Improving patient care and patient and staff safety in a secure intellectual disability unit: The Assessment Treatment and Rehabilitation Unit Model of Care project

Written Project Submission for the 2015 Canterbury DHB Quality Improvement and Innovation Awards

Assessment Treatment and Rehabilitation Unit, Hillmorton Hospital, Canterbury District Health Board
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Project Information Sheet

**Project title**

Improving patient care and patient and staff safety in a secure intellectual disability unit: The Assessment Treatment and Rehabilitation Unit Model of Care project

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<th>Name and address of service/department/organisation</th>
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<td>Specialist Mental health Service, Hillmorton Hospital</td>
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**Contact Person**

<table>
<thead>
<tr>
<th>Name</th>
<th>Job Title</th>
<th>Email</th>
</tr>
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<tbody>
<tr>
<td>Cate Kearney</td>
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<td><a href="mailto:cate.kearney@gmail.com">cate.kearney@gmail.com</a></td>
</tr>
</tbody>
</table>

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**Word Count (limit 3000)**

3,039

Which category do you think best fits your project?

<table>
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<tr>
<td>Improved health and equity for all populations</td>
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<td>Best value for public health system resources</td>
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(Please note Assessors make the final decision)
Abstract

The Canterbury District Health Board’s Assessment Treatment and Rehabilitation (AT&R) Unit, situated at Hillmorton Hospital, is a secure facility for individuals with an intellectual disability. It provides a dual service, to individuals with severe behavioural disturbance and individuals receiving compulsory care under the Intellectual Disability Compulsory Care and Rehabilitation Act (IDCC&R).

The Introduction of this Act brought a younger population with a similar profile to other offender populations. In addition to an intellectual disability, these individuals often came from highly disadvantaged backgrounds with significant developmental adversity and multiple functional impairments.

The changed patient profile culminated in significant challenges in providing a safe environment to enable clinical staff to provide the broad scope of treatments required for the complex consumer group. By 2012 there were high numbers of incidents including physical assaults. Incidents and seclusion use had increased to be the highest in the Specialist Mental Health Service. In addition there were difficulties in staff recruitment and retention and concern for staff injured during restraints.

The aim of the project over the period of 2012-2015 was to ensure a safe and therapeutic environment that would provide optimal clinical care to address the complex needs of a diverse patient group. The four objectives identified for the project were to

1. Increase structured rehabilitation opportunities
2. Improve patient and staff safety by reducing incidents
3. Improve patient and staff safety by reducing seclusion use
4. Stabilise the workforce and improve recruitment and retention

Three years of pilot initiatives were consolidated into a Model of Care Proposal for Change in 2014. The outcomes of the pilots and Model of care were:

1. Each service user has an individualised treatment programme and behavioural intervention plan. There is a multi-disciplinary rostered workforce.

2. From July 2012 to June 2015, incidents have reduced by 82%. From July 2012 to June 2015 physical assaults have reduced by 88%.

3. From July 2012 to June 2015 seclusion use has reduced by 97%.

4. In July 2012, the unit had 20 - 35% vacant positions. In June 2015, the unit is fully staffed.
Introduction and Background

The health care environment:
The Assessment Treatment and Rehabilitation (AT&R) Unit, situated at Hillmorton Hospital, is a unit for individuals with intellectual disability (ID) and severe behavioural disturbance, posing a risk to self or others.

The AT&R is one of two inpatient units of the Intellectually Disabled Person’s Health Service (IDPH) within the Specialist Mental Health Service (SMHS). As well as two inpatient units there are also two community teams in this Service.

Motivating or Initiating Factors

The introduction of the IDCC&R Act enabled individuals with an Intellectual Disability who committed a serious offence to receive deposition to compulsory care in secure hospital or community facilities. As a consequence of the legislation a new group of consumers were admitted to the AT&R unit; typically younger, with mild Intellectual Disability, significant developmental adversity and multiple functional impairments. The AT&R unit was treating to a diverse group of individuals with high and complex needs associated with severe behavioural disturbances (frequently characterised by aggressive and assaultive behaviour.)

In December 2011, the SMHS Divisional Leadership Team became concerned about the chronic health and safety risks associated with patients admitted to the AT&R unit who exhibited a propensity for violence that resulted in a disproportionately large occurrence of incidents of physical assault.

A review of these incidents occurred and the review recommendations were released in June 2012. The Model of Care project commenced in July 2012.

Other Centres using this initiative

The therapeutic approach is an amalgam of evidenced based best practice approaches for individuals with an intellectual disability with severe behavioural disturbance, and/or those who have offended.

The workforce composition was compared with other secure intellectual disability inpatient units in New Zealand.

Project Team

IDPH: Jane Hughes, Paul Kelly and Cate Kearney.
SMHS Project Lead: Stu Bigwood, Rose Henderson.

Clinical advice on the components to be included in the model were provided by IDPH senior clinicians who had expertise in behavioural management. The pilots were implemented by leaders and clinicians in the AT&R.
Background

From its earliest days the AT&R seclusion rates, incident rates, particularly assaults on staff and other consumers, was well above the SMHS average. There were high numbers of staff injuries often arising during restraint and seclusion events.

In addition to a new patient group (following the introduction of the IDCC&R Act), there was a requirement that the unit be locked and upgraded to a secure facility, using the old ‘villa’ footprint.

As a consequence of the dual populations, by 2012 AT&R experienced:

- Highest numbers of incidents for any CDHB mental health unit
- Reactive care due to the crisis to crisis nature of working with the patient groups
- High seclusion use
- A markedly changed population due to the IDCC&R Act:-
- Chronic recruitment and retention issues
- The building was not fit for purpose, resulting in extensive property damage
Planning and Implementation

Planning
SMHS project commenced to review its current system of care for people with an intellectual disability with associated behavioural difficulties, dual ID/offending behaviour and ordered to undertake compulsory treatment under the IDCC&R Act.

Literature Review
Best Practice in Offender Rehabilitation has been published in New Zealand and Australia.

There is extensive literature on Positive Behaviour Support and Applied Behavioural Analysis for people with an Intellectual Disability.

O’Brien’s (1989) accomplishments underpins many intellectual disability services.

Data gathering
Seclusion data and incident data were entered into the electronic Patient Management System and into the Quality Management Control System. The Risk and Quality Coordinator provided monthly reports that were analysed, discussed and disseminated to the AT&R clinical team.

Costing
Employee costs were evaluated monthly and at the end of each financial year. The new model of care employee costs was reviewed at each stage of the project. The final composition of the workforce required for the new model of care resulted in an increase in FTE for the unit and a small increase in employee costs (page 10).

Determining best practice
In December 2012 a formal Project Charter aimed ‘to clarify the role of secondary mental health services in the provision of care for those with intellectual disability, develop the model of care on best practice guidelines and advise on workforce and service requirements’ The Project Sponsors were CDHB Executive Director of Nursing and the General Manager, Planning and Funding.

The Steering Group were to provide a report by August 2013 on:

- Proposed model of care based on contemporary best practice guidelines
- Workforce and service requirements
- Recommendations for implementation

Site visits
Two project leads visited the CCDHB national ID inpatient unit and the Waitemata DHB and Southern DHB secure units.
The Director of Allied Health and the Director of Nursing visited Intellectual Disability facilities in the UK and USA and provided feedback to the project team.

**Project vision/aim and goals/objectives**

The project aimed to clarify the role of secondary mental health services in the provision of care for those with intellectual disability, develop the model of care on best practice guidelines and advise on workforce and service requirements.

The AT&R model of care was to address challenging behaviours consistently and encourage the adoption of positive pro-social behaviours through the implementation of structured behavioural interventions. The model is based on a philosophy of care that strengthens the individual's rights to an equal place in society and enables them to live a good life by building on their personal strengths.

The specific objectives of the project were to:

1. Increase structured rehabilitation opportunities
2. Improve patient and staff safety by reducing incidents
3. Improve patient and staff safety by reducing seclusion use
4. Stabilise the workforce and improve recruitment and retention

**Approval to proceed process**

The Project was endorsed by the SMHS Divisional Leadership Team and by the Executive Leadership Team Project Sponsors.

**Feasibility and Expected Benefits**

Feasibility was determined by exploration of similar models utilised in ID settings.

**The project**

Monthly seclusion use reports would measure seclusion use. Data to be reviewed monthly by the Service Leadership and Divisional Leadership Teams.

Monthly incident data to be monitored with the Safer Staffing Health Workplace Committee, a joint committee of the CDHB and NZNO. There was flexibility in adding additional fields in order to determine the area where and when incidents occurred.

Risks associated with changing the workforce were consistently evaluated against legal and ethical requirements of professional groups i.e. Nursing Council regulations for registered workforce directing an unregistered workforce.

**Consultation with internal and external stakeholders.**

A key stakeholder in this project were the staff of the AT&R Unit who were concerned about their working environment. Their representative unions were involved in discussions and meetings from 2012 onwards.

CDHB Health Advisory Committee (HAC) requested presentations and monitoring reports.
Link between the project objectives and CDHB’s strategic goals and National Health Priorities.

The Project aligns with CDHB strategic goals of being more people-centred, and increasing patient safety. Seclusion reduction is a strategic goal for SMHS, and a national priority.

Incident reduction is a key priority for staff, for their union organisers and is a health and safety concern for the CDHB especially when it leads to increased loss of time due to injury.

Project Innovation and/or Strategic opportunities

During the project pilot phases, a SMHS contract to provide community Behaviour Support Services to individuals with an intellectual disability ceased. SMHS was left with a highly skilled workforce that was not deployed in other areas of SMHS. There was an opportunity to include this experienced workforce in the AT&R workforce plan.

Project Sign-off

April 2013: Approval to proceed - SMHS Divisional Leadership Team and CDHB Executive Leadership Team.

April 2014: Workforce reconfiguration recommendations signed off by SMHS and the Executive Management Team.

May 2014: Proposal for Change AT&R Model of Care signed off by the CDHB Executive Management Team.

September 2014: Direction of Change signed off by the CDHB Executive Management Team.

Project Implementation

1. Incident Baseline Data - July 2012

Physical assault data was broken down into time of day and location of assaults to inform clinical care and also inform the project team. This data was produced monthly and distributed to the AT&R Team.

PHYSICAL ASSAULTS

TIME OF DAY - 3 HOUR TIMESLOTS
LOCATIONS OF ASSAULTS

TIME OF DAY BY AREA

2. AT&R Pilots 2012-2015

1. **Dec 2011** – August 2012. Increase RN on afternoon and weekend shifts (seclusion hours increased).

2. **Jul 2012.** A project to reduce incidents commenced with the Safer Staffing Health Workplace Committee. Collated incident data was disseminated to the AT&R team for interpretation and to assist in identifying key times and areas in which incidents occurred.

3. **Aug 2012.** Seclusion reduction project introduced. Additional sensory and clinical areas created. It was acknowledged that the unit was not fit for purpose. Strengthening occurred to internal walls to reduce and deter property damage.

4. **Jan 2013.** Key staff were trained in behavioural interventions and a working party established.

5. **Feb 2013.** Key Performance Indicators were developed for CDHB HAC. The Seclusion Reduction project evolved into a daily, then weekly review of seclusion events and incidents.


7. **Jun 2013 - Feb 2014.** Seconded senior registered nurses from other units to provide leadership in procedural and relational security.

8. **May 2014.** Behaviour Support Facilitator seconded to AT&R for 3 months to complete behaviour plans for all consumers

9. **Jun 2013 - Feb 2014.** Seconded senior registered nurses from other units to provide leadership in procedural and relational security.

10. **Aug 2013- Feb 2014.** Hospital Aid Pilot

11. **Oct 2013.** Increased nursing leadership from one to two Clinical Nurse Specialists.

From 2012 onwards, The Project Team met with AT&R staff and their representative unions in efforts to find solutions to the ongoing risks associated with working in the AT&R unit.

The pilot initiatives gained traction as evidenced by incident data and the reduction in seclusion hours.
3. **The Model of Care Proposal for Change**

In June 2014, a formal proposal for change process began. The Model of Care proposed was a consolidation of the pilot initiatives which proposed to provide consistent care, positive behavioural support and rehabilitation opportunities for service users. The model proposed:

- A behavioural approach based on applied behaviour analysis, O'Brien’s key accomplishments and the Good Lives model.

- The incorporation of behavioural assessment and rehabilitation opportunities would be more likely if Behaviour Support Facilitators and Occupational Therapists were ‘on the floor’ embedded in the matrix of the team, rather than working as a separate entity.

- Conversion of vacant nursing positions into allied health would facilitate the above

- Increase in nursing leadership to support the new model of care

**Key Milestones**

- December 2011: Investigation into incidents in the inpatient units
- January 2012: First pilot: increase in nursing FTE
- August 2012: Commencement of Seclusion Reduction Project
- July 2013: Commencement of Incident Reduction Project
- May 2014: Approval to proceed with Model of Care Proposal for Change
- June 2014 Proposal for model of Care released.
- August 2014 Direction of Change released.
- May 2015: Model reviewed and confirmed.

**Communication processes with Stakeholders**

- Meetings with Staff
- Meetings with Sector representatives
- Meetings with CDHB key staff
- Meetings and reports sent to Disability Support Services Directorate of MoH
- General Manager’s weekly news update
- Bi-monthly reports to CDHB HAC
- Monthly reports to Safer Staffing Healthy Workplace Committee

**Policies, procedures, or guidelines**

- Amendments to Service Provision Framework
- Inclusion of role descriptions in unit specifications
- In-service training programme
### AT & R Workforce: Budgetary Considerations

#### Current Shifts 2013/14

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#### Proposed Shifts 2014/15

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<td>Sal Cost</td>
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Results and Findings

From July 2012 to June 2015 there was an 82% reduction in incidents. There has been a consistent downward trend in incidents over the two years of the project.

![Graph of ATR Total Incidents from July 2012](image)

From a high of 90 physical assaults in July 2012, these type of incidents have consistently trended with only 10 such incidents in June 2015, a reduction of 88%.

![Graph of Physical Assaults from July 2012 ATR](image)

The reduction in seclusion use has declined dramatically. With a high of 719 hours in July 2012, in June 2015 there was only 19 hours of seclusion use, a 97% reduction. From November 2014 whilst patient numbers have fluctuated, seclusion hours per month have been 100 hours or less, a 90% reduction in seclusion use in 3 years.
Rehabilitation and Occupation

From the June 2015 Audit Report for the Ministry of Health:

*In 2014 the organisation developed a model of support based on Applied Behaviour Analysis, (ABA), O’Briens Five Essential Accomplishments and the Good lives Model for people who are offenders. This model involved converting nursing positions into behavioural support and occupational therapy positions which are incorporated into the day to day support on the unit and within the community work.*

*There is a variety of activities off unit through internal and external programmes.*

*Staff are appreciating the changed model of service as it provides a greater emphasis on rehabilitation.*

Stabilise the workforce and improve recruitment and retention

From the June 2015 Audit Report for the Ministry of Health

*Over the last few years there has been considerable attention paid to the service both in terms of structural improvements within an already established footprint and also strengthening the professional input into the day to day work in the unit. This has resulted in a sharp reduction in seclusion, incidents, less medication required, staff harm and is now seen as desirable place to work resulting in full staff rosters”*

Unexpected or additional benefits of the project

In the May 2015 review of the Model of Care, whilst acknowledging that more work was required on the model of care and specifically on direction and delegation requirements for Registered Nurses, the majority of staff endorsed the change to a multi-disciplinary workforce.

From the June 2015 Audit Report for the Ministry of Health:

*Overall staff spoken with feel supported by the organisation and are appreciating the changed service approach.*

Early indications are that staff retention has increased and staff returning to the unit for other areas have made very positive comments regarding the new model of care.
What the project achieved for the stakeholders

Family satisfaction was equally high in the audit findings

“…was very grateful for the service and commented on how the staff interacted and worked with her family member over a long period. She commented that her family member was settled and happy in the unit and the staff were fantastic. They were excellent at communication and she felt very confident that everything was being done for her family member”.
Conclusions and Future Direction

Conclusions
The project has been successful due to the application of data in a systematic way to arrive at a final new model of care. We reviewed the gains or deficits of each pilot. The Pilots and eventual model of care have resulted in an extremely positive reduction in seclusion use. Incidents of physical assault have halved over the three years. In the words of the Ministry of Health Auditor:

“The model had been implemented in part through a variety of pilot initiatives which introduced behavioural and occupational modalities more intensively than 2007 when there was part time availability but not within the unit setting.

“Staff are rightly proud of their achievements in reducing incidents and managing seclusion downwards”

Ongoing Monitoring Activities
Monthly incident data and seclusion use data will continue to be reported on to the AT&R Team, the Division and to the CDHB DSAC.

Data will be used to inform further quality improvements.

The Service Provision Framework for the unit will reflect changes to clinical processes and monthly monitoring will occur.

Future Directions
• Embedding the philosophy of the new model of care into clinical processes
• Education for all staff on the new model and continuous building of staff skills
• Share specialist skills and knowledge within SMHS, CDHB, the Canterbury health and disability sectors
• Include behavioural strategies in discharge planning and interface with the community in efforts to reduce readmissions.

Recognition Strategies
Article in the General Manager Weekly Update on the positive changes and outcome of the Ministry of Health Audit.

June 2015 presentation to the CDHB DSAC on the AT&R Model of Care project.

Quality Improvement Awards Application
References


Institute of Applied Behaviour Analysis (IABA)  [http://www.iaba.com/index1.html](http://www.iaba.com/index1.html)


