of an e-Learning training program which significantly reduced the face to face components of course delivery
- The range and variability in roles and skills of participants attending the program as well as the scope of the projects
- An increase in the range and variability in roles and skills of sponsors
- An increase in local coaching for participants by LHD/SHN-based Redesign Leaders
- The addition of a graduation ceremony which includes a six-month review of solution implementation

In view of the changes to the Diploma program, along with the transition of the CHR to the NSW Agency for Clinical Innovation (ACI), it was considered timely to conduct an evaluation of the program to inform ongoing improvements.

1.2 The Evaluation

The evaluation was carried out between 1 December 2012 and 31 May 2013. It includes both elements of formative and summative evaluation approaches.

In view of changes that have occurred over time with the program, the evaluation is limited to the operation of the program from January 2010 to December 2012. While changes have been made during this three-year period , they have been relatively small. The Chronic Care Aboriginal Program (CCAP) was not included as it used a different approach.

A high level program logic model was developed to provide a broad framework for determining the primary evaluation questions (see Figure 1.1 below).

The mixed methods evaluation involved:

- Interviews and focus groups with 62 current and previous course participants, LHD Redesign Leaders, LHD Chief Executives, sponsors and key ACI staff.
- A web-based survey with feedback from 93 previous participants
- A web-based survey with feedback from 14 previous sponsors
- Audit of existing documentation
- Collection of several illustrative case studies
- Collection and analysis of some existing quantitative data including participant assessments and feedback

Detailed information about the evaluation methodology, including the evaluation tools, is found in Appendix 2.

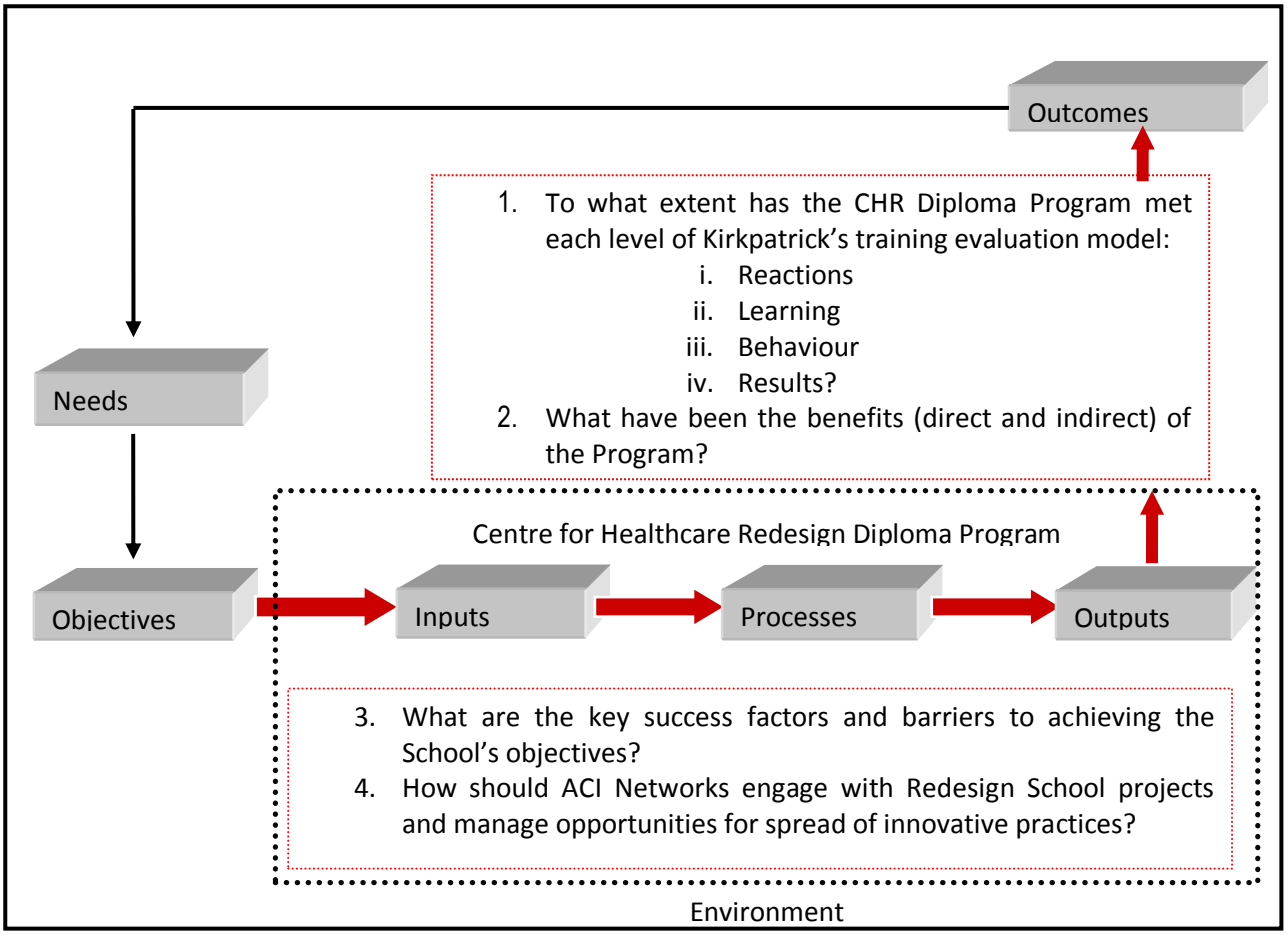


Figure 1.1 High level program logic model and primary evaluation questions

1.3 The Report

The main target audience for this report is the staff of the CHR along with the ACI Executive Team, Redesign Leaders and LHD/SHN Executive Management. It was also seen there would be a range of other people interested in reading the document including healthcare providers who have sent, or may be interested in sending, staff to the school, as well as people nationally and internationally involved in running similar programs. Due to this diverse audience, it was decided the report should be comprehensive as a stand-alone document, be easy to read and made interesting through the use of some narratives and examples.

To facilitate a clear and logical flow, the report structure is based largely on the primary evaluation questions. Chapter 2 sets the background by providing an overview of the CHR and the Diploma program.

Chapter 3 addresses the first two evaluation questions by providing an assessment of the degree to which the program has met each level of Kirkpatrick's training evaluation model, and identifies the direct and indirect benefits of the program. The data presented is a mix of quantitative and qualitative elements.

Chapter 4 answers the third evaluation question by identifying the five main factors critical for the success of the program along with four of the main barriers and challenges. Due to the lack of adequate quantitative data for statistical modelling, the critical success factors and barriers are based on a thematic analysis of key stakeholder interviews as well as focus group and survey responses.

Chapter 5 seeks to bring together the findings and the literature to provide a general assessment of the overall effectiveness of the program. It also provides 12 recommendations for ongoing program improvement including a recommendation addressing the fourth evaluation question.

Chapter 2. Description of the CHR Program

2.1 What is the Centre for Healthcare Redesign?

As mentioned in the Introduction, the Centre for Healthcare Redesign (CHR) was established in 2007 by NSW Health as a key strategy to support the growth of Redesign programs across NSW.

The role of the CHR, as part of the Agency for Clinical Innovation (ACI), is to provide skills and capability building for staff across the health system primarily in the areas of:

- Innovation
- Redesign
- Change Management

To support its function, the CHR offers capability development programs and resources which include:

Programs

- The CHR Diploma Program (Redesign School)
- Change Management Training (Accelerating Implementation Methodology – AIM)
- Redesign Awareness Programs
- Patient and Staff Experience Program

Resources

- Redesign eLearning Portal (GEM)

Other functions

- Hub of the Redesign Leader's Network
- Knowledge Management

2.2 Redesign Methodology

The redesign methodology for NSW Health draws on, and consolidates a range of improvement methodologies including LEAN, Business Process Redesign, Systems Thinking and Innovation Approaches. Using this proven Redesign methodology, and a rigorous project management approach, health staff identify and analyse issues impacting patient experience and service development. Once root causes are found, staff engage stakeholders to develop and implement sustainable change processes to improve the way health care is delivered and experienced, benefitting both staff and patients/carers (Figure 2.1).

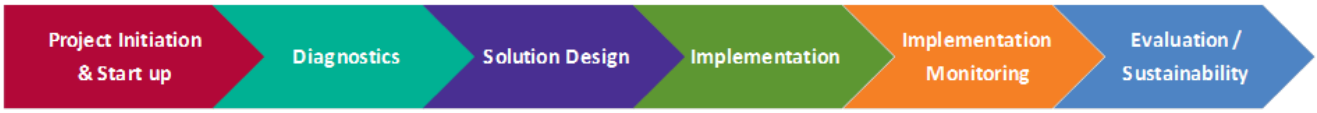


Figure 2.1 Steps in the CHR redesign methodology

2.3 CHR Objectives

As part of the ACI, the CHR builds capability in the healthcare system and contributes to the triple aim of:

- Better health outcomes
- Improved experience of care
- Reduced per capita cost of care

The CHR provides redesign and project management training to support the ACI's strategic goal to be the 'go to' place for clinician and consumer led reform and aims to be the lead partner in growing innovation capability in health care.

Redesign projects provide enhanced healthcare outcomes through new ways of delivering better care for patients and carers.

2.4 CHR Diploma Program

The CHR has been delivering a state-wide diploma program for health professionals to improve clinical processes and deliver better patient journeys since 2007. The specific objectives of the diploma program are:

- Professional development of the participant in understanding and applying project management and redesign methodology to improve healthcare
- Delivery of a redesign project with a scoped and signed off implementation plan

- Development of the NSW Health workforce's capability to lead redesign projects

The CHR Diploma Program is an intensive 20-week program conducted three times a year. It incorporates a mixed-method model of delivery which includes:

- Comprehensive eLearning modules, providing participants with the theoretical knowledge to support their practical learning sessions
- Five face to face interactive sessions (13 days) held over a 20-week period, designed to give participants the opportunity to develop the practical skills needed to undertake specific tasks related to each stage of the project
- Workplace coaching
- A workplace redesign project where participants focus on developing their project and putting their new skills and knowledge into practice
- The award of a Diploma of Project Management for eligible participants

An outline of the course and the number of face to face days for each phase is summarised below.

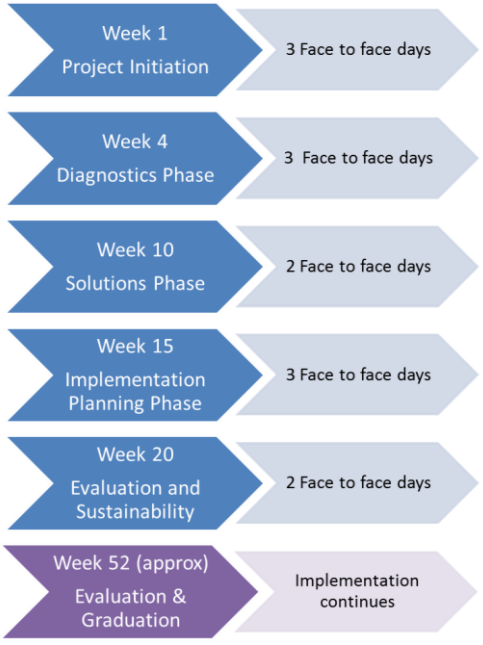


Figure 2.2 Course outline

More than 240 participants have graduated from the CHR Program, implementing over 140 projects in the past five years (see Appendix 5 for a listing of the projects conducted during the period covered by the evaluation – 2010 to 2012). These projects address a wide range of issues, including high profile and state-wide initiatives such as:

- Emergency Department (ED) Models of Care
- Chronic Pain Management for Frequent Attendees to the ED
- Individual Patient Special for Patients with Delirium and Dementia
- Hospital in the Home for Patients with Cellulitis
- Emergency Surgery Guidelines
- National Emergency Access Target (NEAT) Projects

A complete listing of the projects is found in Appendix 5.

Commencing 2013 the program has been limited to approximately 12 projects per course to optimise participant learning. The demand for the program is high and increasing.

2.5 Key Roles in the Program

Program Participant

Participants are project managers and/or team members in charge of project activities during the 20-week program and are responsible for developing an implementation plan for their project. The project is a mandatory requirement for successful completion of the program.

Program participants are required to:

- Attend all face-to-face sessions including the Graduation Day
- Have dedicated project time. This is a fundamental aspect of the course as the project work while completing the program requires significant commitment in their workplace
- Complete all course requirements and deliverables in a timely manner
- Share ideas and learning to create a mutual support network for learning

To achieve positive outcomes, the project team is expected to follow the project management methodology, have the support of their organisation, maintain open communication and network at a senior level within the organisation.

Project Sponsor

The Project Sponsor's role is to authorise, legitimise and demonstrate ownership for the project. As such, the Project Sponsor will work closely with the project team to ensure there is:

- An appropriate scope and goal setting in line with organisational strategic goals
- The allocation of resources and project budget
- Regular scheduled monitoring of progress and approval for project milestones / deliverables.
- Timely decisions to move the project forward
- Senior level commitment and sponsorship by senior executive teams
- Facilitation and resolution of issues at senior levels
- Identification, engagement and involvement of relevant stakeholders

Redesign Leaders

The Redesign and Innovation Network consists of 27 experts in project and change management across all Local Health Districts (LHD) and Networks (SHN) in NSW. The Redesign Leaders play an active role in supporting the CHR Program, in particular by:

- Identifying optimal projects and participants to attend the program
- Coaching and mentoring the participants and projects from their LHD/SHN
- Contributing directly to the CHR Diploma Program through delivery of individual sessions and providing expert feedback to participants at their presentation days
- Marking the deliverables
- Facilitating networking within and across clinical and geographical boundaries

CHR Program Course Facilitators

The CHR course facilitators create:

- A challenging experience where participants learn and develop new capabilities in redesign, change and project management
- An opportunity to learn from and be coached by recognised experts in the redesign field
- A learning culture supported by coaching and online educational resources and templates
- Opportunities for knowledge transfer

CHR Course Sponsors

Executive Managers from ACI and the Ministry of Health support the program participants, attending to hear and provide constructive feedback on the projects at each face to face block of the program. This provides program participants exposure to systems level expertise to benefit their capability development.

Chapter 3. Findings (1): Assessment against Kirkpatrick's Four-Level Training Evaluation Model

3.1 Introduction

The first evaluation questions asks:

To what extent has the CHR Diploma Program met each level of Kirkpatrick's training evaluation model:

- Reactions
- Learning
- Behaviour
- Results

Kirkpatrick's four-level model (Kirkpatrick and Kirkpatrick 2006, 2009) was used for the evaluation as it is a well-recognised training evaluation model that has been widely used over a number of decades across most industries, including health. Its widespread use is attributed to its simplicity and practicality (Kirkpatrick 1996).

The four levels represent a sequence of ways to evaluate training programs with each level being important and reportedly[1] having an impact on the next level. As you move from one level to the next, the evaluation process becomes more challenging and time-consuming, but it also provides more valuable information. The four levels are:

- *Reaction* – what participants thought and felt about the training
- *Learning* – the resulting changes in knowledge, skills and attitudes
- *Behaviour* – how on the job behaviour has changed as a result of the learning
- *Results* – the outcomes achieved for the organisation as a result of the training

Interestingly, in one systematic review of over 50 articles on improving teaching effectiveness in medical education, it was found that the reaction level was assessed in 74% of studies, learning in 77%, behaviour in 72%, but results or outcomes in just 19% (Ruud et al 2012).

[1] Note: The postulated causal relationship between the four levels is debated with a number of studies not finding evidence to support this position (Bates 2004),

The results for each level is examined below.

3.2 Participant Reaction

3.2.1 *Overall*

Evaluation at this first level measures how those who participate in the program react to it. Kirkpatrick sees it as essentially the same as measuring customer satisfaction (Kirkpatrick and Kirkpatrick 2006). If training is going to be effective, it is important that trainees react favourably. If their reaction is unfavourable, then Kirkpatrick suggests they will not be motivated to learn and they will not encourage others to attend.

Information on participant reactions to training programs is normally collected as part of the internal assessment during a course as well as at the end. For the CHR Diploma program, participant feedback was sought at the end of each day of training and at the end of the course. However, some of the participant feedback that was routinely collected using likert ratings is only able to be used for the evaluation in a limited way as some of the scales were unbalanced and there was some inconsistency in the scales. This has been corrected for courses from January 2013.

Despite this, an abundance of information to assess the participant reaction to the training has been collected from a variety of sources including: (i) internal assessments; (ii) surveys of previous participants; and (iii) interviews and focus groups with key stakeholders including previous participants (see Appendix 2).

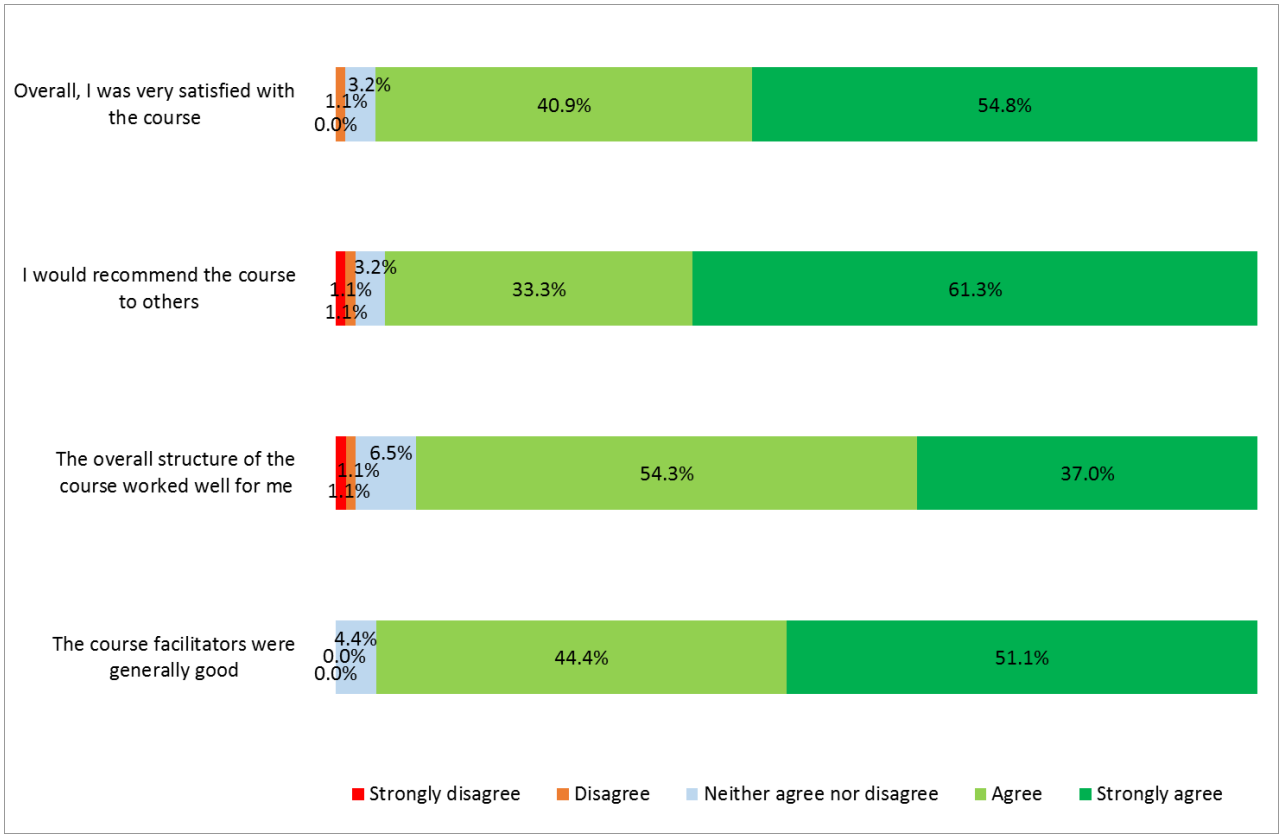
Clear convergence of results was found across these different sources with strong evidence that the participant reaction to the program over the last three years has been extremely positive.

This is demonstrated in a number of ways. Firstly, in the survey of previous participants (n=93, 55% response rate), 95.7% said they were very

satisfied with the course and 94.6% indicated they would recommend the course to others (Figure 3.1).

When examined by year the course was undertaken, the overall levels of satisfaction were not statistically different (χ^2, p = 0.1065), nor were they by place of participant geographical location (χ^2, p = 0.7849).

In addition to extremely positive responses for overall satisfaction, both the course structure as well as the facilitators received very positive ratings (Figure 3.1).



Source: Participant survey, Number of respondents: n = 93

Figure 3.1 Participant broad reactions to the course

The following summarises some specific participant feedback collected at the end of each of the last two courses conducted during 2012[2]. The percentages are for those who rated the indicated variable as being 'very good' or 'excellent'.

- Catering - 81%
- Venue – 93%
- Ability to provide a good learning environment – 95%
- Style and delivery method – 86%
- Knowledge level of presenters – 95%

This overall positive response was also reflected in the comments made either at the end of the course, in the survey, or during the interviews and focus groups.

[2] Data from the first course could not be combined with that from the last two courses as different likert scales were used.

I was most grateful that I was offered the opportunity to undertake this course. It was one of the hardest things I have completed in my professional career, there were many late nights and challenging moments but I'd do it all again in a heartbeat!

(Former participant)

I spat the dummy when I was told to do it.....now I'm a strong advocate and recommend the course to others!

(Former participant)

I enjoyed the program and also interacting with staff from across NSW Health. The best program I have ever attended.

(Course participant – End of course feedback)

I now work in the training industry … I would say that the structure, content and delivery that I received was fantastic and realistic.

(Former participant)

One theme that came up several times during the interviews with previous course participants was that they felt 'special'. When this was explored, several contributing factors were identified:

- Participating in training in Sydney attended by people from across the NSW
- Training in a nice venue
- Having a senior local person (either an executive member of the Local Health District (LHD) or a service manager) as a sponsor
- Some sessions attended by senior members of the health system including the Director of the ACI as well as the Director of Clinical Program Design and Implementation

With regard to the later dot point, one participant commented:
'Having senior members of NSW Health [ACI] attend sessions and sponsor the program gave it a lot of credibility.'

It made them feel 'special', that their project was also special and that they were involved in something 'really important' for NSW Health and improving patient care.

3.2.2 *Main causes for frustration*

Despite this there were some areas that caused frustration. If these were addressed, then it is expected they would result in even higher percentages for 'strongly agreed' in Figure 3.1.

These will be discussed in more detail in Chapter 3 and several are just listed below. They did not apply to all participants.

- Use of the e-learning platform, GEM
- Lack of local support including release time, backfilling, and sponsor availability
- Inadequate preparation for the course including not being well informed about what commitment the course and project would require from both the participant and the health service
- Limitations with a few areas of course content
- Course termination prior to project implementation and not being involved in implementation

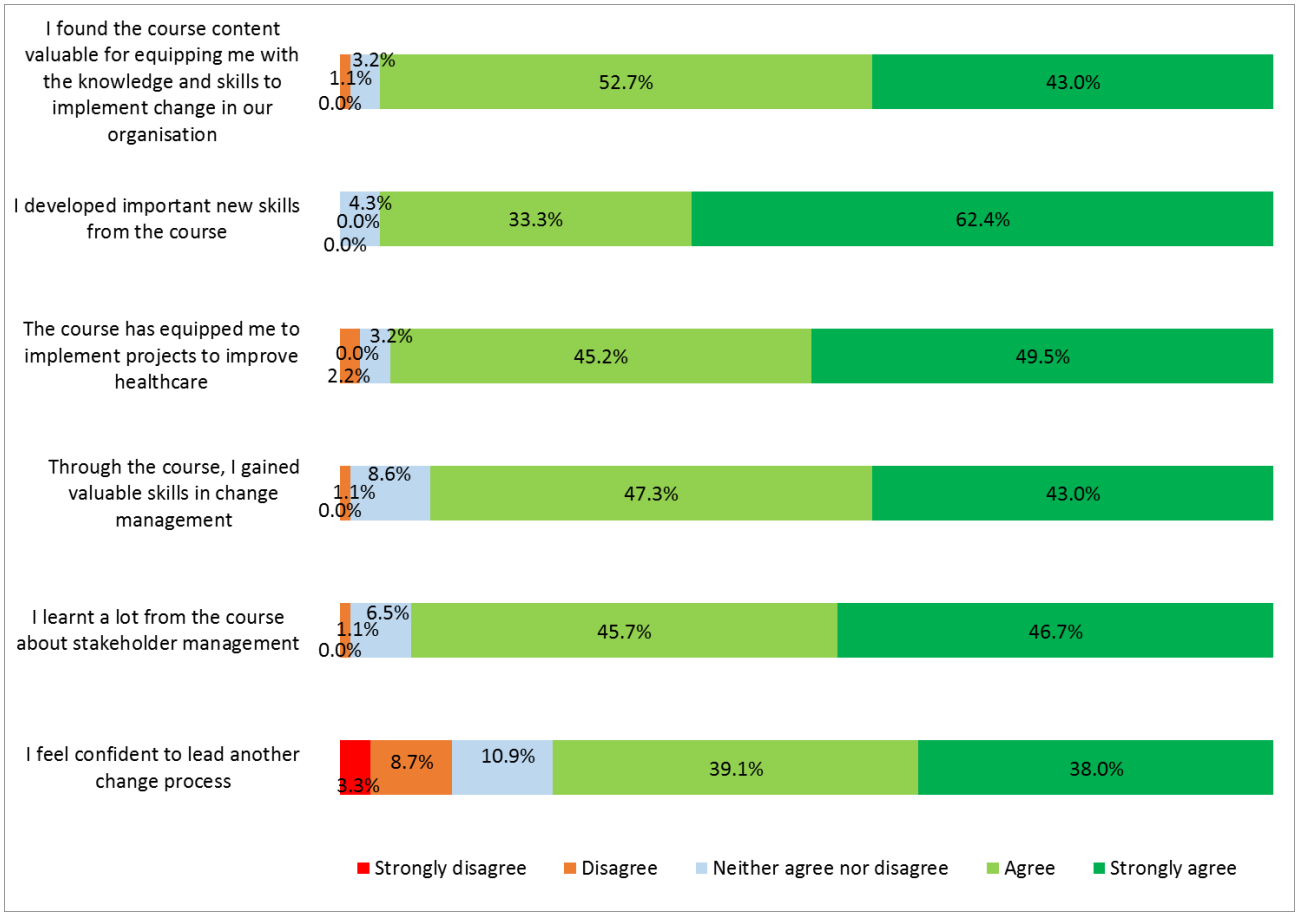
3.3 Participant Learning

Being 'very satisfied' with the course or enjoying the course and being made to feel 'special' doesn't mean that significant learning has occurred. For the CHR training, as with many other training programs, there are usually three participant learning objectives:

- To acquire knowledge related to the workplace
- To learn new skills and / or increase their present skills
- To change their attitudes

The learning that has occurred as a result of the program is important to measure because no change in behaviour can be expected unless one or more of these learning objectives have been accomplished (Kirkpatrick and Kirkpatrick 2006, 2007).

Several questions in the previous participant survey targeted the perceived acquisition of the relevant knowledge and skills (Appendix 2). Figure 3.2 shows the results for these items.



Source: Participant survey, Number of respondents: n = 93

Figure 3.2 Participant perceptions about acquisition of knowledge and skills

Well over 90% of previous participants saw that the course made a significant contribution to equipping them to implement change and to manage projects to improve healthcare; two key targeted learning outcomes. On their level of confidence to lead another change process, 38.0% 'strongly agreed' they could with another 39.1% saying they 'agree' with the statement.

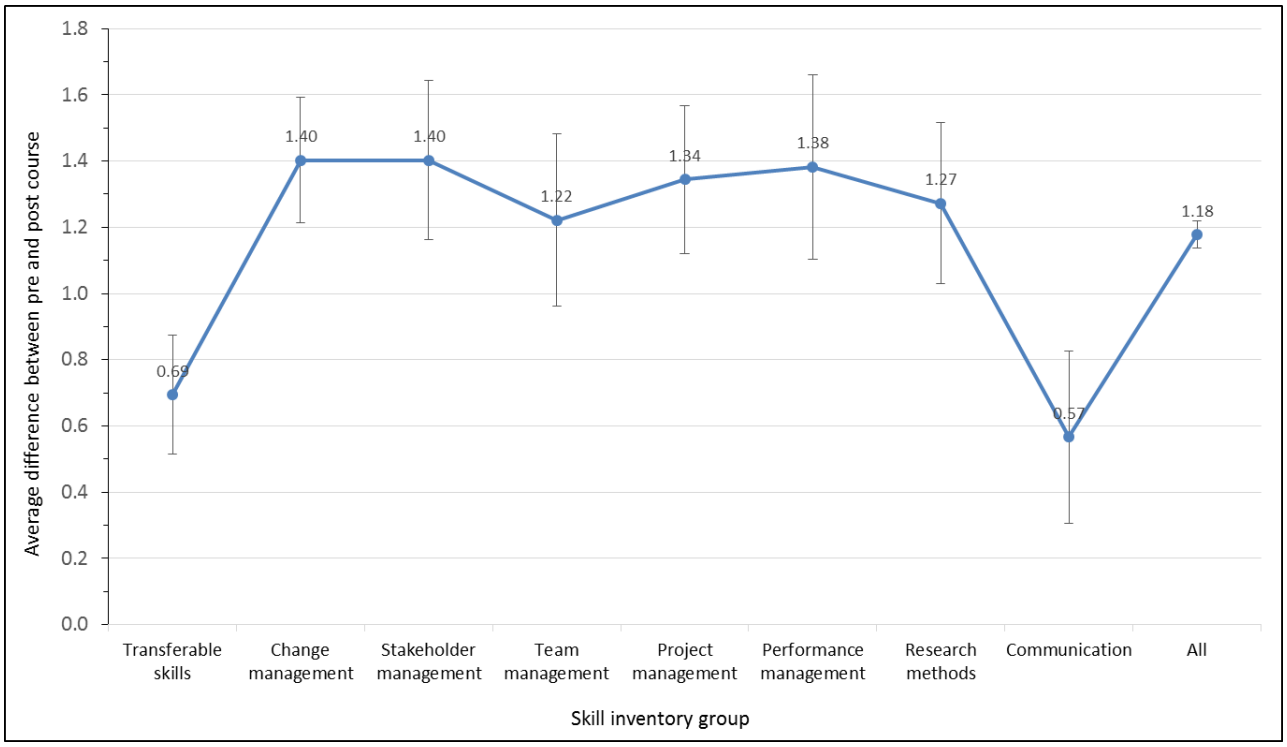
When questioned about what were the main things they learnt from the course, a range of topics were mentioned by participants including:

- How to undertake effective project management
- How to carry out effective change management
- Learning a structured methodology for redesign
- Gaining a set of tools to use in redesign and change management
- How to prepare PowerPoint presentations and reports
- Learning about the importance of sponsors
- Learning about the importance of key stakeholders and how to get their buy in

These were all consistent with what the course organisers hoped would be the main learnings through the program.

It was also agreed by project sponsors, LHD Executive and Redesign Leaders that the program resulted in solid skill and knowledge acquisition by most participants.

One of the main ways to assess the acquisition of new knowledge and skills from training is to compare pre- and post-course competencies across key learning areas. Figure 3.3 below shows the differences in eight targeted skill domains. Fifty two separate elements make up the domains (see Appendix 3). The results are based on self-assessment by participants at the start and end of the 20-week course and are for 53 (85%) participants who undertook the course in 2012.



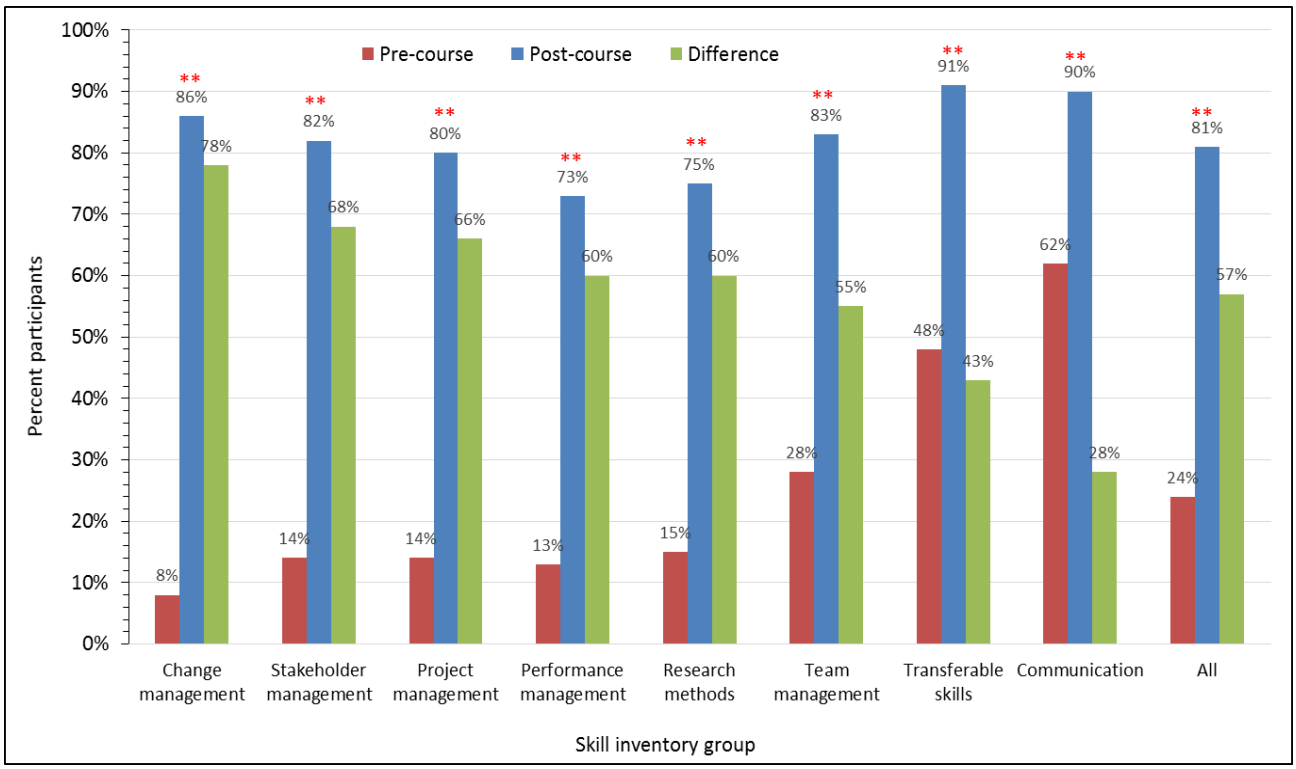
Source: CHR database. Vertical bars show 95% confidence intervals.

Figure 3.3 Participant (2012) pre and post self-assessments: Mean difference on a five-point scale[3]

Figure 3.3 shows there was an average of 1.18 points positive difference in the five-point scale in self-assessed levels across the different elements of the skills inventory. All the improvements are statistically significant with communication (0.57) and transferable skills (0.69) having the lowest levels of improvement.

While these changes are impressive, the question needs to be asked, what percentage of students at the end of the course indicated they had acquired the targeted level of knowledge and skills? This is shown in Figure 3.4.

[3] Assessment was based on a five-point scale where: 1 = No Exposure; 2 = Exposure but no experience; 3 = I know what this is and can implement with assistance; 4 = I know this and could implement without assistance; 5 = Expert and able to teach the skills to others. For the assessment tool, see Appendix 3.



Source: CHR database. **Difference between pre and post course assessments, p < 0.001 (paired comparison t-tests)

Figure 3.4 Participant (2012) pre and post self-assessments: Percent participants who know and could implement without assistance / are expert and able to teach the skill to others

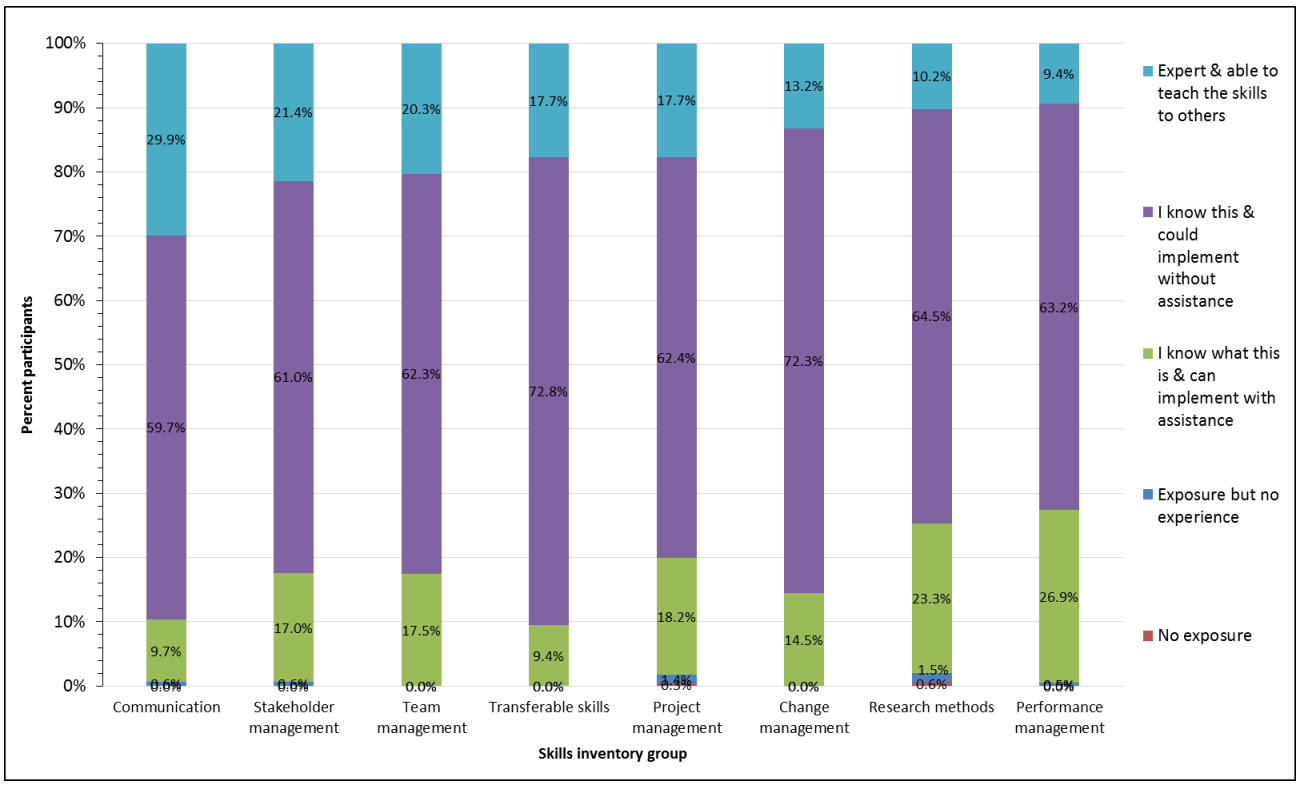
Across each of the inventory groups, major statistically significant (p<0.001) self-assessed improvements in knowledge, skills and confidence occurred during the 20-week course (Figure 3.4). At the end of the course, 81% of participants indicated they now had the required knowledge and could implement without assistance, or that they were expert and able to teach the skills to others. As expected, the smallest shifts were in those areas where course participants already had some degree of exposure and experience. This was reinforced with a correlation analysis where there was a strong correlation (R^2=0.76) between (i) the initial and (ii) the change in percent for those who *'knew and could implement without assistance' / 'who were expert and able to teach others'*.

The largest percentage improvements were for the following elements of the skills inventory:

- Use recognised change management strategies (Increase 79.2%)
- Identify the best way to have an impact (77.4%)
- Use recognised stakeholder engagement strategies to build commitments & ownership (77.4%)
- Develop a risk management plan (77.4%)
- Develop a change management plan (75.5%)
- Prioritise issues and solutions (73.6%)

For a breakdown of this data for each of the eight groups and the 52 associated elements, see Appendix 3.

Figure 3.5 shows a breakdown of the post-course assessment for each skill group by each of the five assessment levels.



Source: CHR database

Figure 3.5 Participants (2012) self-rated levels of knowledge and skills at the completion of the program: Percent total

While the majority indicated they '*knew and could implement without assistance' / 'were expert and able to teach others'* (Figure 3.4), just 9% to 30% indicated the latter, that is, they were expert and able to teach others (Figure 3.5). Being expert and able to teach others is what would be desirable in the longer term if an organisation was wanting to broaden and strengthen healthcare reform capacity. It would be interesting to repeat the assessment with the same cohort in another 12 months to see if there was an increase in the proportion saying they '*were expert and able to teach others'* or whether it had actually decreased. This subsequent rating would probably be dependent on the opportunities they were given to continue to use, and hence to reinforce and further develop, their skills.

With regard to changes in participant attitudes as a result of doing the course, one of the main changes noted by previous participants as well as sponsors, was that the trainees did not jump straight in to solutions the way they may have done before the training. Rather, from the redesign methodology, they knew they had to carefully understand the problem before considering what would be the relevant solutions.

3.4 Participant Behaviour

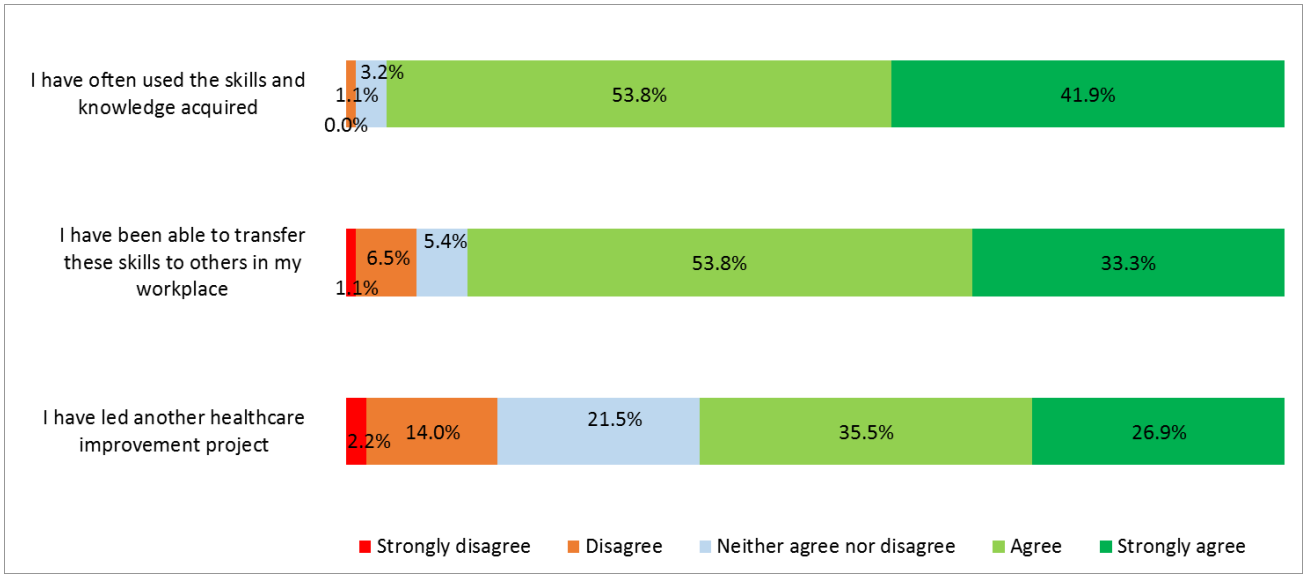
It is well known that the acquisition of new knowledge and skills provides little return on investment for the organisation unless they translate into changed behaviours back in the work place (Kirkpatrick and Kirkpatrick 2006, 2007). Thus, the key evaluation question at this level is '*what change in behaviour occurred back in the local health service as a result of participants attending the CHR Diploma program?*'

This is generally seen as the hardest level to effectively evaluate. However, according to Kirkpatrick (Kirkpatrick and Kirkpatrick, 2007) having good evaluation data at this level can help inform whether any lack of success at level 4 (Results) is caused by ineffective training, or by a lack of sufficient follow up in the work place. They go on to say that disappointing training outcomes (measured in Level 4) more often come from lack of follow-up than from poor training programs or delivery. They have observed that all too often there are barriers with local management and workplace culture resulting in a failure to support and reinforce learnings. Despite this, they often hear back from organisations that

the problem is not local but 'ineffective training' (Kirkpatrick and Kirkpatrick 2007).

Information for the evaluation of changes in participant behaviour was obtained from the participant survey along with interviews and focus groups (see Appendix 2).

With the participant survey, the question was asked, *'Since completing the course, what has been your subsequent use of the skills and knowledge acquired?'* The responses to this for several related likert items are shown below in Figure 3.6.



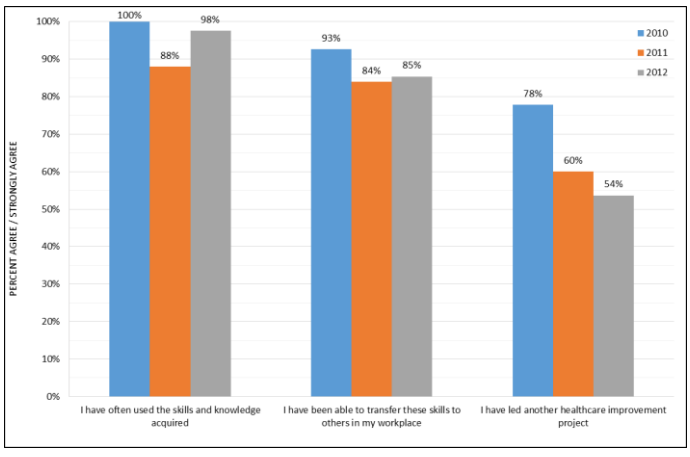
Source: Participant survey, n = 93

Figure 3.6 Subsequent use and transfer of knowledge and skills acquired during training

These results show that 95.7% of previous course participants have often used the skills and knowledge acquired from the course, and 87.1% have been able to transfer at least some of these skills to others in their workplace. Just under two thirds (62.4%) indicated they had led another healthcare improvement project. Unfortunately, with this question the nature and type of project was not investigated. Based on interviews with CHR graduates and sponsors, it is likely that most were relatively small projects carried out as part of their normal role and not necessarily projects of the same strategic significance to the organisation as the project undertaken as part of the course. It is also likely that they have not used all of the skills and knowledge acquired through the course, just some elements of it. This is supported by the data in Figure 3.5 which shows that across some of the skills inventory groups, up to one quarter of 2012 course participants had no exposure or did not feel able to implement without some assistance.

Since the above responses may vary depending on when the course was undertaken, the data was examined by year (Figure 3.7).

As expected, because of the limited time between completion of the course and the evaluation survey (late February to early March 2013), participants from 2012 had less opportunities to lead another improvement project. The transfer of their knowledge and skills most likely occurred during the CHR project.



Source: Participant survey, n = 93

Figure 3.7 Subsequent use and transfer of knowledge and skills acquired during training by year of course

Since participants may over estimate their use of skills and knowledge in the workplace in the survey, more detailed information was also sought through interviews with the participants, their sponsors and local Redesign Leaders. It was envisaged that through these various sources of information, it would be possible to make a more rigorous assessment of the degree to which there were behavioural changes in the participants as a result of the CHR training. The main findings are summarised below.

3.4.1 *Change in behaviour during the 20-week Diploma program*

Within the course structure (see Chapter 2), participants have extended opportunities with their workplace project to apply what they have learnt during their face to face and online learning.

In the key stakeholder interviews and focus groups, there was common feedback that attendance at the CHR course had not just resulted in increased knowledge, skills and attitudes but that course participants were generally able to apply these during the diagnostic, solution design and implementation planning phases.

However, it was also clear that this was to some degree dependent on the background and previous experience of the participant, a number of whom had not undertaken such an intensive course for a long time, or at all. For many, based on pre-course assessments, they probably also had little experience in utilising a rigorous approach for healthcare reform.

Where there was an experienced and available Redesign Leader, it was evident that they were able to coach the participant to apply the learnings where the participants were still unsure or lacked confidence. Where such a local resource did not exist, participants were more likely to seek support from the CHR through one of the regular teleconferences or via a one-off phone call.

Some of the feedback is well illustrated with the following quotes.

> [Participant] developed from a clinician who was doing her job every day to an amazing project lead during the course…now she is working at a higher level….she has a huge future!
>
> (Sponsor)
>
> The biggest change I've seen with them [participants] is that they have learnt not to jump straight into implementing a solution…they have also learnt to not make assumptions, but test them.
>
> (Sponsor)
>
> Its only now I'm starting to talk with some of our patients about their experiences….we never did this before.
>
> (Former participant)
>
> Sometimes the participants come back from the Redesign School with gaps in solution development…they have a bag of tricks but they are not sure how to use them.
>
> (Redesign Leader)
>
> I was amazed at the professionalism they developed …. What questions to ask, collating and interpreting the data …the whole process [of clinical redesign]
>
> (Sponsor)

During the sponsor interviews it was also asked whether the participants picked up from the CHR program any undesirable skills or attitudes. The universal response to this question was a clear 'no'.

3.4.2 *Change in behaviour during project implementation*

Although the exact proportion is unknown, it is apparent that a number of participants after the CHR course were not involved in the implementation of their CHR project; their last involvement being the development of the solution implementation plan. This sub-group of participants thus missed out on a valuable opportunity to consolidate the learnings from the 20-week course and to further develop and apply their skills in project and change management. It was pointed out by some key stakeholders that implementation of the solutions is the most challenging part of healthcare redesign. They considered it to be an excellent opportunity for application and consolidation of learnings and skills from the course, many of which were seen to be critical for bringing about change in the public health system.

That some course participants were not involved in project implementation was commented on by a number of interviewed senior staff and was highlighted as one of the weaknesses of the CHR program (see Section 4.3). It was also noted that it could be a very frustrating experience for participants to not get the opportunity to continue to the implementation phase after they had spent so much time in thinking about the issues and changes needed and developing an implementation plan to address them. This also informs the need for more considered participant selection (see Section 4.2.2). Unless there is a compelling case otherwise, participants need to be selected who will be involved, not just in the course and the initial phases of the project, but in project implementation.

> There is absolutely no logic in the participant not being involved in implementation
> (Redesign Leader)
>
> It's a shame participants can't continue on with implementation and having real ownership and responsibility
> (Sponsor)
>
> It seemed to us that 80% of hard wins had to occur after we completed the CSR course … most of us were only contracted to be involved during the [20-week] course.
> (Previous participant)

For those who continued with project implementation after the 20-week course, there was generally positive feedback from sponsors indicating that the participants were effectively using their skills in implementation. Two main areas they struggled with were gaining and maintaining involvement of all relevant stakeholders, as well as managing those who were resistant to the proposed changes.

The general view of the CHR over an extended period has been that the LHD was fully responsible for project implementation. This has changed more recently with:

- The CHR providing funding to all LHDs to employ Redesign Leaders. Redesign Leaders can make an important contribution in the implementation phase. For example, being available to offer coaching and other support to assist with some of the inevitable challenges involved in bringing about change in healthcare.
- The introduction of a graduation day six months after the 20-week course. Besides being an opportunity for participants and sponsors to meet together again and share progress and learnings with implementation, this was also commented on as being a good addition to the program. It was seen to provide greater incentive and accountability for them and their service to make sure implementation did not 'fade off the radar'.

3.4.3 *Ongoing change in behaviour after the course and project*

Information obtained from the evaluation on this aspect was hard to obtain and limited in depth.

Participant responses to this varied depending on several factors including whether they returned to their substantive position or moved to a new position that had a focus on change management and clinical redesign.

> I've only made very limited formal use of what I learnt through the CHR because of day-to-day business
> (Former participant)
>
> I've not formally used the skills again but have occasionally drawn on some of them … mainly getting other staff to think about these types of things when they have a project.
> (Former participant)
>
> The program helps me in various areas of my substantive role …. in small and large projects and also in mentoring other staff.
> (Former participant)
>
> The course was perfect for my needs and I have now gone on to lead state wide projects.
> (Former participant)

A few participants, because of their success and exposure with the CHR program, were identified locally as people who had important skills that needed to be placed strategically within the organisation. Unfortunately, based on anecdotal feedback, this may be a relatively limited occurrence with a number of LHDs/SHNs.

Although not directly involved in another change management project, some said they were able to support subsequent participants attending the CHR program.

Another indication that there have been some subsequent changes in behaviour is that a

number of former participants indicated they 'strongly agreed' (15.1%) or 'agreed' (26.9%) with the statement that '*doing the course helped them to obtain a promotion*'. Contributing to this could also be increased recognition by management because of their involvement in something that gave them a higher profile than what they previously had.

3.5 Organisational Results

Organisational management want to see that for the investment in the training, including release of staff to participate and possible backfilling of their positions, there is a good return on that investment. The basic question for management, is '*has the program achieved the impact back in the organisation that they expected?*'

Kirkpatrick and Kirkpatrick (2007) state that if organisations do a good job with levels 1, 2, and 3, level 4 generally takes care of itself. That is, if participants find value in the course; they acquire new knowledge, skills and attitudes; and this translates into changed practices and behaviour back in the workplace, then the desired impacts back in the workplace will occur. Based on the above results, it can be generally stated that the results for levels 1 and 2 were very good, while those for level 3 were mixed and quite dependent on local support and opportunities. It would thus be assumed, based on Kirkpatrick and Kirkpatrick's (2007) reasoning[4] that this should flow into mixed results for level 4.

In discussions with sponsors and other LHD senior management, there was a general consensus that the main expectations in sending staff to undertake the CHR Diploma Program were:

- Professional development of the participant in project management and redesign methodology
- A well designed project that was successfully implemented
- An enhanced workforce capacity that can be used for ongoing healthcare redesign

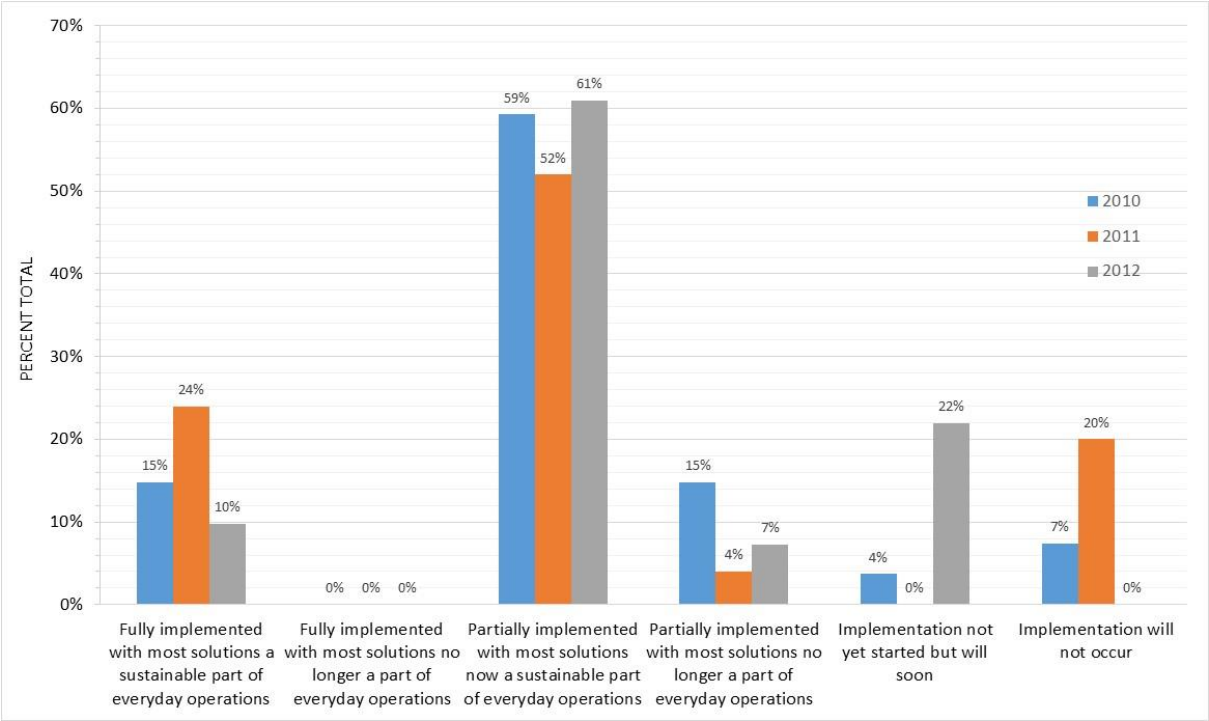
[4] Note, as pointed out above there is some debate in the literature about whether the causality proposed by Kirkpatrick is as strong as they suggest. Some studies have shown no or limited causality (for example, Bates (2004).

The first expectation has been examined above and has been largely achieved. Evidence for the achievement of the latter two are discussed below.

3.5.1 *Project results*

In the participant survey, several questions were asked about the project to try and assess the degree to which the project had been implemented, as well as how successful the implementation has been.

Firstly, the degree of implementation is shown in the Figure 3.8 below.



Source: Participant survey, Number of respondents: 2010 n= 27, 2011 n=25, 2012 n=41

Figure 3.8 Degree of implementation of project solutions by year of course: Percent total respondents

In interpreting the above data, it is important to remember that some projects had more than one participant involved[5]. As expected, because of the limited timeframe for implementation, implementation had not yet started at the time of the survey (late February to early March 2013) for a number of projects from 2012 participants who did the course later in the year.

Approximately three quarters of survey respondents indicated that the project solutions they were involved in developing had been either fully or partially implemented with most solutions being sustained. Despite this, particularly for participants from 2010 and 2011, the results are probably less than expected at the time of project planning with a relatively low proportion (15-24%) being fully implemented and with some (7-20%), implementation was not expected to occur.

If people selected an option other than '*Fully implemented with most solutions a sustainable part of everyday operations*', they were asked to clarify why they selected other options. Some examples of their feedback are shown below.

'The project scope was too large. Subsequent smaller projects have been undertaken. Tried to change too much!'

'Having a team involved in such a large project is difficult to implement when that team has to return to full-time clinical responsibilities.'

'Workload overtook the project'

'Delays have occurred due to staff availability to implement change'

'None of the money options were implemented'

'Some difficulties remain around support of initiatives by the medical staff (who developed their own strategies)'

'The main person whose department the project ran from has moved on'

'There were considerable staffing changes impacting on the recommendation being implemented'

'Some solutions are no longer viable due to changed circumstances'

Generally, the reasons for there being partial or quite limited implementation, fell into four categories:

- Unrealistic project scope
- Change in circumstances – for example, key staff left
- Lack of local support

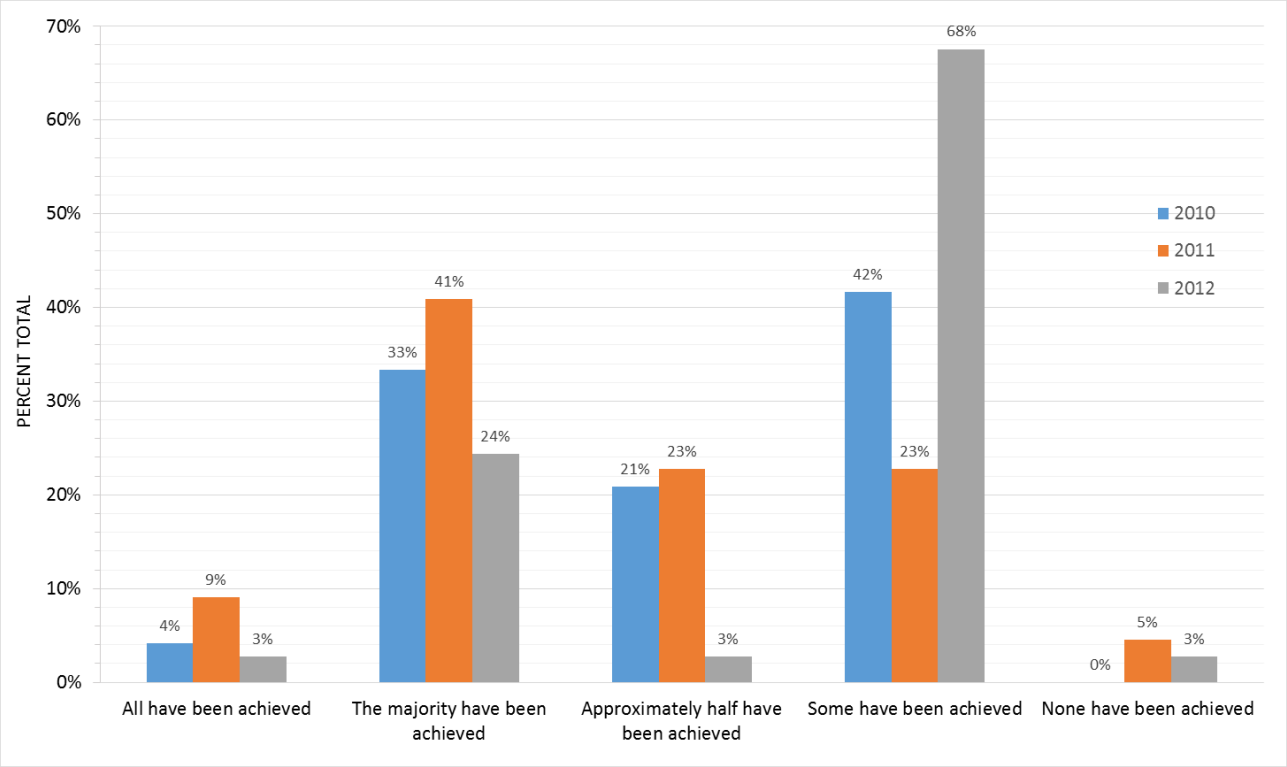
[5] 57 projects had one participant, 29 – 2x, 11 - 3x, 3 – 4x, 1 – 5x (Source: CHR participant data)

- Other barriers to change

While many projects have been fully or partially implemented, the question that now needs to be asked is *have the project implementations led to the achievement of the original project goals and the expected improvements in healthcare delivery*?

As a first step in answering this question, participants were asked how they evaluate the success of the project. Fifty (54%) respondents indicated their project performance measures were regularly monitored and / or they were now a part of the service's suite of measures. Twenty seven (29%) indicated they did not know suggesting they were no longer involved in the project, or in the service where the project was being conducted. Seven respondents said the project they had been involved with had been formally evaluated and 22 (24%) said they plan to conduct a formal evaluation. Feedback from some evaluation participants suggests that for some, this was going to be an examination of all the project performance measure results rather than a full formal evaluation.

While it would have been ideal to carry out an independent statistical analysis of the trended project data for all project performance measures, this was not possible within the scope of the evaluation. Instead, participants were asked in the survey about the degree to which their project goals had been achieved (Figure 3.9).



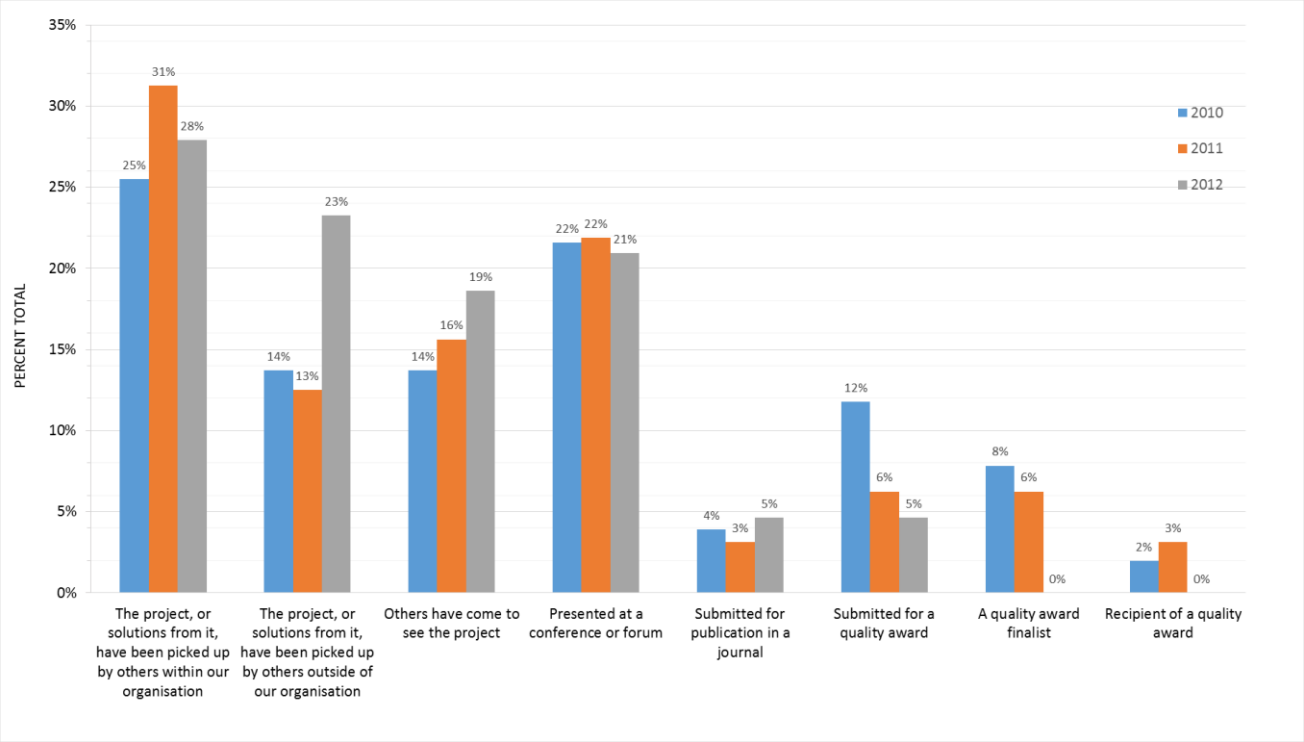
Source: Participant survey, Number of respondents: 2010 n= 24, 2011 n=22, 2012 n=37

Figure 3.9 Achievement of project goals: Percent total respondents

Those (n=10) who indicated they have no idea whether the goals had been achieved were excluded from the graph. This would have included people who had moved away from the service, for example, to a different hospital or even LHD/SHN.

With projects for participants from the 2010 and 2011 courses, where there had been some time for the achievement of results, approximately two thirds of respondents indicated that at least half the project goals developed as part of the solution planning phase had been achieved.

To gain another perspective on the impact of the CHR course project, previous participants were asked a group of questions in the survey about the exposure and uptake of the project to a broader audience (Figure 3.10).



Source: Participant survey, Number of respondents: 2010 n= 23, 2011 n=18, 2012 n=23. Twenty nine participants indicated the question was not applicable because the project was yet to be substantially implemented

Figure 3.10 Exposure of the project by year: Percent total respondents

Overall, 44% of the participants indicated that their projects, or solutions from their projects, have been picked up by others, and 21% said their project had been presented at a conference or other forum. The latter may have been within their LHD/SHN. A small proportion of participants (< 10%) noted that the project they were involved in had been submitted for publication or a quality award.

Combined with information above, these data support the hypothesis that while generally quite favourable, the project results are mixed with some projects being well implemented with the project goals being achieved and the model, or elements of it, receiving peer recognition.

Interestingly, nearly half (42x, 46.7%) of the previous participant survey respondents said they thought the CHR could do more with the Diploma course to help participants and service providers achieve successful project outcomes. The following are some typical responses.

> The CHR is perfectly designed for learning how to design and present a good project. It is not set up for achieving project outcomes. If achieving successful project outcomes is the goal, then the CHR needs to be redesigned for this. The learning outcomes need to be focussed on implementation and evaluation skills…..the return on investment for the CHR training could be much greater with the main focus of the school being about building implementation capability.
>
> (Former participant)
>
> I think support around the implementation process is really important, this is the most difficult aspect of the project
>
> (Former participant)
>
> [There should be] more support after the implementation phase. There should be clear dedicated release time to implement changes after the redesign school finishes. Once back to the existing role, it is very difficult to find time to implement changes. Support from the redesign school such as a monthly teleconference would be useful to discuss issues etc.
>
> (Former participant)

Despite this feedback, there were some excellent project outcomes as illustrated by the case studies included in the evaluation (see Section 4.2 and Appendix 1).

3.5.2 *Enhanced workforce capability that can be used for ongoing healthcare redesign*

During the interviews with senior LHD management, most saw that the graduates were a valuable resource that should be used after graduation for other change management and healthcare redesign projects. This was seen to be particularly important for those who had demonstrated their leadership and expertise in the various stages of the project, including implementation.

However, while this was often mentioned, it was clear that these staff were not being optimally used in a strategic way for improving healthcare (see also Section 3.4.3 above).

3.6 Perceived Program Benefits

The second evaluation questions asks:

What have been the (direct and indirect) benefits of the program?

Data to answer this question was obtained from interviews, focus groups and surveys of key stakeholders. As a number of benefits have been noted above, just a brief summary is given below. The first three were the most commonly mentioned.

- Through experiential learning, course participants are equipped with an **effective redesign methodology** knowledge and skills and a kit of **tools** that they are able to utilise in a variety of settings, for example, with small and large projects, clinical and non-clinical.
- Participants equipped with **change management and project knowledge and skills** that they can use for a range of different purposes
- Through the 20-week course, participants developed useful **networks** with each other. These often continue after the course and are used for sharing of resources that may or may not be related to their respective projects.
- Increased **capability** and **capacity** within the health system for improving health care delivery and outcomes.
- Provided increased **exposure** and **opportunities** for some graduates to work at a higher level within the same or a different organisation.
- Through interaction with other course participants, a **broader understanding of the health system** and how decisions made in one service may have wider unexpected consequences.
- Development of **PowerPoint** and **presentation** skills.
- **Spread** of the learnings and skills from course participants to their workplace colleagues.

3.7 Summary

EVALUATION QUESTIONS:

1. To what extent have CHR participants met each level of Kirkpatrick's training evaluation model:
   i. Reactions
   ii. Learning
   iii. Behaviour
   iv. Results
2. What were the benefits (tangible and intangible) of the CHR Diploma program?

Kirkpatrick Level 1: Reactions - what participants thought and felt about the training

- Feedback from those who have undertaken the course, as well as their sponsors and other key stakeholders, has been extremely positive.
- In the survey of previous participants from 2010 to 2012 (n=93), an extremely high 95.7% said they were very satisfied with the course and 94.6% indicated they would recommend the course to others
- Participants felt 'special' and that their project was also special. Furthermore, they believed they were involved in something 'really important' for NSW Health by improving patient care.

Kirkpatrick Level 2: Learning - the resulting changes in knowledge, skills and attitudes

- Over 90% of previous participants saw that the course made a significant contribution to equipping them to implement change and manage projects to improve healthcare; two key targeted learning outcomes of the course.
- Across each of the eight inventory groups, major statistically significant ($p<0.001$) self-assessed improvements in knowledge, skills and confidence occurred during the 20-week course.

Kirkpatrick Level 3: Behaviour - how on the job behaviour has changed as a result of the learning

- There was general feedback from key stakeholders that attendance at the CHR course had not just resulted in increased knowledge, skills and attitudes, but that participants were generally able to apply a number of these during the diagnostic, solution design and implementation planning phases. The presence of an experienced Redesign Leader and sponsor/s provided important support for this.
- A major behavioural change was not to 'jump straight into [supposed] solutions' as had previously been the approach with many participants.
- A significant sub-group of graduates were not involved in project implementation following the course and thus missed out on a valuable opportunity to consolidate the learnings and to further develop and apply their skills in project and change management, and healthcare reform.

Kirkpatrick Level 4: Results - the outcomes achieved for the organisation as a result of the training

- While some projects from 2010 to 2012 had been fully implemented, at the time of the survey most had been partially implemented and sustained. Approximately two thirds of respondents indicated that at least half their project goals had been achieved.
- The reasons for limited implementation varied but included an unrealistic project scope, a change in circumstances (for example, departure of key staff), and lack of local support.
- About half the survey respondents said the CHR could do more with the course to help participants and service providers to achieve successful project outcomes.
- While most healthcare leaders saw that the graduates were a valuable resource that should be used after graduation for other change management and healthcare reform projects, it was apparent that some were not being optimally used in a planned way for ongoing redesign.

Perceived Program benefits

- A range of perceived direct and indirect benefits from the Program were identified by key stakeholders. The four main identified benefits were: (i) graduates equipped with an effective redesign methodology and a toolkit of useful tools; (ii) change and project management knowledge and skills development; (iii) useful networks with other graduates for ongoing sharing of resources; and (iv) increased capability within the health system for improving health care delivery and outcomes.

Chapter 4. Findings (2): Key Factors for Success, Barriers and Challenges

4.1 Introduction

Following on from the previous chapter which examined the extent to which the CHR Diploma Program has met each level of Kirkpatrick's training evaluation model, as well as listing the main program benefits, this chapter seeks to answer the primary evaluation question:

> *What are the key success factors and barriers to achieving the Program's objectives?*

4.2 Key Success Factors

A thematic analysis of the qualitative data collected as part of the evaluation, along with a CHR documentary review, identified the following factors as being the most important for the CHR to achieve the Diploma program's objectives:

- Evidence-based adult learning program
- Right participants
- Appropriate project
- Effective sponsors
- Ongoing local support including experienced Redesign Leader/s

Each of these is examined in more detail below. When reading these success factors, it is important to note that they have been present to varying degrees with the current program.

4.2.1 *Evidence-based program*

Most critical to the achievement of the CHR goals for the school is a strong and attractive Diploma program that has an evidence base. Key elements of this included:

- Use of a range of critical adult learning principles including e-learning, experiential project work and face-to-face interactive sessions
- Flexible redesign methodology that has been demonstrated to work in diverse healthcare settings
- Experienced staff with a track record in healthcare reform
- Program and project evaluation

These, along with the other key success factors, will be examined further in Chapter 5.

4.2.2 *Right participants*

It is not surprising that choosing the most appropriate participants emerged as one of the key factors for success.

During interviews and focus groups with key stakeholders, they were asked what they thought would be some of the key characteristics in choosing course participants. The following is a summary of their feedback:

- *Credibility and trust*. It was seen as critical that participants had not just a good local track record but also strong credibility and trust amongst clinicians they would be working with and amongst. If credibility and trust were not present, then examples were given where participants struggled to gain local respect and hence buy-in, particularly amongst medical staff.
- *Potential to become future change agents*. For the investment in resources by both the health care service provider and the ACI, it is seen as a much more worthwhile investment if the graduate continues to use their skills, experience and training for shaping ongoing improvements in health care delivery.
- *Passion and drive for health system reform*. Leading a health care redesign project is a challenging task that requires a passion for this type of change management as well as the drive and commitment to see to it through, no matter what barriers and obstacles may be encountered.
- *Networking and interpersonal skills.* Most stages of the project, including implementation, involve working closely with a diverse group of people including the local team where the change will be implemented,

other departments that may be a part of the continuum of care, people providing data, an IT department, human resources, union leadership and / or patients. All of this requires good networking and interpersonal skills.

- *An open mind with a positive attitude*. An open mind is needed so there is true objectivity in identifying the issues and solutions. This needs to be coupled with a positive mindset with a 'can do' attitude rather than this is 'all just too hard'.
- *Part of a team*. While some participants who attended the course as individuals were very successful, it was generally recommended that attending as part of a small team was usually more beneficial. There were a number of reasons mentioned for this including the opportunity to share the load and complement each other with their different skill's mix, the opportunity to build relationships across different roles and services, and to learn from and support each other.

Several other qualities were also mentioned including being a good problem solver, loving the stimulus of change, and being a clinician with experience in the clinical area where the project was to take place.

> People doing a project rarely do another one so there is a need to be more strategic in choosing who does the Redesign School … [we need] to choose people that will become local change agents for the future.
>
> (Former participant)
>
> They need to be motivated … positive people who still have fire in their belly … as well as good networkers with strong interpersonal skills.
>
> (Sponsor)
>
> Clinicians influence their colleagues much more than managers … and if they go with the support of their managers you get much better results
>
> (Redesign Leader)
>
> These two people [successful course participants] were just so motivated and gave 150% … I just had to watch they didn't burn out
>
> (Sponsor)

4.2.3 *Appropriate project*

While project selection was noted as improving, a number of projects were seen to have been inappropriate for the participants attending the Redesign School during the period reviewed in the evaluation (2010 to 2012). Some of the key factors that were considered important in project selection are listed below.

- *A strategic local priority with strong support from management and clinicians.* Because of the amount of resourcing (for example, staff time, participant training) that goes into any one project, it was seen to be a poor use of these very limited resources if they were not utilised for maximal benefit. If the project was seen to be of limited strategic benefit or priority, then it would also be less likely to attract local clinician or management interest and commitment. The most successful projects appear to be ones that from the start have the support of management and clinicians. Of course, this support needs to continue beyond project selection into all subsequent stages of the project.
- *Well scoped with achievable goals*. Before the participant starts the course it was seen that their project needs to be well worked up with clear achievable goals. It was also considered important that the project is appropriate in size for the participant/s leading it including the dedicated time available to them to work on the project.

> You need to set up the project for success from the beginning with a good project choice
>
> (Redesign Leader)
>
> There needs to be good preparation of the idea before the course … and the scoping has to fit the time the clinician has available
>
> (Redesign Leader)

4.2.4 *Effective Sponsors*

Some of the participants interviewed indicated that their sponsor was less than helpful and they had difficulty accessing them. On the other hand, many participants were very positive about their sponsor and saw that having a good sponsor was one of the key success factors for them. They saw that having an effective sponsor brought credibility, authority and profile to the project. In some cases, it was mentioned that having a medical sponsor / clinical lead was critical in getting other medical staff involved.

Some of the attributes suggested by participants and other key stakeholders of an effective sponsor were:

- *Accessible.* A number of sponsors were extremely busy because of their senior roles in the organisation, for example, as a member of the LHD/SLN Executive Team or as a hospital department head. Despite their busyness, it was seen that a good sponsor would view their sponsorship of the participant and the project as a priority and would make sure they had booked in regular meetings (for example, weekly or fortnightly) with the participant, and that they were available for team meetings and at other key times.
- *Understand the service and the fundamentals of redesign.* To be an effective sponsor and provide solid relevant input it was seen that the sponsor needs to not only have a good knowledge of the service but to also understand the redesign methodology.
- *Strong advocate and supporter for the project*. This included not just being there to help obtain the appropriate support and to make any necessary hard decisions, but also to communicate more broadly about the project, for example, at senior management meetings. They also needed to be in the right position with the authority to make the relevant decisions.

It was stated by several people, based on their experiences and observations, that it was important that the sponsor was not there to '*ram through what management had already decided to do prior to the project*' but rather to support the redesign methodology with an open mind.

> Our sponsor was a person we could go to for support when we became stuck.
>
> (Former participant)
>
> [Having a good sponsor] gets things moving … gave it strength and profile … [sponsor] gets things happening at a high level … that is not possible with me.
>
> (Former participant)

4.2.5 *Local support including experienced and skilled Redesign Leader/s*

Participants who did not have local support for their attendance at the course and their project often felt isolated and were frequently frustrated. When there was strong local support, it was perceived there was a greater likelihood of success. Some key components of local support were:

- *Released at least three days for the duration of the course*. Most participants interviewed who were not backfilled or released for at least two to three days per week to undertake the program said they found it very difficult and probably did not get as much out of the course as others. They also had to spend more time at home during the night and weekends working through the course material. Some said they often rushed through the material just so the 'boxes could be ticked'. Exceptions to this could be those where the project was an expected part of their role.
- *Supportive local team*. Sometimes this did not come automatically but to some degree also depended on staff seeing that the program was going to be beneficial for them and their patients. Some other elements of this included managers and clinicians working in partnership and having ongoing medical staff support for the project.
- *Experienced and skilled Redesign Leader*. While Redesign Leaders have now been appointed for each LHD / SHN, several LHDs have had a Redesign Leader/s, and in some places an Innovation Unit, for a number of years (for example, Hunter New England LHD). One of the main reasons for funding of the Redesign Leader positions across the State was the recognition that where they had been in existence for some time, there was a much greater likelihood of the CHR program achieving its goals. Comments were made by previous course participants of the value of this locally based resource, particularly where they were seen as experienced in healthcare reform and the CHR redesign methodology. It was often noted that they were able to help course participants 'fill in the gaps' with their learning and to work with them to increase their confidence and skills, for example, in the use of a particular redesign tool. While the positions vary in their role and location across the State, they were seen to play not just a key role in the mentoring and coaching of participants, but also in broader areas of health care reform within the LHD.

Without doubt we see [at LHDs with effective Redesign Leaders] the students being better prepared, there are better deliverables through the course and much more successful projects … so it's clear that having an effective Redesign Leader makes such a difference.

(Key Stakeholder)

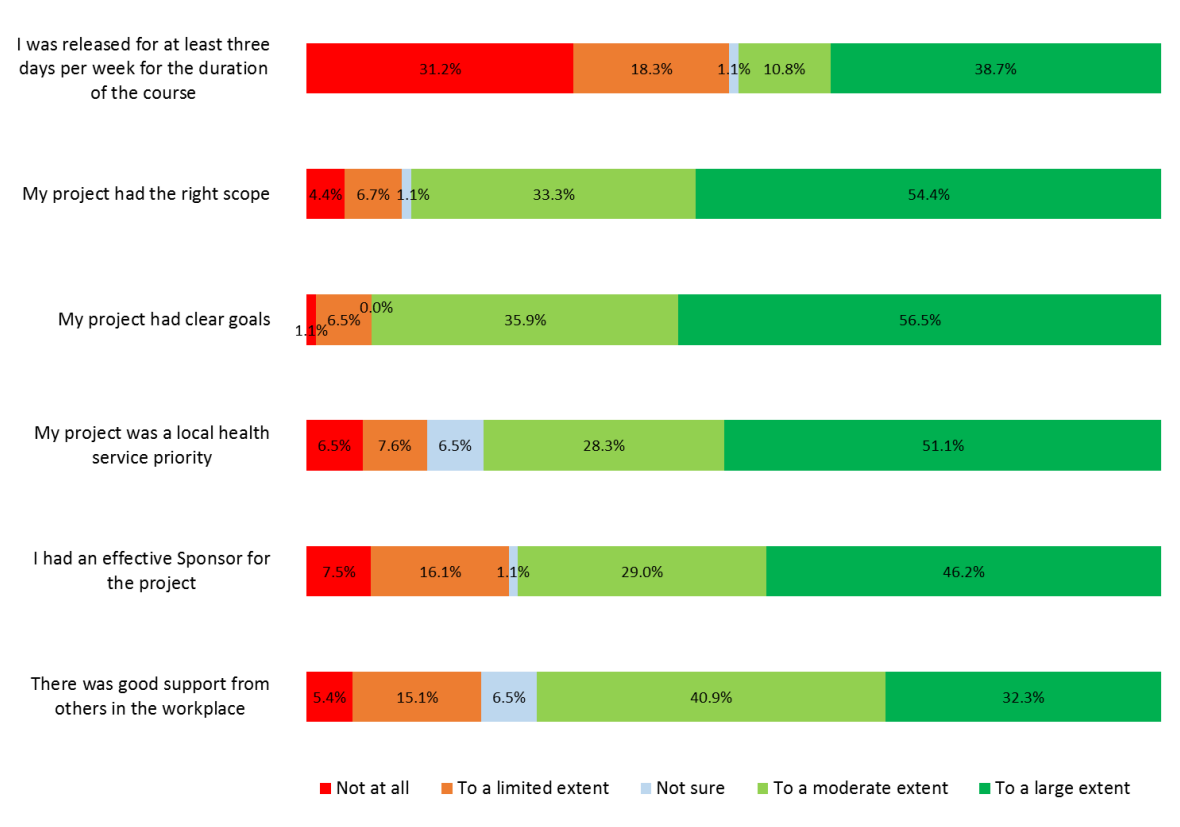
Sometimes participants come back from Redesign School with gaps in solution development … they have a bag of tricks but unsure how to use them.

(Redesign Leader)

[Redesign Leader] was excellent and provided a lot of support. She understands the principles of redesign, always provides constructive feedback … I learnt a lot just by watching her and the way she treats people.

(Previous participant)

Several questions were asked as part of the participant survey about the extent to which several key factors were present for the participants. The results are shown below in Figure 4.1.



Source: Participant Survey, Number of respondents: n = 93

Figure 4.1 Previous participant perceptions around the presence of several key success factors

Generally, course participants perceived their project had clear goals (although this may not have been the case at the start of the course) (92.4%), had the right scope (87.8%), was a local health service priority (79.3%), they had an effective sponsor (75.3%), and they had good local workplace support (73.1%). Approximately half were released for three days per week for the duration of the course.

Unfortunately, due to inadequate numbers in some groups it was not possible to carry out a logistic regression analysis of this data to determine if there were any relationships between the above factors and outcomes such as participant satisfaction, participant confidence to lead another change project. Individual chi-squared analyses did not pick up any statistical differences.

A case study below from the Hunter New England LHD illustrates the health care reforms and positive outcomes that can be achieved when the critical success factors are present.

Case Study: John Hunter Hospital Maternity Services

2010

The Hunter New England Health Innovation Support Scholarship process was introduced to identify and support clinical leaders with innovative ideas, and to identify projects that would be suitable to be conducted using the CHR methodology.

One service that was experiencing major issues with capacity was the John Hunter Hospital (JHH) Maternity services. In 2010, this service provided care for 3,600 women with an estimated 50% being complex pregnancies. There was a vision that all women with complex pregnancies would be offered women-centred, collaborative continuity of care, and that women with low risk pregnancies would have the option of GP shared care. The leadership team were working towards this vision but major changes to the models of care were required.

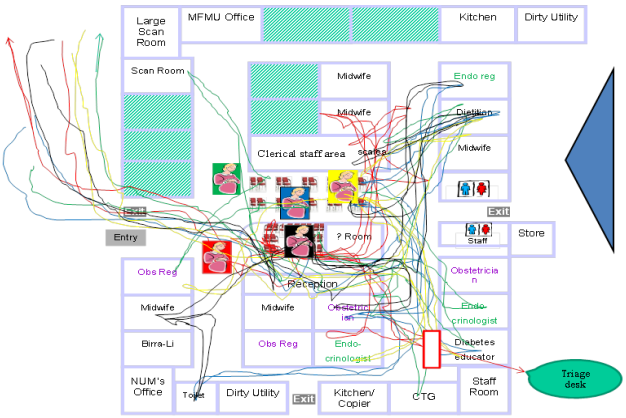
One JHH maternity service that was ready for change was the Diabetes in Pregnancy Antenatal Clinic. The Director of Diabetes services who worked in this clinic had recently completed the Clinical Excellence Commission Clinical Leadership Program and was developing clinical pathways. However, it was very difficult to implement the changes required in the existing clinic model of care and associated processes. The team was awarded an Innovation Support Scholarship and the midwife who was part-time in the role of Clinic Coordinator attended the CHR to undertake the "Making it Sweet for Diabetic Mothers" project. A Clinical Midwife Consultant (CMC) also attended the CHR. A new model of care was developed and clinic processes were redesigned. Both project staff continued to work in their usual roles and communicated on a daily basis with staff in the clinic. The Midwife Clinic Coordinator was funded for two days per week to be the project manager. Sponsorship was from the Service Manager and there was strong clinical leadership from the obstetricians and the endocrinologists working in the clinic. All clinic staff were directly involved and very supportive.

2011

The project was implemented in early 2011, won a HNE Quality Award and was a finalist in the NSW Health Quality Awards.

Following the success of the *Making it Sweet* project, a second maternity project "Complex Pregnancy Redesign" commenced in 2011 with the aim of improving the continuity of maternity care experience for women with complex pregnancies at JHH. This was to be achieved by designing a model where women would have a known maternity care provider from early pregnancy to early parenting. The CMC who participated in the first project was part of the second project team and the project manager was the Group Practice Midwife Manager who would be managing the new model of care. A second Midwife manager attended the CHR training. All of those involved maintained existing roles which added to project credibility with staff. This redesign project was very large as the stakeholder group was the whole service, but it was strongly led by the senior managerial and clinical leadership team.

Concurrently with the redesigned model for complex pregnancies, the JHH Maternity services also planned to increase rates of shared maternity care with GPs. Traditionally, about half of routine antenatal care was shared between GPs and maternity services. In 2006 rates of shared care were down to around 25% and continued to drop to 14% by 2011. With the work and planning that had been undertaken, the service was in a position to be one of the first to participate in the Hunter New England HealthPathways process which was due to be implemented in 2012. HeathPathways was a new way of working between the HNE Local Health District and the Hunter Medicare Local providing a whole of system approach to transforming healthcare. The HealthPathways collaboration has resulted in a locally customised online health information portal for General Practitioners (GPs) to use at the point of care.

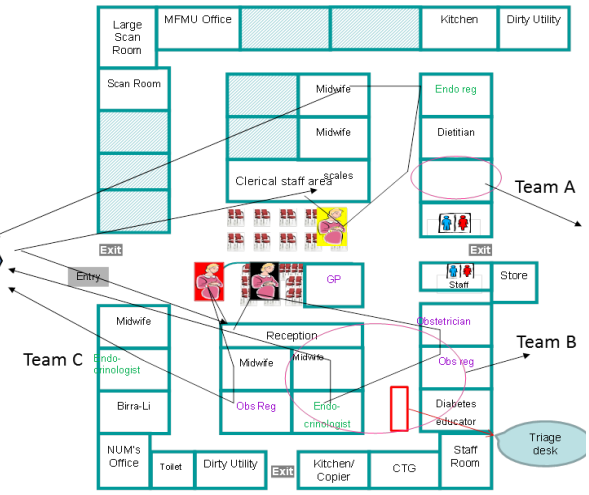


BEFORE

- Women see 2-4 clinicians/ visit (fortnightly)
- See up to 10 different clinicians throughout pregnancy
- Wait average 2 ½ hours
- Patient describe clinic as "a cattleyard"
- Staff describe clinic as "haphazard"
- Very difficult to introduce evidence based practice

AFTER

- Women and staff allocated to one of 3 teams
- Pathway of care
- Educational opportunities enhanced
- continuity of care increased from 45% to 80%
- 25% increase the number of pregnant women through the clinic within existing resources
- Decrease wait time by 78 mins/visit
- patient satisfaction improved by 64%
- 100% of staff report improved communication
- 100% of patients would recommend service
- Caesarean section rate reduced by 8%
- Reduction of antenatal admissions by 3.2%



2012

The Complex Pregnancy redesign project had overwhelmingly positive stakeholder engagement and the new model was implemented in 2012. Several other projects have been undertaken within the JHH Maternity services as a result of the capacity for major change developed through the larger redesign projects. A new referral information management system was also introduced.

There have been 13 maternity HealthPathways implemented in 2012 including the Routine Antenatal Care Pathway. The project manager from the initial "Making it Sweet" project managed the pathway development teams and now, as well as working as a midwife with HNE, is also working part time with the Hunter Medicare Local as a HealthPathways project officer. The Routine Antenatal Care Pathway has the highest usage by GPs of all HealthPathways. By December 2012 there were indications of shared care rates increasing from a group of targeted GPs, resulting in around 550 clinic appointments being utilised more appropriately for higher risk women. There are efficiencies emerging including a reduction in total referral processing time by 82% allowing women to be seen in a timelier manner, as well as anecdotal reports of a reduction in phone calls from women asking about when they will receive an appointment time.

All of the CHR projects and the HealthPathways are supported by the HNE Innovation Support team.

In **summary**, the case study provides evidence that:

- A scholarship or seed funding process identifies innovative clinical leaders and provides an opportunity for building the capacity of a service for major change
- Redesign projects that are aligned to a service priority, led by senior clinicians and sponsored at service manager level can lead to successful outcomes that are sustainable and can be spread
- Matching the change methodology to the desired goals in a staged approach can produce successful outcomes and build positive attitudes to change
- Project staff that maintain a part-time clinical or leadership role whilst undertaking a redesign project retain credibility with colleagues facilitating involvement of clinicians in the change
- Staff who have successfully implemented change projects can lead other projects within their service, or progress to other leadership roles

4.3 Barriers and Challenges

One other dimension to the evaluation question around key success factors was to determine the main barriers and challenges for the program to achieve its objectives. Any feedback from the interviews, focus groups or surveys related to program barriers and challenges was coded and thematically analysed.

As barriers and challenges are often negatively correlated with key success factors, there is some commonality between what is reported here and in the previous section. As it was not possible to reliably assess their relative impact, they are not listed in any priority order.

In reading the following, it needs to be remembered that there was a lot of variation depending on who the response was from. It also needs to be remembered that some of these barriers and challenges have been addressed recently or are now (2013) being addressed by the CHR.

4.3.1 *Insufficient preparation*

This applied to a range of areas that people felt could be improved.

- *Occasional poor project, participant and sponsor selection* (see Section 4.2 above).
- *Service providers and participants not fully aware of the commitment required by them*. For example, some felt that the letter to the LHD/SLN Chief Executives did not spell out clearly the commitment that the LHD/SLN would need to make, particularly during project implementation. Some participants commented that it was only when they started the course that it was clear about how large a commitment was required from them.
- *Late participant notification*. Some course participants indicated they were only informed (usually by their LHD/SLN management) they were to attend to the Redesign School a couple of days before the course started. They saw this as a bad start to the course and the project and were often overwhelmed during the early stages.
- *Inadequate sponsor preparation*. In the sponsor survey[6], only 14% of respondents said they felt very well prepared for being a sponsor. Some of the written comments included, *'more detail* [up front] *on the requirements', 'communicate* [better] *early and often'.* Similar feedback was received in the key stakeholder focus groups and interviews.
- *Limited project development prior to the course*. From several key stakeholder comments, projects that have been well thought through and scoped prior to the course were more likely to be successfully implemented.

> There should be a clearer understanding of what is expected of you throughout the course in the course outline. I felt the workload was a big surprise when it was outlined in the first workshop
>
> (Former participant)
>
> The project was far too large and this was spoken about by a number of presenters during the course. We were, however, compelled to maintain the project at that size so that, in the end, it was bound to fail. [There was a] clear lack of support from executive for anything which could have mean't budgetary implications. This was not clear at the beginning and should have been advised.
>
> (Former participant)
>
> [There needs to be] more work with executive sponsors to stress the importance of a well-designed and executed project and the value of evaluation to determine if a project has meet the desired outcomes. All too often in health we look for quick solutions.
>
> (Former participant)
>
> Lack of preparation [for the role] was a major challenge and expectations of the role were not communicated to me.
>
> (Sponsor)

4.3.2 *Inadequate release time for some participants*

Figure 4.1 above shows that approximately half the respondents were released for less than three days during the 20-week program. Verbal and written feedback from a number who had only very limited or no release for the course / the project found this a real struggle often

[6] Note: There was a very low response rate (19%) so any data from the survey need to be treated with extreme caution

resulting in compromises with both. It was generally thought that three days per week was a minimal release time, although for some, less time was required as the course and the project could be considered a part of their existing role.

> I was nominated (without consultation) to attend CHR and was not supported through having dedicated project time … I experienced extreme pressure at times and was at breaking point through the lack of support from my employers who viewed the CHR as the same as doing any other course
>
> (Former participant)

> We did not have dedicated work time to do the project. The work load associated with the course was intense and difficult to fit the time for the course into core business.
>
> (Former participant)

4.3.3 *Course limitations*

A number of limitations with the course were mentioned by previous participants, Redesign Leaders and sponsors. These fell into several groupings:

- *Limitations with GEM.* The online e-learning component of the course, GEM, was one of the most frequently mentioned barriers to effective learning. For many participants it was a cause of frustration and frequently referred to as being 'clunky' or a 'dinosaur'. Sometimes this was, upon further investigation, attributed to IT issues, particularly in some rural and remote areas. More frequently, however, the main cause of frustration was with GEM navigation. Many graduates said they would love to have a version that was easy to print out if required and easy to come back to in order to access sections of interest. One section was also considered too long by a number of people with the result they tended to skim over it 'to just tick the box' that it had been read.
- *Lack of information on some topics*. Topics that some participants felt could have had more focus were implementation, project evaluation, staff engagement, data usage and analysis, how to do a presentation to members of the Executive (as opposed to the clinical team), and business writing skills.
- *Accelerated Implementation Methodology (AIM) earlier in the course*. This seemed to be more an issue for participants from earlier courses as some changes had been made in 2012 to increase exposure to AIM earlier, as well as to have it more integrated through the course. Despite this, it was still raised by the last group in 2012 as something they would like to see changed.
- *Inadequate time for reflective learning*. This was seen as important particularly for those elements of the projects that may not have gone as well as expected.
- *Perception that the project is primarily for the Redesign School.* Several key stakeholders commented that there was a perception by students that the tasks they were doing as part of the course were for the Redesign School as opposed to primarily being about improving their healthcare service. Although subtle, this was seen as an important distinction that needed to be changed with messages coming from the School. Sometimes it resulted in compromises being made, for example, with stakeholder engagement and how tasks were carried out, and material presented in the workplace.

Several people commented on the lack of clear marking criteria and learning objectives, and that there was too strong a focus on making 'beautiful looking' PowerPoint presentations at the expense of writing reports with substance.

> The one change I would like to see is the content on GEM provided in a hand book to each participant. This would be beneficial for retention of the information delivered through the course. Although it is still available on GEM it is a BIG hassle to log on and find the right section and scroll through all the PowerPoint slides to get to the page you want. This was raised numerous times with the trainers [without any changes apparently being made].
>
> (Former participant)

> [There is the need for] clearer documentation around learning objectives, assignment expectations and marking criteria - after all this is supposed to be coursework for a post-graduate qualification. Less emphasis on the standardisation of submitted reports as power point presentations and more emphasis on individual actions and submissions.
>
> (Former participant)

> [The course] structure is a little inflexible and is focussed more on project management than change management … [It] could be clearer about change management with AIM principles more clearly incorporated throughout the program.
>
> (Former participant)

> [The participants] keep saying 'we'll doing this for the School … we've got to do our PowerPoint presentations for the School' … I keep on needing to say … 'no..no.. you are primarily doing the project for the service, not for the School'
>
> (Redesign Leader)

4.3.4 *Inadequate focus on project implementation*

The completion of the course after 20 weeks, prior to the start of solution implementation, was commonly raised as a short coming of the program (also see Chapter 3.5). While the CHR saw that their role largely finished once the solutions had been developed and that implementation was the sole responsibility of the health care providers, many saw that this needed to change. For example, 50% of survey respondents from previous participants said the CHR could do more to help participants and service providers to achieve successful project outcomes.

Many stakeholders saw that the introduction in mid-2012 of a graduation day six months after participants completed the course, and at which they could share, along with their sponsors, how their project implementation was progressing, was a very worthwhile step. This was put in place by the CHR in recognition that more needed to be done by them in order to increase the likelihood of successful implementation. However, in order to achieve the CHR's objective of *'Enhancing the health workforce's capacity to undertake redesign projects within the NSW Health system'* it was seen that there needs to be further work on developing a stronger partnership approach. This is further discussed in Chapter 5.

> It seemed to us that 80% of the implementation (the hard wins) had to occur after we had completed the CHR Program … most of us were only contracted to be involved during the CSR course period which meant there were limited resources to implement the recommendations. This was regrettable for a number of reasons and I think difficult for the organisation's staff who had this whirlwind of activity whilst the project was underway and then limited implementation of recommendations.
>
> (Former participant)
>
> The CHR is perfectly designed for learning how to design and present a good project. It is not set up for achieving project outcomes. If achieving successful project outcomes is the goal, then the CHR needs to be redesigned for this. The learning outcomes need to be focussed on implementation and evaluation skills. Two days of AIM training at the end of the course will not achieve this outcome. Assuming that the ACI is developing the right models of care, the return on investment for the CHR training could be much greater with the main focus of the school being about building implementation capability.
>
> (Former participant)
>
> [CHR] staff do not feel the pain of things not getting implemented … just the joy and excitement of participants who love the course.
>
> (Redesign Leader)
>
> I don't think there is enough in the implementation planning part of the course….tying in a range of things necessary for successful implementation such as having the appropriate structures, processes, risk management and accountabilities built into the implementation plan … implementation skills are different from project skills. AIM doesn't give enough for implementation … there is a need some additional training.
>
> (Redesign Leader)

4.4 Summary

EVALUATION QUESTION:

3. What are the (i) key success factors, and (ii) barriers to achieving the Program's objectives of:

a. Professional development of the participant in understanding and applying project management and redesign methodology to improve healthcare
b. Delivery of a redesign project with a scoped and signed off implementation plan
c. Development of the health workforce's capacity to lead redesign projects

Key Success Factors

- Evidence-based training program including:
  - Use of a range of adult learning principles
  - Flexible reform methodology that has been demonstrated to work in diverse healthcare settings
  - Experienced staff with a track record in healthcare reform
  - Program and project evaluation
- Right participants
  - Credibility and trust
  - Potential to become future change leaders
  - Passion and drive
  - Networking and interpersonal skills
  - An open mind with a positive attitude
  - Part of a team
- Appropriate project
  - Local health priority with strong support from management and clinicians
  - Well scoped with achievable goals
- Effective sponsors
  - Accessible
  - Understand the service and the fundamentals of redesign
  - Strong advocate and supporter for the project
- Ongoing local support including experienced and skilled Redesign Leader/s

Barriers and Challenges

- Insufficient preparation
  - Occasionally poor project, participant and sponsor selection
  - Service providers and participants not fully aware up front of the commitment required
  - Inadequate orientation and preparation of sponsors
  - Limited project development prior to the course
- Inadequate release time for some participants reflecting a mismatch between course requirements / project scope and available participant time
- Some course limitations
  - Limitations with GEM – mainly with use rather than content
  - Lack of information on several topics eg project evaluation
  - Some parts of Accelerated Implementation Methodology (AIM) earlier and more integrated
  - Inadequate time for reflective learning
  - Participant perception that the project is primarily for the Redesign School
- Inadequate focus on project implementation
  - During the course
  - After the 20-weeks during the implementation phase
  - Limited partnership between the CHR and the LHDs

Chapter 5. Bringing it Together: Discussion and Recommendations

5.1 How Effective has the CHR Diploma Program Been?

Recognising the need to build health workforce capacity and capability for healthcare redesign, in 2007 NSW Health, as part of a major healthcare reform program, established the CHR Redesign training program. Since then it has trained over 240 staff in project management and use of redesign methodology to make changes across the NSW health system and beyond (Chapter 2).

One of the most appropriate ways to assess the effectiveness of a program is to examine the degree to which the program goals have been met. Using the results in Chapters 3 and 4, the assessment of this is summarised in Table 5.1.

Table 5.1 An assessment of the CHR Diploma program against the program objectives

CHR Diploma Program objective	*Assessment*
1. Professional development of the participant in understanding and applying project management and redesign methodology to improve healthcare	• Extremely high (95.7%) levels of participant satisfaction • Over 90% of previous participants saw that the course made a significant contribution to equipping them to implement change and to manage projects to improve healthcare • Statistically significant ($p<0.001$) self-assessed improvements in knowledge, skills and confidence occurred during the course
2. Delivery of a redesign project with a scoped and signed off implementation plan	• Over ninety five percent of participants starting the Diploma program completed the program, delivering a redesign project with a scoped and signed off implementation plan
3. Development of the NSW Health workforce's capability to lead redesign projects	• Since the course was established in 2007, over 240 healthcare staff have completed the course. This well-qualified resource pool represents 0.2% (or 2.0% if each of these is able to influence 10 other staff) of the total NSW Health workforce. • One important impact of the overall CHR program has been in the training and professional support of LHD-based Redesign Leaders who have a major role in local healthcare reform including the support of course participants, course project implementation, other LHD-based reform projects, and local communities of practice for healthcare improvement. • A significant but unknown percentage of participants did not go on to be involved in the implementation of their project and / or lead another reform project. These have been missed opportunities for capacity building and capability transfer.

The program has been very successful in achieving the first two objectives but has had mixed results with the third. One factor contributing to the latter result is that development of the capability of the health workforce to lead redesign projects is dependent not only on the CHR but also on decisions made by the LHDs/SLNs. These decisions include those made before the course, as well as decisions relating to project implementation and how graduates are utilised in an ongoing way after completing the program.

Another approach for assessing the effectiveness of the program is to compare the results with those published in the literature. The most relevant international review was carried out by Boonyasai et al (2007) who undertook a comprehensive systematic review of the effectiveness of teaching quality improvement and health care reform approaches to clinicians. Of the 39 studies that met their eligibility criteria, 31 were team-based projects and 37 combined didactic instruction with experiential learning.

Table 5.2 summarises the results of the review, along with a comparison of the results from this current evaluation of the CHR Diploma program.

Table 5.2 Summary of evaluation results from a systematic review (Boonyasai et al 2007) of quality improvement curricula: A comparison with the CHR (in brackets)

Outcome category	*Percent total articles describing outcomes with:*		
	Only beneficial effects	*Mixed effects*	*No beneficial effects*
Overall	30.8	61.5 (CHR)	7.7
Attitude	16.7 (CHR)	66.7	16.7
Knowledge	80.0 (CHR)	10.0	10.0
Skills / Behaviour	67.0 (CHR)	33.0	0.0
Process outcomes	33.3	55.6 (CHR)[1]	11.1
Patient outcomes	27.8	22.2 (CHR)[1]	50.0

[1]Difficult to assess quantitatively for the CHR Program, so assessment based on information gained from graduation day presentations, percent project goals met, several case studies and feedback from surveys and interviews.

The results show that compared with published studies reporting on the outcomes of training programs, the CHR program compares very favourably on change in attitudes and the acquisition of new knowledge and skills, and is likely better than average for process and patient outcomes. It is interesting to note that the majority of evaluated projects demonstrated positive changes in knowledge (80%, n = 8 out of 10) and skills / behaviour (67%, n = 4 out of six).

Boonyasai et al (2007), while they were unable to provide evidence of a causal relationship due to limited published information, postulated that the effectiveness of a course would be related to the adoption of adult learning principles. As part of their testing of this hypothesis, they developed a list of fundamental adult learning principles based on a review of five major educational theories. Using the same adult learning principles and a similar assessment approach, an estimate was made of the degree to which they were exhibited in the CHR Diploma Program (Table 5.3).

Table 5.3 Degree to which adult learning principles are exhibited in the CHR Diploma program

Adult learning principle[1]	*Degree to which exhibited (None / Partial / Full)*
1. Enabling learners to be active participants	Full
2. Providing content relating to learners' current experiences	Full
3. Assessing learners' needs and tailoring teaching to their past experiences	Partial
4. Allowing learners to identify and pursue their own learning goals	None
5. Allowing learners to practice their learning	Full
6. Supporting learners during self-directed learning	Partial
7. Providing feedback to learners	Partial
8. Facilitating learner self-reflection	Partial
9. Role-modelling behaviours	Partial

[1]From Boonyasai et al (2007)

The results for CHR are very similar to those found in other quality improvement training programs examined by Boonyasai et al (2007). The main difference was the absence with the CHR program of *'allowing learners to identify and pursue their own learning goals'*. For the programs examined by Boonyasai, 29.4% had fully utilised this principle, 50.0% partially, and for the remaining 20.6% it was absent.

Coaching of course participants by the Redesign Leaders, who are provided professional support by the CHR, would strongly complement the adult learning approaches mentioned in Table 5.3.

In a detailed evaluation of a training program to develop organisational leaders to carry out improvement projects at Cincinnati Children's Hospital Medical Centre in the US, Kaminski et al (2012) also used Kirkpatrick's four-level model to evaluate that program[7]. As the program is recognised as being very successful, and because of some similarity in the course approach and the evaluation methodology, it is possible to roughly compare the two sets of results (Table 5.4). In comparing the two sets of results it is important to note that the Cincinnati program is run in house with a much smaller range of health services within the one medical centre and has a focus on smaller quality improvement projects. In contrast, the CHR program is for health services across 17 LHDs/SHNs with generally larger projects to improve clinical processes and deliver better patient journeys.

Table 5.4 A comparison of the Cincinnati and CHR improvement programs using Kirkpatrick's four-level model of evaluation

Kirkpatrick evaluation level	*Cincinnati improvement course*	*CHR improvement course*	*Comments*
1. Participant reaction	• Extremely positive.	• Extremely positive.	Although slightly different likert scales were used, there were very similar levels of positive responses to questions related to the participant reactions to the course including their satisfaction.
2. Participant learning	• Large and statistically significant ($p<0.0001$) improvements based on pre- and post-course self-assessments.	• Large and statistically significant ($p<0.0001$) improvements based on pre- and post-course self-assessments.	Cincinnati assessments based on five quality improvement topics; CHR based on eight skill inventory groups made up of 52 individual elements.
3. Participant behaviour	• Most participants indicated changes in behaviour as a result of the course. • Most participants continued to use at least some of their learnings after the training.	• Most participants indicated changes in behaviour as a result of the course. This was generally confirmed by their sponsors. • Most participants continued to use at least some of their learnings after the training.	The relative degree of subsequent use of learnings was not able to be determined from either evaluation.
4. Organisational results	• 50.0% of projects were completed and made a part of everyday operations. • Approximately 85% of	• 19.4% of survey respondents reported their projects (2010 & 2011) were fully implemented with most solutions a sustainable part	Although not able to be quantified within the scope of this evaluation, there appears to be significant variability across NSW LHDs

[7] Brief course description: *"Training sessions occur over 2 full days a month, for 6 months. Each class consists of a multidisciplinary cohort of 25 to 30 participants … Priority is given to leaders actively involved in improvement efforts … Instructional methods include lectures, case studies, interactive application exercises and dialogue, participant book reports, and assigned readings of textbooks and journal articles. Participants demonstrate competence in improvement science by completing a project with improvement in outcome and/or process measures. They give project presentations and receive feedback during each session and one-on-one coaching between sessions."* (Kaminski et al, 2012, p905).

Kirkpatrick evaluation level	*Cincinnati improvement course*	*CHR improvement course*	*Comments*
	projects demonstrated measurable (modest to sustainable) improvement. • 34.3% and 13.6%, respectively, of participants said their project had spread to other units within the organisation or to other organisations.	of everyday operations. • Approximately two thirds of participants (2010 & 2011) reported that at least half their project goals were achieved and sustained. • 27.7% and 13.3% of participants (2010 & 2011) respectively, said their project or solutions from it had spread to other units within the organisation or to other organisations.	with some LHDs (eg HNE) achieving successful implementation rates of 90% or more.

Similar to the comparison in Table 5.2, this data also highlights that the CHR program, despite its much broader scope, has been extremely successful with participant reaction / satisfaction, and acquisition of new knowledge and skills, and changes in behaviour. The Cincinnati Centre having a higher success rate of project completion and demonstrated positive outcomes. This is not surprising as their projects are smaller and there is clearer accountability for implementation with the Cincinnati program. While it needs to be tested with further research, it does appear with the CHR Program that where there are rigorous LHD processes for participant, project and sponsor selection, along with good local support including from an experienced Redesign Leader / Innovation Unit (see Chapter 4.2), then the rates of success, and the organisational impacts, would be at least comparable to those at Cincinnati.

Another evaluation of a quality improvement training program for improving clinical care that utilised Kirkpatrick's evaluation model was that of the Mayo Clinic Quality Academy Teams Training Program (Ruud 2012). This course is comprised of 80 hours of in-class training as well as project work over a three-month period. The results from this smaller program revealed:

- Generally favourable reactions from participants
- Statistically significant ($p<0.001$) improvements in pre- and post-course scores
- Participants increased their use of process improvement tools after the course
- All 14 teams in the study cohorts achieved positive results with their projects.

While the focus of the Mayo Clinic program is on equipping participants with process improvement tools, rather than on systems and culture change management, the positive results do highlight what can be achieved with a shorter experiential course. As the follow up period was just 90 days after graduation, it was not possible to assess the longer term impacts of the course.

In summary, the Diploma program has been extremely successful in developing over 240 change managers for the NSW Health system with many of the results being comparable with or better than a number of other training programs internationally. Graduates have been equipped with important project and change management skills that are critical for ongoing reform of healthcare delivery in NSW. Other than some fine tuning of the course, the main areas for improvement are around increasing the likelihood of project implementation success and a more strategic use of graduates for ongoing health system reform and capacity building.

In large part, this is quite dependent on the work environment of the participants and local management decision making (Tracey et al 1995).

5.2 Key Success Factors

One of the evaluation questions was to determine the key success factors for achieving the program's objectives (Figure 1.1). Key success factors are here defined as those few important areas that an organisation or program needs to get right in order to ensure success.

They are important to identify for ongoing learning and improvement and to ensure that any

future efforts are targeted towards those areas where improvement activities will have the most impact.

The key success factors identified during the evaluation were:

- Evidence-based training program including: the use of a range of adult learning principles, a flexible reform methodology that has been demonstrated to work in a diversity of healthcare settings, experienced training staff with a track record in healthcare reform and program and project evaluation
- Participant selection: having credibility and trust, passion and drive, networking and interpersonal skills, and the potential to become future change leaders
- Project selection: a local health priority with strong support from management and clinicians as well as being well scoped with achievable goals
- Effective sponsors: accessible, understand the service and the fundamentals of redesign, and being a strong advocate and supporter for the project
- Ongoing local support including experienced and skilled Redesign Leader/s

How do these compare with those reported in evaluations of other healthcare improvement training programs? Unfortunately, there are few papers reporting on the key success factors for quality improvement training programs. In the systematic review by Boonyasai et al (2007) mentioned above, they list several recommendations for healthcare quality improvement curricula, namely:

- Among other things, the content needs to include teaching on health as a system, customer knowledge and collaboration skills
- Learning needs to be experiential with incremental change based on trial and error
- Opportunities need to be provided for working closely with colleagues from other disciplines
- Coaching of course participants by an expert faculty
- Access to performance resources such as performance data and tools

As part of their evaluation, Kaminski et al (2012) also propose some recommendations for training success:

- Experiential learning
- Project selection is critical with the project needing to be one of organisational significance that is supported by management and has a narrow scope.
- A coach needs to be assigned six to eight weeks before the start of course to ensure a good start with draft project aim and some baseline data
- Private coaching of participants being provided between face to face sessions
- Time for reflective learning and internalising with repeated emphasis of core concepts and specific feedback on their projects

Morganti et al (2013) argue that the strongest predictor of success in the Perfecting Patient Care University quality improvement program for health care leaders and clinicians was the level of 'training dose'. This was a composite measure made up of the initial training along with other training and coaching. They highlight the importance of continued reinforcement of the skills gained to achieve ongoing sustainable changes in practice.

The CHR Diploma Program has most elements of the above. Perhaps the ones that need more emphasis within the overall program are:

- More time set aside for reflective learning and internalisation
- Greater reinforcement of skills and learnings during and after implementation through coaching and other forms of support

5.3 Future Directions

It has been recognised for a number of years that major transformational changes are needed in healthcare in order to meet the ongoing challenges of providing high quality, safe and effective care within an environment of increasing demand but limited resources.

International studies show that one of the most critical components in delivering the required transformational changes is having a planned and strategic approach to developing the capacity of change leaders and agents within the health

system. This is demonstrated by Bevan (2010) who highlights that four of the nine enablers[8] for system-wide change in the healthcare system are directly related to this (Table 5.5).

Furthermore, using evidence from reviews of the National Health Service (NHS) and case studies (for example, Øvretveit J, Staines A, 2007), Bevan et al (2008) conclude that the greatest area for ongoing improvements within the NHS is hands-on improvement skills for leaders and front line alignment of change capability with local strategic priorities.

Table 5.5 Capacity and capability building enablers for system-wide change: Current roles of the CHR and LHDs/SHNs

System enabler	*Role of the CHR Program*	*Role of LHDs/Ns*
Systems for learning and discovery which enable health systems, local organisations and teams to learn about, experiment with and adopt new practice rapidly	Major	Major
Access to the skills, competencies and know how to propel the system to future success	Major	Major
Support and guidance in implementing changes	Medium	Major
Systems for workforce development, talent management and leadership succession planning	Minor	Major

Source: Adapted from Bevan (2010)

Assuming the above four enablers are also critical for system wide change in NSW, it is clear that the CHR training program, which was specifically set up for redesign capability development within NSW Health, has an ongoing critical role to play. This also highlights the importance of a strong partnership between the CHR and the LHDs/SHNs. For this partnership to be effective there needs to be clearly defined roles for capability development, along with shared accountabilities for the outcomes.

Looking ahead to the next five to ten years, what should be the priorities for the program? Should it continue to function in a similar way to now or should there be some planning around future directions to meet the longer term goals of the LHDs/SHNs? For the NHS, which has been at the forefront of healthcare transformation, Bevan (2010) suggests an aspirational future where:

'Change management, innovation and improvement skills are regarded as a critical component in individual and organisational performance and behaviour. In addition, leadership teams and frontline clinical teams are able to identify the gaps in performance and resources and have the skills and confidence to close them in a systematic way' (Bevan, 2010, p143). That is, it is hard-wired into the day to day practice of staff (Bevan et al, 2008)

Assuming there is a similar need in NSW, then a targeted approach for capability building is needed. In order to build a strategy for large scale improvement skills, Bevan (2010) suggests the following based on the best available evidence:

- Plan for large-scale capability building based on the evidence base
- Raise the status and perception of change agents and service improvement programmes
- Build on existing capability and talent
- Mobilise the workforce
- Connect skill building to results
- Engage senior clinical and management leaders as role models

While the CHR Diploma program is delivering some excellent outcomes, and should continue as the central component of any future strategy, it is considered worthwhile that high level discussions take place over the next 12 months around the vision for the next five to ten years for ongoing

[8] In addition to the four enablers listed in Table 5.5, the other enablers listed by Bevan are: (i) Governance and assurance systems that: (a) integrate clinical quality and cost reduction, (b) enable improvement; (ii) Systems that enable service users to drive and influence change; (iii) Performance management, and incentive systems that support improvement in quality and cost; (iv) Access to sources of world-class good practice and generalizable evidence; and (v) Access to global benchmarking data at patient, clinician, team, organisation and health system level.

capacity and capability building for healthcare reform within NSW Health.

5.3.1 *Recommendations*

The following recommendations are based on the evaluation findings and the international literature. The main organisation/s responsible for implementation are listed in (**bold**) after the name of the recommendation.

To continue to build on the clear positives of the existing Diploma program, and at the same time to address the identified challenges, the following recommendations have been made.

Partnership approach

1. *Strengthen the partnership between the CHR and the LHDs/SHNs to build redesign and innovation capability* **(ACI and LHDs/SHNs)**. While there are different roles (CHR having a major role in capability development for clinical redesign with the LHDs/SHNs being responsible for other facets including project implementation), the Program's objectives can only be achieved with a strong partnership between the two with overall shared accountability. Partnership strengthening should occur at both CE / Executive and operational management levels. Strengthening should include enhanced communication, for example, about the resourcing and commitment required for successful outcomes.

Preparation and selection

2. *Improve project selection* **(LHDs/SHNs and ACI)**. In selecting projects for the Diploma Program, it is recommended that the following are included in the selection criteria by the LHDs/SLNs and the CHR: (i) be a local health service priority with strong support from management and clinicians, and (ii) be well scoped with achievable goals.

3. *Improve participant selection* **(LHDs/SHNs and ACI)**. To maximise benefit for both the health service and the participant, it is recommended there is a commitment to:
   a. Select participants who have: (i) local credibility and trust; (ii) passion and drive for health system reform; (iii) networking and interpersonal skills; (iv) potential to become future change leaders; and (v) have a stake in achieving a successful project outcome.
   b. Ensure participants have dedicated time that aligns with the project scope. Generally, this is recommended to be at least three days per week for the 20-week course and for solution implementation. The actual level of release may need to be varied across the different phases depending on project demands and the scope of the project.

   It is also recommended that all LHDs/SHNs consider the adoption / adaption of the revised Hunter New England LHD scholarship model as part of the selection process (see Appendix 6).

4. *Improve sponsor selection and preparation* **(LHDs/SHNs and ACI)**. For effective sponsorship, there is a need for sponsors that: (i) are accessible to the participant on a regular basis; (ii) understand the service and the fundamentals of redesign; and (iii) are a strong advocate for the project. For most projects, it is recommended there should be a senior manager sponsor and a clinical lead. In preparation for their role, the sponsor should be provided with an orientation package, accompany participants at the first day of the course, complete a GEM unit on sponsorship, participate with the project team in at least two teleconferences arranged by the CHR during implementation, and attend the participant graduation.

Course delivery

5. *Modify course content and structure* **(ACI)**. While important improvements to the course have been made over time, some small changes are necessary for further improvement. The recommended changes are:
   a. With the involvement of several previous course participants and an e-learning expert, review the usability and content of the e-learning tool, GEM.
   b. Review the course content in relation to the following (existing or new) topics suggested by key stakeholders as possible areas for change: (i) implementation; (ii)

project evaluation; (iii) how to run a focus group and meeting; (iv) communication and engagement; (v) collecting and using data; (vi) how to be both rigorous and flexible (within the broad methodology) in applying the CHR redesign methodology.

c. Review and modify the course structure with a focus on greater integration of AIM including more on sponsorship at the commencement of the course; increase the time for solution design; and add in a session for facilitated reflective learning exploring and sharing the participant's experiential learning on the last day of the course.
d. Review and modify the approach taken with participant reports, streamlining the report process to align with the project management diploma and sponsor requirements. To this end, it is recommended that consideration be given to the use of an 'A3' format.

Solution implementation

6. *CHR increase its input into participant skills development and learning during project implementation* **(ACI)**. In order to continue to invest in participant capability development, and to help sustain momentum with the transition from the 20-week course into implementation, it is recommended during the solution implementation phase that:
   a. Bimonthly telephone conferences be trialled with participants and sponsors involved in implementation. These teleconferences could be similar to those run during the course but with a focus on implementation.
   b. Support participants and Redesign Leaders through site visit/s by CHR staff.
   c. Support the development and growth of local communities of practice through the Redesign Leaders and other ACI resources.

7. *LHD/SHN increase their focus on implementation and reporting* **(LHDs/SHNs)**.
   a. If not already in place, local processes should be developed by the LHDs / SHNs for regular monthly reporting of CHR-related projects to the Executive Team. This report should include progress with solution implementation and the impact of this on the targeted levels of performance.
   b. A progress report be submitted to the CHR six months after completion of the 20-week course. A template for these reports to be developed and to include challenges and learnings encountered. Consideration be given to having these reports based on a one-page template.
   c. A 'close-off' session for reflective learning and review be held 12 months after the course is completed. This should be attended by the course participant/s, the sponsor/s and Redesign Leader/s, and a member of the CHR faculty. A final report should be provided to the CHR at this time.
   d. LHDs/SLNs consider how local expertise can be harnessed to support participants to build successful change management initiatives, for example, develop an AIM monthly learning set or an innovations workgroup for project discussion and learning.

8. *Develop an Award Scheme for outstanding CHR related projects* **(ACI)**.

Other

9. *Strengthen the relationship between the CHR Diploma Program and the ACI Networks* **(ACI)**. It is recommended that the linkage be strengthened by: (i) the appropriate CHR projects with state-wide potential are taken to the relevant network for their review as to the possibility of broader dissemination and implementation; (ii) the networks are involved in identifying broad priorities for possible CHR projects; and (iii) learnings from network and CHR project implementation are fed back to each other for mutual benefit.

10. *Conduct theme-based Diploma programs* **(ACI)**. Run and evaluate further theme-based redesign schools.

11. *Improve data collection and review processes* **(ACI)**. The data collected as part of the course (eg pre- and post-course self-assessments, readiness for change project assessment, achievement of project goals) be reviewed both for having the right data collected, as

well as how it is stored and utilised for ongoing evaluation and review.

12. *Investigate how to further increase the capacity and capability of NSW Health for ongoing healthcare reform and the role of the CHR Program within this* **(ACI)***.*

References

Bates R (2004) A critical analysis of evaluation practice: the Kirkpatrick model and the principles of beneficence. *Evaluation and Program Planning* 27: 341-347.

Bevan H, Ham C, and Plesk P (2008) The Next Leg of the Journey: How do we make High Quality Care for all a Reality? NHS Institute for Innovation and Improvement, Coventry,

Bevan, H (2010) How can we build skills to transform the healthcare system? *Journal of Research in Nursing* 15(2): 139-148.

Boonyasai RT, Windish DM, Chakraborti C, Feldman LS, Rubin HR, Bass EB (2007) Effectiveness of teaching quality improvement to clinicians: a systematic review. *JAMA* 298(9): 1023-37.

Kirkpatrick DL, Kirkpatrick JD (2007) Implementing the Four Levels: A Practical Guide for Effective Evaluation of Training Programs 1st Edition Berrerr-Koehler, San Francisco 165 pages.

Kirkpatrick DL, Kirkpatrick JD (2006) Evaluating Training Programs: The Four Levels 3rd edition Berrerr-Koehler, San Francisco 398 pages.

Kirkpatrick D (1996) Great ideas revisited. *Training and Development* January 1996.

Morganti G, Lovejoy S, Beckjord E, Haviland A, Haas A, Farley D (2013) A Retrospective Evaluation of the Perfecting Patient Care University Training Program for Health Care Organizations. *American Journal of Medical Quality* (Epub ahead of print)

Øvretveit J, Staines A (2007) Sustained improvement? Findings from an independent case study of the Jönköping quality program. *Quality Management in Healthcare 16(1): 68-83.*

Ruud K, Leland J, Liesinger J, Johnson M, Majka A, Maessens J (2012) Effectiveness of a quality improvement training course: Mayo Clinic Quality Academy. *American Journal of Medical Quality* 27:130-138.

Tracey J, Tannenbaum S, Kavanagh M (1995) Applying trained skills on the job: The importance of the work environment. *Journal of Applied Psychology* 80 (2): 239-252.

Wong B, Etchells E, Kuper A, LevinsonW, Shojania K (2010) Teaching quality improvement and patient safety to trainees: A systematic review. *Academic Medicine* 85(9): 1425-1439.

Appendices

Appendix 1: RENEW Case Study – Improving the Health Care Experience for Renal Patients Planning for Dialysis

(Source: Adapted from the South Western Sydney LHD Submission for a NSW Health Baxter Award, 2012; 2013 outcome data update was provided by LHD)

Abstract

A Renal Redesign Project (RENEW) was undertaken to improve the pre-dialysis phase of a patient's journey and with a view to increasing the proportion of patients on home dialysis. This was identified as a safer, preferable and cost effective service for patients. An ongoing increase in the number of dialysis patients was placing pressure on a renal service that has already increased its services with additional haemodialysis chairs.

The project used the established NSW Health CHR Redesign methodology. Nineteen solutions were identified with the implementation phase of the project commencing in October 2011.

Evaluation at six months post commencement of implementation saw a seven percent increase in pre-dialysis patients planned for home therapies. By April 2013 56% of new renal dialysis patients were planned for home dialysis therapy.

By April 2013 all new pre-dialysis patients referred to the services in the previous 12 months (n=179 patients) were commenced on a structured multi-disciplinary care pathway. This has ensured appropriate multi-disciplinary planning and allowed for the planned initiation of dialysis therapy at an appropriate time for each patient.

At 6 months $280,500 was saved in avoidable expenditure due to dialysis on an in-home therapy program rather than in-centre. By the April 2013 this saving increased to $750,000. A further expenditure avoidance of $181,200 is estimated from the implementation of the revised home management support model which prevented hospitalisation and admission.

Extent of the Problem

In 2011, there were approximately 480 maintenance dialysis patients under the care of the Renal Service. There had been a continued growth in dialysis patient numbers mainly in facility based haemodialysis demand (Renal Unit Annual report 2010/11). All five facility based centres providing haemodialysis chairs in SWS LHD were full and over capacity in the In-centre Unit, despite an expansion in the dialysis chairs within the Local Health District.

Home based dialysis has been identified as the most cost effective solution (NSW Dialysis Costing Study, 2008) with proven physical and social benefits to the population receiving the therapy. However despite these proven benefits, home therapies as the first treatment option was under-represented with only 43% (n=214) of the dialysis population in the SWSLHD utilising home based services. This was under the State target of 50% (NSW Renal Dialysis Service Plan to 2011, 2007) and resulting in additional cost of $1,125,000 pa.

Aim

The Redesign Project aimed to improve the journey of patients with Chronic Kidney Disease (CKD) from the point of referral and to achieve an increase in the uptake of home therapies to 50 percent of all new patients on the dialysis program.

Issues Identified

A range of issues were identified during the diagnostic phase of the project including:

- Inadequate resources to meet the demand for frequent home visiting.
- Inconsistent care planning with fragmented referral processes, lack of an overall case management model.
- Fragmented and multiple services over multiple sites with at times limited accessibility.
- Ineffective 'one size fits all' approach.
- Poorly marketed education seminars.
- Lack of knowledge of services and roles amongst some staff. Poor staff understanding

about home therapies and the support available to patients and carers.
- Large geographical area with poor public transport.
- Variety of referral processes and opinions on timing of care.
- Sporadic follow up with poor communication between care team members.

Planning and Implementing Solutions

The project was conducted adopting the CHR Redesign Methodology, involving clear project phases, objectives, milestones and deliverables. Improving home dialysis service using a redesign methodology is unique and the first known project of its kind undertaken in Australia. It is also contributing to International studies in relation to the potential impact of integrated care pathways for CKD has on choice of dialysis modality. Executive sponsorship was provided by the Chief Executive of SWSLHD and operationally by the Director of Area Renal Service who was the Chairperson of the Project Steering and Implementation Committees.

Nineteen eventual solutions were identified for implementation. Some key solutions involved:
- Case management model
- Care planning
- Information access & management
- Pre-dialysis education, and
- Vascular access

Some other aspects of the implementation process:
- The Implementation Committee continued to met monthly during the first year of implementation.
- The Project Officers continued to meet with the Operational Sponsor of the project on a monthly basis to support implementation.
- The Project Officers continued to conduct in-services, presented at Service Manager meetings, Area Renal Meetings, Community Participation Network and continued to keep the project on the agenda for the Executive Meetings of each Facility within SWSLHD to increase awareness of the changes.
- Communication and risk management strategies continued to be utilised to support implementation.
- The district Redesign Program Manager remained involved in advising on implementation for the first 12 months of implementation.
- Progress was monitored and evaluated at 6 and 12 months post commencement of implementation.

Outcomes and Evaluation

Outcomes include the following:

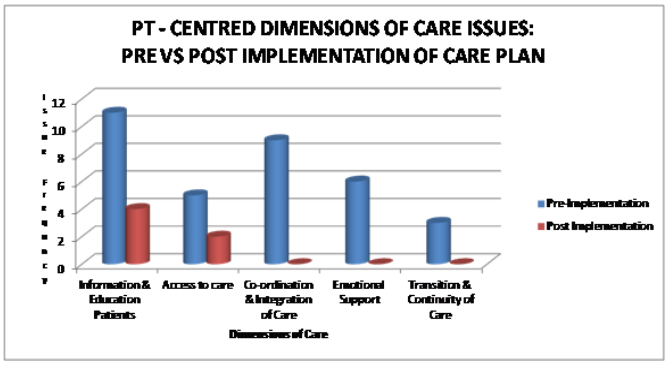
(a) Revised case management model
- Increase in the rate of pre dialysis patients planned for home therapy from 19% to 26% in 6 months and to 56% by April 2013.
- Patients educated earlier allowing for better self-management and empowerment.
- Case Manager surveillance program implemented.
- Reduction in number of pre dialysis patient waiting education from 49% to 38%.

(b) Renal eMR developed and piloted in December 2011
- After 'go live' date, staff described the eMR as 'easy to use' and 'doctors have access to full, current dialysis information when they are reviewing the patient'.
- Resulted in an immediate positive impact on communication and maintaining safety of the patient.
- Improved access to data and information.

(c) Home Therapies solutions
- Previous decline in Home Peritoneal Dialysis numbers improved following commencement of implementation with a 13% (21 patient) increase in the first 6 months, saving $262,500 in six months. A further significant expenditure avoidance of $750,000 occurred by April 2013 due to continued increased uptake in peritoneal dialysis (28%).
- Increase home visiting by experienced nurses, saved patients out of pocket expenses and travel time associated to hospital clinics attendance and clearly assisted in troubleshooting issues and prevented hospitalisation and admission, saving an estimated $181,200.

(d) Improved patient experience

- Post implementation interviews have demonstrated increased improvement in care co-ordination, improved patient satisfaction with their care and better structure for the patient's preparation for dialysis, including psycho-social welfare (see below).



Sustaining Change

The revised model of care is embedded with dedicated communication and implementation plans providing a supportive structure. Strong organisational and governance structures were in place to support the project and subsequent implementation creating an integrated centre of competency with accountabilities and key performance indicators established. The Renal eMR provides an integrated system allowing 'real time' data extraction which is regularly reported to the hospital, the District Performance Unit and agencies such as ANZDATA. The introduction of standardised care plans/milestones, pre-dialysis patient education and psychological assessment tools were developed by and are owned by staff - supporting sustainability.

Transferability and Future Scope

The project provided direction to meet increasing demand and resulted in clear positive impact on patients and improved capacity of the health system. The Model and resources developed by our project can easily be adopted by other renal service providers. The success of this program is attributable to the dedicated clinical and governing leadership and the provision of realistic clinical support through redesign of the current service. The continuance of the Renal Case Manager and Trouble Shooting Nurse roles reflect a sustained commitment to maintaining positive change. It has been demonstrated that this model of care can, by bridging the knowledge/practice gap, be replicated to produce sustainable improved clinical and financial outcomes, improving quality of care, patient safety and efficiency.

References

NSW Department of Health (2008), NSW Dialysis Costing Study.

NSW Department of Health (2007), NSW Renal Dialysis Service Plan to 2011.

Sydney South West Area Health Service, Area Renal Services (2011), Annual Report 2010/2011.

Appendix 2: Evaluation Methodology

The evaluation methodology, including the primary and secondary evaluation questions along with the data collection approaches to answer the questions, were developed and agreed by the independent external consultant and CHR staff.

Primary evaluation questions	Potential secondary evaluation questions (Besides being important to break down the primary questions and focus on the important elements, they also help frame interview, focus group and survey questions)	Data collection for answering the evaluation questions
1. To what extent have School participants met each of Kirkpatrick's four-level training evaluation model: **i. Participant reactions to the training** **ii. Participant learning** **iii. Change in participant behaviour including how they have applied** **iv. Results of participant project**	*(i) Reactions* • Did participants consider the training was worthwhile? • What were their overall levels of satisfaction with the program and the various elements (eg face-to-face, e-Learning, facilitators) that make it up? • What proportion of all participants successfully completed the course? If not completed, why? (ii) *Learning* • To what degree have the intended changes in participant knowledge, skills and attitudes occurred? • How well did the course prepare the participants for leading the change process in their workplace? • To what extent has the training been helpful in dealing with challenging behaviours and entrenched cultures? • Did the training session accommodate their personal learning styles? • Has the program content and structure met the learning needs of participants? (iii) *Behaviour* • What actual transfer of knowledge, skills and attitudes from the training to the workplace have occurred? • Have these been sustained? • Would they be able to transfer their learning to someone else? Have they already – what and in what ways? • To what degree have participants applied what they have learnt when they have returned to their usual role following project implementation? (iv) *Results* • To what extent have the targeted outcomes occurred as a result of the program? • Have the redesign project changes been sustained? How long? Why / Why not? • Has the redesign project maintained its fidelity during the course of the implementation?	• Existing data eg pre- and post-course self-assessments • Existing documentation • Interviews with selected participants and other key stakeholders • Focus groups • Surveys of key stakeholders

Primary evaluation questions	Potential secondary evaluation questions (Besides being important to break down the primary questions and focus on the important elements, they also help frame interview, focus group and survey questions)	Data collection for answering the evaluation questions
	How has it been adapted and changed? • What are the ongoing trends in redesign project KPIs? • Have they presented their completed projects and results at internal and external forums for knowledge sharing? • Has involvement in the program assisted any graduates to be promoted? (v) *Other* • What do the key stakeholders see as the top three main strengths and weaknesses / challenges of the program? • What could be done in the future to address the main weaknesses / challenges? • How is success measured and how is knowledge and skill acquisition measured and applied in the workplace? • Does the graduation day add value? Why / Why not? • Is the Diploma of Project Management and rewarding for participants? How integral is each to the completion of the program and submission of the deliverables? • Is the current evaluation process robust and appropriate?	
2. What have been the other (direct and indirect) benefits of the program?	• Has there been a beneficial flow on effect to other staff? Why / Why not? • Has the redesign project been picked up and used or adapted in other relevant settings? Why / why not? • Have there been any unintended or unexpected negative consequences of the program?	• Interviews with selected participants and other key stakeholders • Focus groups • Surveys of key stakeholders

3. What are the key success factors and barriers to achieving and sustaining the program objectives?	• What are the key predictors of success with achieving the School's objectives?
	• What are the main challenges or obstacles?
	• How do these compare with what is found in the international literature on similar improvement training programs?
	• What have been the major challenges in implementing the projects?
	• What criteria have been used and should be used to select:
	  ○ Course participants
	  ○ Participant sponsors
	  ○ Participant projects
	• How effective is the support provided by the local healthcare provider and the CHR and how could it be improved?
	• How well do sponsors know what is expected from the CHR and what the CHR expects from them?
	• How well do sponsors engage with the CHR to discuss expectations and issues. Is there a perceived need for this?
	• How effective has been participant coaching by local redesign leaders and what are the most effective approaches for this?
		• Existing data
		• Existing documentation
		• Interviews with selected participants and other key stakeholders
		• Focus groups
		• Surveys of key stakeholders
		• International literature review

Primary evaluation questions	Potential secondary evaluation questions (Besides being important to break down the primary questions and focus on the important elements, they also help frame interview, focus group and survey questions)	Data collection for answering the evaluation questions
4. How should ACI Networks engage in CHR projects and manage opportunities for spread of innovative practices?	• Are the right type of projects being selected and who selects them? • Does the methodology work better with particular type/s of projects and work environments? • *No secondary questions*	• Interviews with selected key stakeholders

While ethics approval was not required for the evaluation, ethical considerations were discussed and integrated into all relevant aspects of the evaluation. These included the following:

- Information sheets about the evaluation were provided to all staff participating in the key stakeholder interviews and focus groups
- Informed consent was obtained for all interviews and focus groups and participants were told in writing they could withdraw from the interview or focus group at any time
- While the interviews and focus groups were recorded, the recorded material and summarised transcriptions were only able to be accessed by the external consultant
- No identifying material was included in the report without the prior consent of the relevant person.
- All evaluation materials that may be identifying have been stored with password protected security and are not accessible by others.

Literature Review

A limited literature review was undertaken by the consultant to ensure that the evaluation included a broader evidence base for the methodology and from which to help draw conclusions. However, because of the very tight timeframe, the review had to be restricted to a relatively small set of key papers identified from Google Scholar, Medline and Proquest searches undertaken by the consultant as well as papers identified by CHR staff.

Data Collection and Analysis

Semi-structured interviews and focus groups
Semi-structured interviews and focus groups with key stakeholders were conducted as follows.

Organisation	*Key stakeholder group*	*Number*
General	Focus Group with current course participants	12
Hunter New England LHD	Previous course participants	4
	Sponsors	2
	Redesign Leader	1
Illawarra Shoalhaven LHD	Focus Group with previous course participants	7
	Sponsors	4
	Chief Executive	1
	Redesign Leader	2
South Western Sydney LHD	Focus Group with previous course participants	3
	Sponsors	2
	Redesign Leader	1
Northern NSW LHD	Previous Participant	1
	Sponsors	1
	Redesign Leader	1
Northern Sydney LHD	Focus Group with previous course participants	4
	Sponsors	2
	Chief Executive	1
	Redesign Leader	1
Mid North Coast LHD	Focus Group with previous course participants	5
	Sponsors	1
	Redesign Leader	1
CHR / ACI	CE	1
	CHR Staff	3
	Previous participant	1
Total		*62*

A letter was sent from the CHR to CEs from six LHDs (three that had been involved with the CHR for an extended period and three that had more recent involvement) inviting participation in the evaluation from the Redesign Leader/s, at least one sponsor and any previous course participants who were available to attend a focus group or interview on the day/s the consultant was available at that LHD. CEs were also interviewed at two selected LHDs. Staff at the CHR and the CE of the ACI were also interviewed. As the final course for 2013 was just nearing completion at the commencement of the evaluation, participants from that course were invited to take part in a focus group at the conclusion of the final session.

Following informed consent, all interviews and focus groups were conducted by the consultant, an external independent person experienced in all aspects of program evaluation. It was decided that using an independent expert for the interviews would minimise bias in stakeholder responses and ensure objectivity.

Semi-structured interview schedules (see below) were developed with a focus on answering the primary and secondary evaluation questions above. Their development was also guided by the published literature. They were then trialled with the first couple of interviews and modified if appropriate. All interviews and focus groups were recorded.

Document review
A review of existing CHR program documentation was carried out. The aim of this was to provide an accurate record of what has occurred with the program (Chapter 2) as well as to help inform Chapters 3 and 4.

Previous participant and sponsor surveys
Using themes from the interviews and focus groups, as well as information from the literature, and documentary review, draft survey questions were developed and trialled. After review and finalisation, the two surveys (see Section 7.2.4 for the survey forms) were conducted over two weeks using Survey Monkey. Web-based surveys have proven to be efficient and effective means of data collection especially in professional settings where access to email is common.

Respondents were sent two reminder emails to maximise the response rate. Of the 170 previous course participants (2010 to 2012) sent an invitation and url link to complete the survey, 93 submitted completed surveys giving a response rate of 55%. Based on the survey literature, this was seen as a reasonable response rate.

With the sponsor survey, invitations were sent to 73 people who were listed as sponsors on the CHR database. Unfortunately, due to some issues

with the Monkey Survey server, as well as the sending out of the invitations and reminders, the response rate was just 19% with 14 completed surveys. The very low response rate may also have been due to many of the sponsors being very senior people with the LHDs who are regularly inundated with emails and surveys. Because of the low response rate and likely non-response bias, this latter data was only used in a very limited way.

Quantitative Data Analysis

Quantitative data was largely analysed with the use of frequencies and percentages. Where statistical tests (paired comparison t-tests, chi-squared, 95% confidence intervals for a single variable, correlations) were performed (Chapter 3), the tests were carried out using SPC for Excel (www.spcforexcel.com).

Qualitative Data Analysis

A modified thematic analysis approach to identify common themes was used by the consultant for the interview and focus group recordings.

Semi-Structured Interview Format for Course Participants

Provide brief background to the evaluation. Handout information sheet / consent form and obtain consent for taping.

General

1. Could you please tell me a little about why you did the course and what was your project?
2. What do you think was the main aim of the course? Do you think it achieved this?

Learnings and Skills

3. What were the three most important learnings / skills you gained from the course?
4. Have you been able to transfer these to others? Explore.
5. Have you used them in other contexts? Explore.
6. Were there any unexpected benefits or negatives from doing the course and the project? (Explore – tangible and intangible)

Strengths and Weaknesses

7. What did you most like about the course? What did you find least helpful? Explore.
8. What do you see as the three main strengths of the Redesign School?
9. What do you see as the three main weaknesses?
10. What do you think could be done to improve the course?

Other

11. Who chose this project and why? Do you think it was a good choice? Why?
12. How fully has the project been implemented? Has there been an evaluation (if so get results)?
13. How well has the project been sustained? Has it been changed much over time? (Examine trend data if available)
14. What were the main challenges you experienced with your project? Behavioural, cultural, logistic, timeframes, resourcing….
15. How well do you think the Redesign School prepared you for leading the project and managing these types of challenges and to lead the change process?
16. What sort of support did you receive from the (i) Redesign Leader, (ii) your sponsor, (iii) other management, your colleagues, staff at the Redesign School? Explore effectiveness of the support.
17. What would you ideally look for in a (i) Redesign Leader, (ii) your sponsor, (iii) other management, your colleagues, staff at the Redesign School?
18. How well equipped do you think you were to work with a project sponsor?
19. Do you know if the project has been picked up by others? Why / why not?
20. Are there any further comments you would like to make?

Semi-Structured Interview Format for Project Sponsors

Provide brief background to the evaluation. Handout information sheet / consent form and obtain consent for taping.

1. Could you please tell me a little about your involvement with ….(name) and the Redesign School project?
2. What do you think were the main aims of the course / project attended by….? Do you think it achieved these?
3. On average, how much of your time do you think it took each week during the course of the project?
4. What did you see as your main role as the sponsor? Was this communicated clearly to you by the Redesign School or this was just something you knew from sponsoring other similar projects?
5. Did you receive any support from the Redesign School for your role? Was this / would this have been beneficial? If so, what type of support would you have most appreciated?
6. What do you think are the most critical things for an effective sponsor?
7. Who chose the project? Why? In retrospect, do you think this was a good project to choose? Explore.
8. What were the main challenges experienced with the project? Behavioural, cultural, logistic, timeframes, resourcing..?
9. How well has the project been sustained? Has it been changed much over time? What do you think were the (i) critical success factors, (ii) main challenges / barriers?
10. Do you think the most appropriate applicant was proposed to attend the Redesign School? (Explore – why / why not, what qualities are essential….)
11. What have been the main things you have learnt over time about successful clinical innovation and reform?
12. What do you see as the three main strengths of the current Redesign School program? What about the three main weaknesses?
13. If you were going to make changes to the Redesign School program so that it is more effective, what would you recommend?
14. Are there any further comments you would like to make?

Semi-Structured Interview Format for Redesign Leaders

Provide brief background to the evaluation. Handout information sheet / consent form and obtain consent for taping.

1. Could you please tell me a little about your involvement with the Redesign School? (eg when first started, previous redesign experience, Redesign School project involvement).
2. What do you see as your main role as the Redesign Leader? How do you find the role? (eg are you the/a go-to person for innovation within the LHD, successes, main challenges, motivation). What do you think are the key knowledge and skills required? Are there areas you would further development in?
3. What have you found as the most effective way/s to mentor and support Redesign School participants? Can you give some examples of where things you have done have been really effective?
4. How would you describe the support you receive from (i) Redesign School and (ii) your LHD management? Would you like to see any changes made? Explore eg resourcing, greater acknowledgement of role by LHD, Redesign Leaders Network, more involvement with the Redesign School?
5. What do you think are the most critical things for an effective Redesign Leader? What about an effective sponsor?
6. In your LHD, how are Redesign School participants and projects chosen? What would you recommend for the future?
7. What generally is your role in supporting the implementation phase?
8. With the Redesign School projects you've been involved in, what do you think have been the (i) critical success factors, (ii) main challenges / barriers? Explore (eg LHD support / sponsor, resourcing, behavioural, cultural, logistic, timeframes..)
9. How well have the projects been sustained? What about spread to other services (local, other LHDs)?
10. Have you been involved (eg advocacy, support / facilitation) in the evaluation of any of the projects? Explore.
11. Are you aware of any unexpected consequences of the Redesign School participants and projects (prompts tangible and intangible, positive and negative)
12. What have been the main things you have learnt over time about successful clinical innovation and reform?
13. What do you see as the three main strengths of the current Redesign School program? What about the three main weaknesses?
14. If you were going to make changes to the Redesign School program so that it is more effective, what would you recommend?
15. Are there any further comments you would like to make?

This survey asks a series of questions that will be used, along with other information, to help inform ongoing improvements to the CHR Program.

Please work through the survey by reading each question and ticking the most appropriate response option from those listed, or where relevant, providing written feedback.

The survey should take no more than 10 minutes to complete. All responses are strictly **confidential**.

Please complete the survey by **Friday, 8 March 2013**

Section 1: The CHR Course

***1. What has been your overall level of satisfaction with the CHR course?**

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
(a) Overall, I was very satisfied with the course	○	○	○	○	○
(b) The course has made a worthwhile contribution to my professional development	○	○	○	○	○
(c) I would recommend the course to others	○	○	○	○	○
(d) I developed important new skills from the course	○	○	○	○	○
(e) The course has equipped me to implement projects to improve healthcare	○	○	○	○	○

***2. What were the two main benefits you gained from the course?**

***3. How helpful was the course structure, content and delivery?**

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
(a) The overall structure of the course worked well for me	○	○	○	○	○
(b) I found the course content valuable for equipping me with the knowledge and skills to implement change in our organisation	○	○	○	○	○
(c) I found the course valuable for helping me to build stronger networks with others doing similar work	○	○	○	○	○
(d) I found GEM very easy to use	○	○	○	○	○
(e) Through the course, I gained valuable skills in change management	○	○	○	○	○
(f) I learnt a lot from the course about stakeholder management	○	○	○	○	○
(g) The course facilitators were generally good	○	○	○	○	○

Comments

***4. Since completing the course, what has been your subsequent use of the skills and knowledge acquired?**

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
(a) I have often used the skills and knowledge acquired	○	○	○	○	○
(b) I have led another healthcare improvement project	○	○	○	○	○
(c) I have been able to transfer these skills to others in my workplace	○	○	○	○	○
(d) I do not feel confident to lead another change process	○	○	○	○	○
(e) Doing the course has helped me to gain a promotion	○	○	○	○	○
(f) Doing the course has helped me move into a new area of work that I have been interested in	○	○	○	○	○

***5. Please rate the extent to which the following statements applied:**

	To a large extent	To a moderate extent	Not sure	To a limited extent	Not at all
(a) I was released for at least three days per week for the duration of the course	◯	◯	◯	◯	◯
(b) My project had the right scope	◯	◯	◯	◯	◯
(c) My project had clear goals	◯	◯	◯	◯	◯
(c) My project was a local health service priority	◯	◯	◯	◯	◯
(d) I had an effective Sponsor for the project	◯	◯	◯	◯	◯
(e) There was good support from others in the workplace	◯	◯	◯	◯	◯

Comments

***6. What would be the three main changes you would recommend to improve the course (you may want to consider course content, structure, delivery, support)?**

Section 2: Your Project

***7. What best describes the status of the CHR solutions that you were involved in developing?**

- ◯ (a) Fully implemented with most solutions a sustainable part of everyday operations
- ◯ (b) Fully implemented with most solutions no longer a part of everyday operations
- ◯ (c) Partially implemented with most solutions now a sustainable part of everyday operations
- ◯ (d) Partially implemented with most solutions no longer a part of everyday operations
- ◯ (e) Implementation not yet started but will soon
- ◯ (f) Implementation will not occur

Please clarify if you selected any option other then (a):

***8. How are you evaluating the success of the project? (You may choose more than one option)**

- ☐ (a) We regularly monitor the project KPIs
- ☐ (b) Our project KPIs are now a part of the service KPIs
- ☐ (c) We have completed a formal evaluation of the project
- ☐ (d) We plan to conduct a formal evaluation of the project
- ☐ (e) I do not know

Other (please specify)

***9. To what degree have your project goals been achieved?**

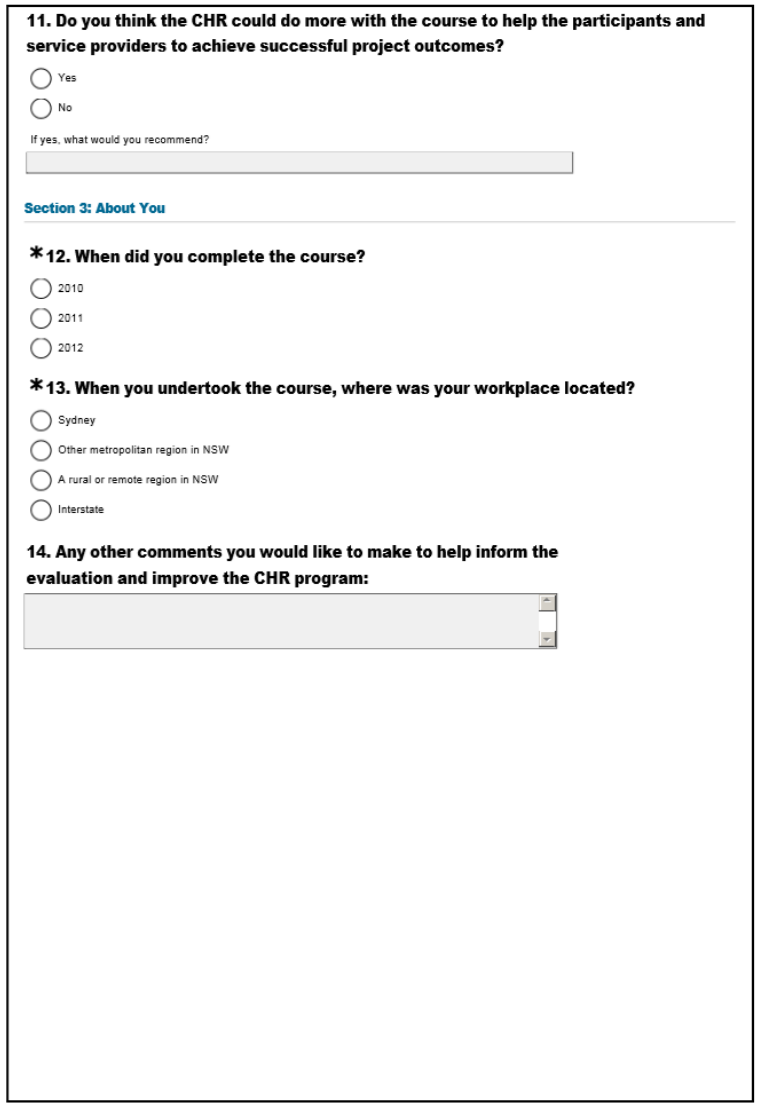
- ◯ None have been achieved
- ◯ Some have been achieved
- ◯ Approximately half have been achieved
- ◯ The majority have been achieved
- ◯ All have been achieved
- ◯ I have no idea

Comment

***10. Which of the following apply to your project (you may choose more than one option)**

- ☐ (a) Submitted for a quality award
- ☐ (b) A quality award finalist
- ☐ (c) Recipient of a quality award
- ☐ (d) Presented at a conference or forum
- ☐ (e) Submitted for publication in a journal
- ☐ (f) Others have come to see the project
- ☐ (g) The project, or solutions from it, have been picked up by others within our organisation
- ☐ (h) The project, or solutions from it, have been picked up by others outside of our organisation
- ☐ (i) Not applicable because the project is yet to be substantially implemented

Comments



11. Do you think the CHR could do more with the course to help the participants and service providers to achieve successful project outcomes?

- ◯ Yes
- ◯ No

If yes, what would you recommend?

Section 3: About You

***12. When did you complete the course?**

- ◯ 2010
- ◯ 2011
- ◯ 2012

***13. When you undertook the course, where was your workplace located?**

- ◯ Sydney
- ◯ Other metropolitan region in NSW
- ◯ A rural or remote region in NSW
- ◯ Interstate

14. Any other comments you would like to make to help inform the evaluation and improve the CHR program:

Sponsors

This survey asks a series of questions that will be used, along with other information, to help inform ongoing improvements to the Centre for Healthcare Redesign Program which is now a part of the NSW Agency for Clinical Innovation (ACI).

Please work through the survey by reading each question and ticking the most appropriate response option from those listed, or where relevant, providing written feedback.

The survey should take no more than 10 minutes to complete. All responses are strictly **confidential**.

Please complete the survey by **Friday, 8 March 2013**

***1. Could you please indicate your level of agreement with the following statements about the Centre for Healthcare Redesign (CHR) program?**

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
(a) Overall, I was very satisfied with the CHR program	○	○	○	○	○
(b) The CHR program has successfully helped train our staff who attended the course in *improvement methodology*	○	○	○	○	○
(c) The CHR program has successfully helped train our staff who attended the course in *project management*	○	○	○	○	○
(d) The CHR program has helped deliver a project of importance to improving our service/s	○	○	○	○	○
(e) I was clear about what was expected of me as a sponsor of a CHR project	○	○	○	○	○
(f) I would recommend the CHR program to others	○	○	○	○	○

Comments

***2. What is your process for identifying projects to send to the CHR program? (You may select more than one option)**

- ☐ (a) Seek expression of interest from staff
- ☐ (b) Advised by the Redesign Leader on what project would be best suited for the CHR program
- ☐ (c) Strategic priority of the organization
- ☐ (d) Funding was available for the project
- ☐ (e) Staff identified as key people to drive redesign and innovation at the local level (Capability program)
- ☐ (f) Other

If you selected 'Other', please clarify:

***3. How do you continue to utilise the skills staff developed at the CHR for the benefit of the organization? (You may select more than one option)**

- ☐ (a) Staff are provided opportunities to teach on other local improvement programs (eg clinical leadership program)
- ☐ (b) Staff are provided opportunities to network in a continuous improvement network at the local level
- ☐ (c) Staff are provided opportunities to mentor other staff doing improvement projects
- ☐ (d) Staff are provided opportunities to lead other projects
- ☐ (e) Staff are encouraged to use their skills in their everyday work
- ☐ (f) Other

If you selected 'Other', please clarify:

***4. As a project sponsor, what was your biggest challenge?**

***5. How well did you feel prepared for your role as the sponsor for the CHR Program?**

- ○ (a) Very well
- ○ (b) Somewhat
- ○ (c) A little
- ○ (d) Not at all

Comments

6. What do you think the CHR could do to improve its preparation of, and communication with, CHR project sponsors?

***7. During which years have you been a sponsor for a CHR project? (You may select more than one option)**

- ☐ 2010
- ☐ 2011
- ☐ 2012

***8. When you were a sponsor for a CHR project/s, where was your workplace located?**

- ◯ Sydney
- ◯ Other metropolitan region in NSW
- ◯ A rural or remote region in NSW
- ◯ Interstate

9. Any other comments you would like to make to help inform the evaluation and improve the CHR program:

Appendix 3: 2012 Participant pre and post self-assessments

Percent participants who know and could implement without assistance or expert and able to teach the skill to others (n=53)[1]

Pre course assessment	Post course assessment	Difference	Group	Element	Element description
3.8%	83.0%	79.2%	Change management	Use recognised change management strategies	Use recognised approaches to managing organisational change to realise the objectives & benefits of the program
11.3%	88.7%	77.4%	Change management	Identify the best way to have an impact	Identify realistic ways to make an impact & effect change within the organisation, including identifying quick wins
5.7%	83.0%	77.4%	Stakeholder management	Use recognised stakeholder engagement strategies to build commitments & ownership	Engage stakeholders using recognised strategies
11.3%	88.7%	77.4%	Project management	Develop a risk management plan	Identify potential risks & state how they will be managed
9.4%	84.9%	75.5%	Change management	Develop a change management plan	Develop a plan for driving a change within an organisation
17.0%	90.6%	73.6%	Project management	Prioritise issues & solutions	Prioritise potential issues according to their severity & identify solutions
7.5%	79.2%	71.7%	Stakeholder management	Establish governance frameworks	Establish a reference group or overseeing body who can provide sound governance to the project
9.4%	81.1%	71.7%	Stakeholder management	Develop a stakeholder communication plan	Develop a plan for engaging various stakeholders including who, when & how the stakeholders will be communicated with
3.8%	75.5%	71.7%	Stakeholder management	Measure the degree of stakeholder engagement	Use metrics to measure the degree of stakeholder engagement
13.2%	84.9%	71.7%	Project management	Define & scope a project	Plan a project in order to accomplish the objectives of all stakeholders
9.4%	81.1%	71.7%	Project management	Monitor progress against work plan & documents/reposts progress	Compare lead indicators against projected results to determine progress against objectives
17.0%	88.7%	71.7%	Research methods	Undertake interviews	Conduct interviews with an interview methodology
15.1%	84.9%	69.8%	Project management	Establish project timelines	Establish achievable milestones & deadlines based on due dates, required tasks & available resources
9.4%	79.2%	69.8%	Project management	Understand and use quality improvement tools	Knowledge of when to sue the main quality improvement tools & skills in using

Pre course assessment	Post course assessment	Difference	Group	Element	Element description
9.4%	79.2%	69.8%	Research methods	Collate research data from various sources	Knowledge of relevant data sources & ability to access, directly or indirectly this information
7.5%	77.4%	69.8%	Research methods	Conduct a tag along	Use the tag along method for observation & collecting metrics
15.1%	83.0%	67.9%	Project management	Manage project risks	Ensure executive teams are informed of status, issues & risks. Take appropriate action to mitigate issues & risks
17.0%	84.9%	67.9%	Project management	Develop an implementation plan	Develop a plan for implementing the project
17.0%	83.0%	66.0%	Project management	Complete a project	Close a project & handover necessary items to others
13.2%	77.4%	64.2%	Project management	Define Key Performance Indicators	Understand how to identify data drivers in health care & how to set KPIs
13.2%	77.4%	64.2%	Research methods	Understand research methodology	Understand the overall service improvement model used for redesign & relevance of the diagnostic phase in the understanding of the approach taken to the project, including data analysis, working groups, process design & implementation planning
11.3%	75.5%	64.2%	Research methods	Evaluate a pilot	Conduct an evaluation of a project, presenting recommendations
9.4%	73.6%	64.2%	Performance management	Performance Measurement -Principles	Understanding of the performance measurement model & basic principles of performance measurement
28.3%	90.6%	62.3%	Stakeholder management	Identify project stakeholders	Identify people who will be impacted on by the project or who have the potential to impact the project
1.9%	64.2%	62.3%	Research methods	Design a research framework	Understanding of how to use and develop an analytical framework/ Issue management tool
15.1%	75.5%	60.4%	Performance management	Map processes, value streams, flow & pull	Ability to design & develop new processes or redesign existing processes
1.9%	61.5%	59.7%	Research methods	Design a research framework	Understand the approach to diagnostic/current state analysis on redesign projects, understand how to use
22.6%	81.1%	58.5%	Team management	Develop skills of a project team	Contribute to team development to achieve a goal
9.4%	67.9%	58.5%	Performance management	Performance Measurement - Execution	Ability to identify appropriate measures for performance assessment – performance drivers (inputs, processes, outputs & outcomes)
15.1%	73.6%	58.5%	Research methods	Design a survey methodology	Design methodology & instrument for conducting a survey

Pre course assessment	Post course assessment	Difference	Group	Element	Element description
5.7%	63.5%	57.8%	Research methods	Design a research framework	Ability to identify the appropriate analytical techniques to use in a given situation such as process mapping, interview design, survey design, activity analysis, framework development
28.3%	84.9%	56.6%	Stakeholder management	Report to governance frameworks	Report to a reference group or overseeing body on a regular basis
34.0%	90.6%	56.6%	Team management	Manage a team	Plan, direct & administer work effort of a working group. Ensure appropriate supervision, involvement & engagement & oversees the development of quality deliverable
11.3%	67.9%	56.6%	Research methods	Analyse research data	Use Key performance indicators to validate issues hypotheses
34.0%	88.7%	54.7%	Transferable skills	Innovation & creative thinking	Identify & pursue new ideas, solutions, methods or opportunities that contribute to better results for the team & the project
28.3%	83.0%	54.7%	Team management	Build team member's knowledge & skills	Transfer knowledge, concepts & information to others in a clear, systematic manner
37.7%	92.5%	54.7%	Transferable skills	Problem solving & decision making	Identify, analyse, organise & solve issues & problems in a timely & effective manner. Use recognised strategies (eg. Brainstorming & root cause analysis) to facilitate group problem solving
18.9%	73.6%	54.7%	Performance management	Performance improvement solutions	Ability to identity solutions for improved performance
35.8%	84.9%	49.1%	Research methods	Conduct a literature review	Understand literature searching & networking strategies to ascertain & use Health industry best practices
18.9%	67.9%	49.1%	Research methods	Design an interview methodology	Design a methodology & instrument for conducting interviews
28.3%	75.5%	47.2%	Team management	Recruit a project team	Identify the required skills & expertise for a project & recruit team members
41.5%	88.7%	47.2%	Research methods	Understand Area best practice	Understand trends & best practices in relevant care area
43.4%	88.7%	45.3%	Transferable skills	Leadership	Communicate a vision or direction & inspire others to achieve it
43.4%	82.7%	39.3%	Communication	Run a facilitation session	Coordinate & guide the exchange of information & ideas in an interaction session designed to meet

Pre course assessment	Post course assessment	Difference	Group	Element	Element description
					defined objectives
49.1%	86.8%	37.7%	Transferable skills	Build personal & team credibility	Build creditability within the organisation by setting realistic goals & meeting them
54.7%	90.4%	35.7%	Communication	Communicate in writing	Compose written materials in a clear & concise manner appropriate for the audience. Use structured techniques to impart information in a logical manner
49.1%	82.7%	33.6%	Communication	Present to a large audience	Verbally exchange information & ideas to a large group in a clear & concise manner appropriate for the audience
17.0%	43.4%	26.4%	Project management	Enter health awards	Identify suitable awards, write an entry & apply for an award
75.5%	96.2%	20.8%	Transferable skills	Teamwork	Contribute to team performance to achieve a goal
66.0%	86.5%	20.5%	Communication	Negotiate & influence to achieve a desired outcome	Ability to achieve a certain desired outcome by applying negotiation & influencing techniques & approaches
79.2%	98.1%	18.8%	Communication	Communicate effectively in one-on-one situations	Verbally exchange information & ideas in a clear & concise manner appropriate for the individual
81.1%	98.1%	16.9%	Communication	Build working relationships	Build effective working relationships, demonstrate empathy with others point of view

[1] Assessment is based on a five-point scale where: 1 = No Exposure; 2 = Exposure but no experience; 3 = I know what this is & can implement with assistance; 4 = I know this & could implement without assistance; 5 = Expert & able to teach the skills to others.

Appendix 4: Listing of CHR Diploma Projects 2010 to 2012[9]

Access to Oncology Services - equity
Acquired infection prevention
Activity Based Funding - developing a costing for Justice Health
Advance Care Planning Team (AcCePT) for Renal Patients
Ambulatory Chemotherapy
Avoidable Admissions to Emergency Department
Cardiac Catheter Laboratory Redesign
Chronic Pain Management for frequent attendees to the ED
Clinical Initiates Nurse (CIN) project
Consumer feedback framework
Develop and Implement a State-wide Cardiology Model of Care
Developing a Collaborative MOC for Women with Complex Pregnancies
Discharge at the right time every time
Discharge Process at Prince of Wales Hospital
ED Model of Care for Level 2 rural facilities
Emergency Medical Unit (EMU) Redesign
Emergency Surgery Redesign
Enhanced Patient Transfers (Back End) - CCLHD and ASNSW
Enhanced Recovery in Orthopaedic Surgery - Hip & Knees - EROS
Ensuring Equity of Access To Child and Family Health Nursing (CFHN) Services By Vulnerable Families
ENT Express - review of outpatient services for ENT Patients
Establish a Sustainable Model for effective and efficient VMO services at Auburn
Evaluation of National Access Targets (NEAT) in Emergency Department (ED) - Wagga & Griffith
Fill that Appointment – Improve attendance rates at public dental clinics
First 48 hours of care coordination for medical patients
Health One telehealth and service redesign
Imp Cat 2 Patients Journey through Gold Coast Hosp ED
Implementing NSW Revenue & Efficiency Plan
Improve access to Improvement Methodology education for rural and remote staff
Improve Casemix Efficiency at Toowoomba Hospital
Improve efficiency in Interventional Radiology
Improve GP communication pathways for patients identified in the Severe Chronic Disease Management (SCDM) program
Improve the function of the MAU with appropriate referral and transfer of patients ensuring DoH KPIs are met
Improve the patient journey for chronic care patients in the Moree district
Improve the patient journey for pats receiving chemotherapy in the cancer clinic
Improvement of Emergency Department flows at Bathurst Health Service
Improving Business Processes in Theatres
Improving integration of primary care, acute care and access to hospital in the home for patients with chrnoic and complex conditions
Improving Operating Theatre Efficiency
Improving Patient Flow between Hospitals
Improving Patient Flow in the Network
Improving patient outcomes in Palliative Care across ISLHD
Improving Patient Flow in ED to meet national target - Canterbury Hospital
Improving Processes for Paediatric Patients to Meet the National Emergency Access Target
Improving Revenue with Booked Admissions at Canterbury Hospital ?CHIRP
Improving the Access to Non-Surgical Management for patients with Osteoarthritis in the Greater Newcastle District
Improving the Communication Flow to & from the Acute Care Sector
Improving the Continuity of Care of Pregnant Women with Diabetes
Improving the Effectiveness of MO Clinical Training
Improving the Flow of Cardio- Respiratory Patients through NBM Hospital
Improving the Flow of Cat 3, 4 & 5 Patients through ED - Concord Hospital

[9] Excludes CCAP projects

Improving the journey for Patients with Cellulitis at BMD hospital
Improving the Journey of Mental Health Patients through Emergency Department
Improving the Patient Journey of Cardiology Patients through ED - Coffs Harbour Hospital
Improving the Patient Journey through ED - Wollongong Hospital
Improving the Patient Journey through St Vincent's Hospital ED
Improving the Patient Journey in the Treatment of Macular Degeneration
Improving the Patient Journey through Ed - Acute Coronary Syndrome - Westmead Hospital
Improving the Sustainability of Projects in JH
Individual Patient Special (IPS) Project - patients with Delirium and Dementia
Integrated care for the aged and frail patients in the Greater Newcastle district
Integration of clinical services with Molong HealthOne
Inter-Hospital Transfer BMD of Surgical & Gastroenterology Patients
LOS @ POW Neuroscience
Maternity Care Models at Dubbo
Maximising Revenue & Data Collection
Medical Assessment Unit Redesign
Mental Health access to inpatient beds at Cumberland Hospital
Mental Health Service - seclusion and restraint
MO rostering & financial efficiencies in ED
Model of care for Community Based End of life care NP led service
Multidisciplinary Clinical Handover - Night to Morning Shift
NEAT- RPAH hospital wide approach
NEAT for Mental Health Services
NEAT Mid North Coast
NEAT, 1 hour for care (Transfer process form ED to Ward bed)
Patient Flow in ED St George Hospital
Patient Home Oxygen on Short Term Oxygen Therapy (STOT) at Home following Discharge from Royal North Shore Hospital
Patient journey in ABF environment (NEAT)
Rationalising Theatre Resources
Redesign of Chronic Care program
Redesign of PACE System to reduce delayed responses, particularly at night
Redesigning & Improving Outpatients - RIO - Ambulatory Care
Remodelling and reviewing patient flow through the Day Surgery Unit (Ambulatory Care)
Renal Dialysis Model of Care including home dialysis
Restructure & Streamline Admission Office Processes at RNS to maximum revenue streams
Review existing health services provided to patients with hand injuries presenting to Sydney & Sydney Eye Hospital
Review of Renal Transport Patients within Hunter New England LHD
Review patient flow within the Medical Day Unit (Haematology/oncology outpatients, Day Only Clinics, Procedure Service-1xOR) at Sydney Children's Hospital
Reviewing ED MOC
Rostering Ways of Working – Key decisions
Scope of practice for Assistants in Nursing in Mental Health – Drug & Alcohol"
Service Integration - Ultrasound, Medical Imaging etc
Short stay Surgery Unit Redesign
Statewide Nursing Rostering System
Streamline & Standardise processes across SESIAHS CAMHS
Surgical Inpatient Diabetes Model of Care
Surgical Patient Journey through ED Fairfield Hosp
Surgical waiting list management Wagga Wagga and Griffith
The Beat Goes On Cardiac Rehab CCAP Solutions & Strategies Coffs/Clarence Network
Trauma Services Redesign

Source: CHR Participant Database

Appendix 5: Hunter New England LHD Scholarship Application Form

Health
Hunter New England
Local Health District

Innovation Support Scholarships 2014

Guidelines and Application Form

Key Dates:

- Applications **open: 1 August 2013**
- Applications **close: 16 September 2013**
- Successful Applicants Announced: **15 November 2013**

Health
Hunter New England
Local Health District

CONTENTS

Health
Hunter New England
Local Health District

SECTION A: GUIDELINES

INTRODUCTION

Hunter New England Health invests significantly in supporting innovation across our public health services. HNE Health's Innovation Support Unit has identified a total pool of $100,000 for 2014 to provide scholarships to health service teams for the implementation of innovative ideas that will help accomplish the Triple Aim. The Triple Aim is a framework developed by the Institute for Healthcare Improvement[1] (IHI) that describes an approach to optimizing health system performance by focusing on three goals simultaneously:

- improving the health of the population;
- improving the experience of care (including quality & satisfaction); and
- reducing the per capita cost of care.

In addition to the Innovation Support Unit Scholarships, applications from Kaleidoscope Children, Young People and Families (CYP&F) services will also be considered for a Kaleidoscope Innovation Scholarship.

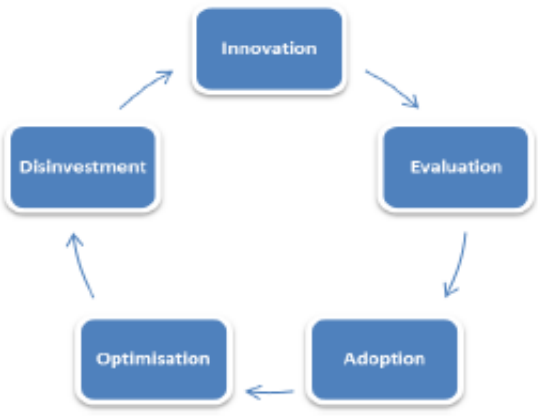
WHO IS ELIGIBLE TO APPLY?

- The **Innovation Support Scholarships** are open to teams of employees of the Hunter New England Local Health District (including teams from Kaleidoscope CYP&F) and the Calvary Mater Newcastle. Teams should show evidence of collaboration between services. Collaboration with Aboriginal Medical Services and Medicare Locals is encouraged.
- **Kaleidoscope CYP&F Innovation Scholarships** are open only to teams from Kaleidoscope Children, Young People and Families services.

WHAT WILL BE FUNDED?

The intent is to support health care teams to implement innovative service improvement projects that will help achieve the HNE Health Operational Plan 2013-2014. The approach is based on the Innovation Cycle (Figure 1) where robust evaluation of the innovation occurs to provide evidence for widespread adoption and optimisation of the initiative. Scholarships are not intended to support academic research (because there are other avenues of funding e.g. National Health & Medical Research Council). The funding is for implementation related costs such as staffing and includes relevant training expenses. See the "How to Apply" section for a list of potential training courses. Funding may not cover the whole of project costs and services must demonstrate their willingness to fund a proportion of the costs or provide in-kind contribution.

Figure 1. Innovation Cycle



WHAT ARE THE SCHOLARSHIP RECIPIENTS' RESPONSIBILITIES?

Scholarship recipients, including those awarded a Kaleidoscope Innovation Scholarship, must agree to:

1. Participate in Accelerating Implementation Methodology (AIM) training;
2. Participate in monthly AIM Learning Sets. The purpose of the Learning Set is to provide a forum where staff can discuss evidence based approaches to implementing change, obtain support to address any barriers to implementing their project and to share successes with other teams;
3. Report progress on a quarterly basis to the Innovation Support Advisory Committee using a standard reporting template;
4. Submit an application to the Hunter New England Health Quality Awards in 2015 as a final report for their project.

WHAT IS THE SELECTION PROCESS?

All applications will be considered. A Selection Panel will be convened which includes the HNE LHD Chief Executive, other members of the Executive Leadership Team, Clinical Leaders and a consumer. Applicants may be asked to provide additional information in support of their application or to meet with the Selection Panel to clarify any points.

Each member of the Selection Panel will assess and score each application individually in the first instance based on the Selection Criteria below. The panel will then meet to review scores, discuss differences and reach agreement on priority applications to progress to the next stage. Prioritised applicants may be asked to present their project to the panel and further development of the application may be offered including working with statisticians, health economists or other experts to help refine the proposals. The panel will then reconvene to make final recommendations and suggest a way forward for unsuccessful applicants. Final decisions regarding successful applicants will be made by the Chief Executive and are non-negotiable.

Applications from Kaleidoscope CYP&F services will be considered using the same process as above. Kaleidoscope CYP&F proposals may be granted an Innovation Support Scholarship or may be recommended to the Kaleidoscope Executive for consideration of a Kaleidoscope Innovation Scholarship.

SELECTION CRITERIA

Applications will be assessed according to whether they:

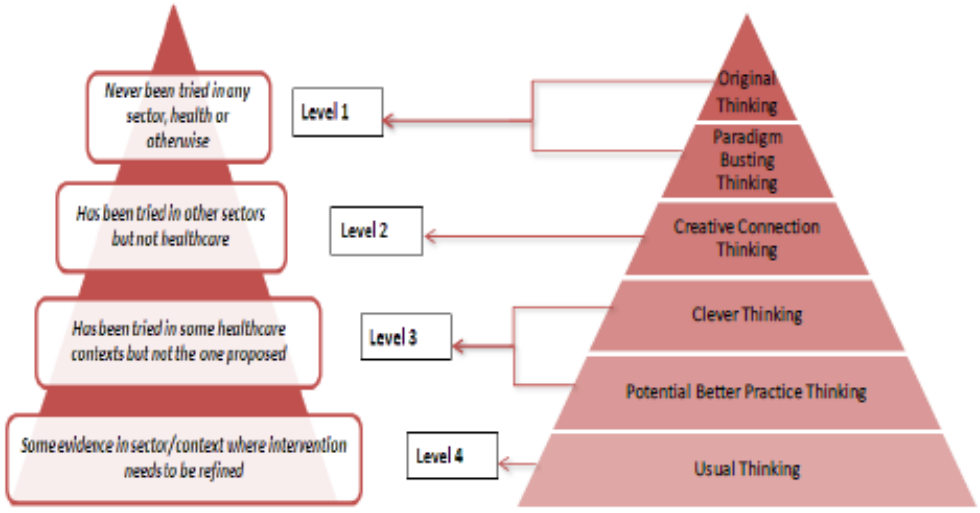
1. Describe Triple Aim goals of improving the health of the population, improving the experience of care and reducing the per capita cost of care;
2. Demonstrate the level of innovation for the intervention;
3. Are clearly linked to the HNE Health Operational Plan 2013-2014;
4. Have a realistic implementation plan based on Accelerating Implementation Methodology;
5. Have a robust evaluation plan;
6. Outline an approach to sustain the change beyond the project completion;
7. Have potential to be adopted across the wider healthcare system;
8. Are sponsored by clinical leaders and department managers, who agree to be accountable for scholarship funds.

1. **Triple Aim Goals**

Applicants must describe their goals in terms of improvements in health outcomes, improvements in the experience of care and reductions in the per capita cost of care. Experience of care includes indicators of quality and safety of care as well as how the patient and their families and carers felt about the care they received. Reducing cost includes improving the efficiency of services and estimates of potential savings from the intervention. Sponsors and business managers may be able to assist in developing a cost analysis plan. Projects that describe benefits from the perspective of the patient, families and carers will be assessed more favourably.

2. **Type of Initiative & Level of Innovation**

Applicants are asked to describe their projects clearly in plain language and to assess the level of innovation of their initiative from Level 1 to 4 using the criteria in Figure 2 below. The intent is to support more innovative proposals that are at a higher level than "usual thinking". The evidence supporting the level of assessment should be clearly described including why this innovation has been chosen over the alternatives.



Original Thinking. This idea is really a new concept and is truly amazing; no one has ever thought of anything like this before.
Paradigm Busting Thinking. This idea fundamentally challenges current mental models and paradigms in health care in an uncommon way; it is creative thinking on a deeper scale.
Creative Connection Thinking. This idea is a creative adaptation of ideas and concepts that are common outside of health care, but not common within health care
Clever Thinking. This idea is a really clever twist on our existing ways of doing things; it is creative thinking on a small scale.
Potential Better Practice Thinking. This idea is an adaptation of ideas that are becoming somewhat common in health care, but it is still a fairly new idea.
Usual Thinking. This idea is a refinement of the typical approach to the topic at hand. It is the way that most people in health care handle it. Most similar teams, groups, departments, or organizations in health care are already doing something very similar to this.

Figure 2. Levels of Innovation[1]

[1]Based on the UK Health Foundation Model of Innovation and Paul Plsek's Creative Thinking Scale. See Health Foundation Shine Awards Call for Proposals 2011. http://www.health.org.uk/ & Plsek, P.E. (2004). *How Creative is That Idea? Thoughts about creating a depth of innovation scale.(Version 4 ed.).* Plsek & Associates, Inc.

3. **Are clearly linked to the HNE Health Operational Plan 2013-2014**
The Operational Plan 2013-2014 is available at:
http://intranet.hne.health.nsw.gov.au/__data/assets/pdf_file/0005/96530/op-plan-13-14.pdf
Please state how your project is aligned to the initiatives outlined in the plan.

4. **A realistic implementation plan.**
   - Check that the timeline is realistic to meet the project objectives. May be too short to achieve the objectives or too long to maintain momentum.
   - Assess the scope of the project to ensure that it is manageable in the timeframe considering the number of stakeholders that need to be involved.
   - Document barriers and risks to implementation and a plan to reduce the risks.

5. **A robust evaluation plan.**
The evaluation plan needs to relate to the objectives and measurable benefits that have been proposed. The plan should include some key evaluation questions and how you would collect and analyse data (qualitative and quantitative) to answer the questions. You will need to be able to assess whether the project went as planned to establish causal relationships (process evaluation) and whether benefits have been realised (outcomes), and to make an assessment of the impact of the project. Examples of questions include:
Process type questions:
   - Has the project reached the appropriate people?
   - Did the project activities go to plan? If not, why not?
   - What seemed to work? Not work?
   - Were any changes made to the intended activities? If so, why?
   - Are the participants and other key people satisfied? (with the intervention)

Outcome type questions:
   - Have the project objectives been met?
   - To what extent have the intended measurable benefits been achieved?
   - Has the project resulted in any unintended outcomes?
   - Who is benefiting/not benefiting? How?

Impact type questions:
   - To what extent can changes be attributed to the program?
   - What are the net effects?
   - What are the final consequences?
   - Is the program worth the resources it costs?

6. **Outline an approach to sustain the change beyond the project completion.**
Sustainability includes consideration of ongoing resourcing, management support and how much change may be needed to embed the intervention into the normal business of the service e.g reviewing operational policies and procedures; ensuring key stakeholders are involved; outcomes associated with the project are communicated.

7. **Potential for the initiative to be adopted across the wider healthcare system.**
Please provide advice on the potential for widespread adoption of the initiative and indicate how the knowledge you gain from this project will be shared with other services.

8. **Sponsorship from clinical leaders and department managers is essential.**
A statement of support is required from the Health Service Facility Manager/s and General Manager/s of the services involved. Where appropriate, the Clinical Network or Clinical Stream Manager should also provide written support. The written support should include a process for monitoring and communicating project performance and the amount of time that the sponsor or delegate will allocate to meeting with the project team.

HOW WILL THE SELECTION PANEL SCORE THE APPLICATIONS?

Area	Selection Criteria	Points
Triple Aim Goals	Clearly articulated measurable benefits to improve: - the health of the population (0 – 5 points) - the experience of care (0 – 5 points) Cost analysis includes cost of the intervention and an estimate of potential savings or improved efficiencies. (0 – 5 points) Project is outlined from the perspective of the patient, families and carers. (0 – 5 points)	0 - 20
Type of Initiative & Level of Innovation	The initiative has been clearly described. The proposal is at a higher level than "usual thinking" on the Innovation Scale. The evidence supporting the level of assessment is clearly described including why this innovation has been chosen over alternatives.	0 - 20
Implementation Plan	Timeline is realistic. Scope is defined and manageable. Potential risks and barriers to implementation have been identified and there is a plan to reduce the risks. AIM training is included.	0 – 10
Evaluation	Strength of the proposed evaluation.	0 - 10
Sustainability	How well has sustainability been considered? What level of confidence is there that any changes can be sustained after the scholarship funding is finished?	0 – 10
Adoption/ Knowledge Sharing	Knowledge will be shared and there is potential for widespread adoption of the initiative.	0 – 10
Sponsorship	**Manager** Manager identifies this project as a priority for the service to help achieve the HNE Operational Plan. The decision makers required for a successful project have been identified and support the project. Sponsor has committed time to the project. The process for monitoring and communicating project performance has been defined.	0 – 10
	Clinical Clinical Leaders are supportive of the project. Clinical Leaders identify this project as a priority for the service. Clinical Network or Stream Leaders endorse the project (if relevant).	0 – 10
Total		**0 – 100**

Health
Hunter New England
Local Health District

HOW TO APPLY

- Download the Guidelines & Application Form via the Innovation Support intranet site.
- Review the HNE Health Operational Plan 2013-2014 at: http://intranet.hne.health.nsw.gov.au/__data/assets/pdf_file/0005/96530/op-plan-13-14.pdf
- Access any relevant information and training courses. The following may be of interest:
  - myLink: http://mylink.hnehealth.nsw.gov.au lists:
    - training opportunities including HNE Accelerating Implementation Methodology training dates for 2013: 27th – 28th August 2013 (Waratah); 29th – 30th October 2013 (Waratah); & 19th – 20th November 2013 (Tamworth)
    - links to Clinical Networks and Streams (under the "Collaborative Spaces/Portals" tab)
  - Centre for Practice Opportunity and Development (CPOD): http://intranet.hne.health.nsw.gov.au/nm/cpod
  - *GEM: https*gem.workstar.com.au for NSW Health learning modules in:
    - Redesign
    - Accelerating Implementation Methodology
    - Clinical Practice Improvement
    - Project Management
    - Patient Flow Systems
    - Emergency and Incidents
    - Leadership & Management
    - Clinical (Clinical Handover & CEC)
    - Patient & Carer Experience
  - Clinical Excellence Commission (CEC) Clinical Practice Improvement Program: www.cec.health.nsw.gov.au/programs/clinical-practice
  - Centre for Healthcare Redesign: http://www.aci.health.nsw.gov.au/centre-for-healthcare-redesign
  - Institute for Healthcare Improvement: www.ihi.org
- Please review the *"NSW Health Guidelines: Human Research Ethics Committees – Quality Improvement & Ethical Review: A Practice Guide for NSW"* http://intranet.hne.health.nsw.gov.au/__data/assets/pdf_file/0006/70467/Quality_Improvement_and_Ethical_Review_A_Practice_Guide.pdf
- For advice on ethical matters and publication please contact the HNE Research Governance and Ethics Unit: http://intranet.hne.health.nsw.gov.au/research_ethics_and_governance_unit
- You are invited to send a brief summary to Judith.Swan@hnehealth.nsw.gov.au before progressing to a full application for review and advice.
- Please send your completed application to Pauline Pickin, Executive Assistant, Innovation Support Byrne House, Rankin Park Campus or email: pauline.pickin@hnehealth.nsw.gov.au

Section B: Application Form

Team Leader Contact Details for Correspondence	
Full name	
Position	
Email	
Work Phone	
Mobile	
Fax	

Services Collaborating in the Project	
Please list names of services involved in the project	

Project Title:
Aim of Project: *Please provide a statement about the long-term change your project is working towards.*
Project Objectives: *Objectives should be "SMART"- Specific, Measurable, Achievable, Realistic and Timely and be focused on the patient, families and carers. Objectives should align with the Triple Aim goals of improving the health of the population, improving the experience of care and reducing the per capita cost of care.*

Type of Initiative & Level of Innovation:

In no more than 300 words include a brief plain-language description of:

- *The proposed initiative and alternative approaches.*
- *What level you believe this initiative to be on the Innovation Scale provided in the guidelines and why you have assessed at this level.*
  Level 1 Level 2 Level 3 Level 4
- *The evidence supporting the level of innovation assessment and why this innovation has been chosen over alternatives.*

Clear links to the HNE Health Operational Plan 2013-2014

Please review the HNE Health Operational Plan 2013-2014 and state how your project is aligned to the initiatives outlined in the plan.

Brief description of the implementation plan

Please describe:

- *your project plan with key activities, milestones and timeline*
- *scope of the project*
- *an estimate of the number of stakeholder groups involved and their level of commitment to the project*
- *the possible barriers and risks to implementation and how these will be managed*
- *how you plan to build skills within the team for implementing major change e.g. Accelerating Implementation Methodology training.*

Brief description of the plan for sustainability

Please describe how you will sustain your project beyond the life of this funding to embed the changes.

Evaluation

Include key evaluation questions and a brief plan for collecting data (qualitative and quantitative) to answer the questions. Remember to address the objectives.

Adoption / Knowledge Sharing

Please indicate the potential for the initiative to be adopted across the wider healthcare system and whether you agree to share the knowledge.

Do you agree to:

1. Write up your project for a quality award and publication? YES ☐ NO ☐
2. Share your project outcomes on the HNE Health intranet? YES ☐ NO ☐
3. What other ideas do you have?

Ethics

Are there ethical considerations? Refer to NSW Health Guidelines "Human Research Ethics Committees – Quality Improvement & Ethical Review: A Practice Guide for NSW"

Is ethics approval required? YES ☐ NO ☐

For advice on ethical matters and publication please contact the HNE Health Research Governance and Ethics Unit:
http://intranet.hne.health.nsw.gov.au/research_ethics_and_governance_unit

Resources

Please list resources required by the team to implement the project, including amount requested and contribution (including in-kind) from the clinical service.

Do you request training at the Agency for Clinical Innovation (ACI) Centre for Healthcare Redesign?

YES ☐ NO ☐

If so, please review the include travel and accommodation costs for 13 face to face training days in Sydney.

Item	*Cost*
Backfill for Project Staff	$
Equipment	$
Other Materials	$
Centre for Health Care Redesign (see above)	$
Other	$
Total	$
Contribution, amount or "In Kind" from the clinical service:	
Cost Centre Number for transfer of funds: (Note, Scholarship funds cannot be transferred into SP&T cost centres)	

Health
Hunter New England
Local Health District

Name of Project Sponsors who agree to be accountable for spending scholarship funds.

Manager/s:_____

Clinical Lead:_____

Network or Stream Clinical Leader/s:_____

Statement of Importance (Submitted by Sponsor/s):

Health service managers and clinical leaders who agree to sponsor the project and acquit scholarship funds as above, to provide a statement describing why the project is important in the relevant service and what actions they will take to provide support. This may be submitted by email to Pauline.Pickin@hnehealth.nsw.gov.au

Please return completed applications via email or by internal mail to:

Pauline Pickin, Executive Assistant, Innovation Support, Byrne House, Rankin Park Campus

Email: pauline.pickin@hnehealth.nsw.gov.au

For further information or assistance to complete the application please contact:

Judith Swan Phone: 49223382 or 0432000081; Email: Judith.Swan@hnehealth.nsw.gov.au

Or see the Innovation Support intranet or internet sites:

http://intranet.hne.health.nsw.gov.au/innovation_support

http://www.hnehealth.nsw.gov.au/innovation_support/scholarships_home/scholarship_application_process