

What did we want to achieve?

The aim of the project was to implement a new model of care for patients with mild to moderate stroke in order for them to receive specialist rehabilitation in their own home rather than in hospital. This was to be the first Early Supported Discharge (ESD) service for stroke in New Zealand.

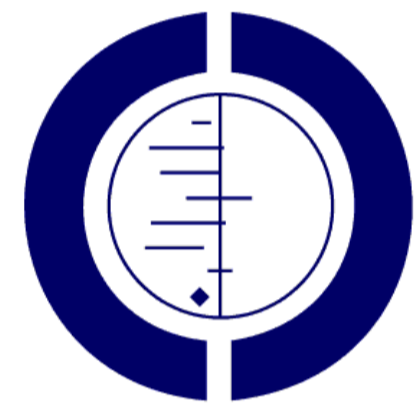
By July 1st 2014 we aimed to:

- reduce the average length of stay by 4 days compared to the baseline population
- achieve functional improvements comparable to those made during inpatient rehabilitation, and
- attain a patient satisfaction response of >90%.

Why did we want to do this?



1. The population of South Auckland is growing faster than in any other part of the country. This puts increasing pressure on our inpatient rehabilitation ward at Middlemore hospital.



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2. There is strong international evidence to support intensive rehabilitation in the home through an Early Supported Discharge service.

The evidence for ESD has been cumulative over the last 15 years. A Cochrane Review of Early Supported Discharge service trials published in 2005 found that ESD services could:

- accelerate the return home of patients after stroke
- produce equivalent or better patient and carer outcomes, and
- provide a cost-effective alternative to conventional services.

The Cochrane review found that an average of 40% of hospitalised stroke patients are eligible for ESD intervention and indicated that the greatest benefit in clinical outcomes was with the mild and moderate groups.

Results were categorised in three groups:

Patient	<ul style="list-style-type: none"> • No additional harm caused • Greater chance of living at home and being independent
Carer	<ul style="list-style-type: none"> • No significant change
Resource	<ul style="list-style-type: none"> • Reduction in length of stay by 8 days • Potential savings estimated at 20%

The 2010 New Zealand Clinical Guidelines for Stroke Management give an A grade recommendation that an early supported discharge service be offered to all people with mild to moderate stroke.



What did we change?

Key elements of the new service design were:

- Early identification of eligible patients
- Criteria for determining if a patient was ready to go home
- An individualised rehabilitation plan and visit schedule
- Transition of care between services
- The delivery of the ESD service.

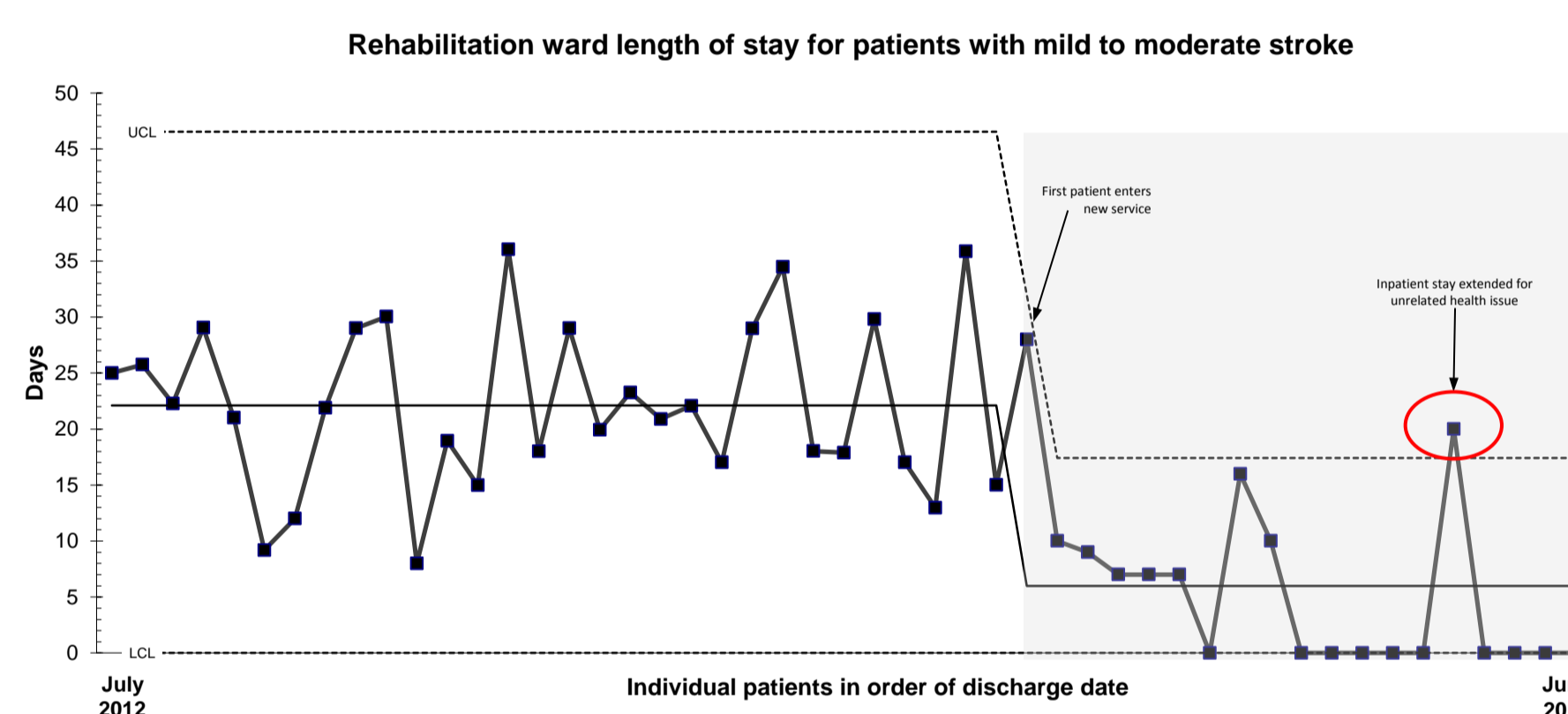
Each of these elements were tested as the new service was developed, until there was confidence that the new service was operating well.

In the new service, patients are visited 2-3 times a day during the week and once on the weekend. Visits are made by members of a multidisciplinary team that includes a co-ordinator, physiotherapist, occupational therapist, speech and language therapist, and nurse, with access to social work, dietetics, and medical input as needed.

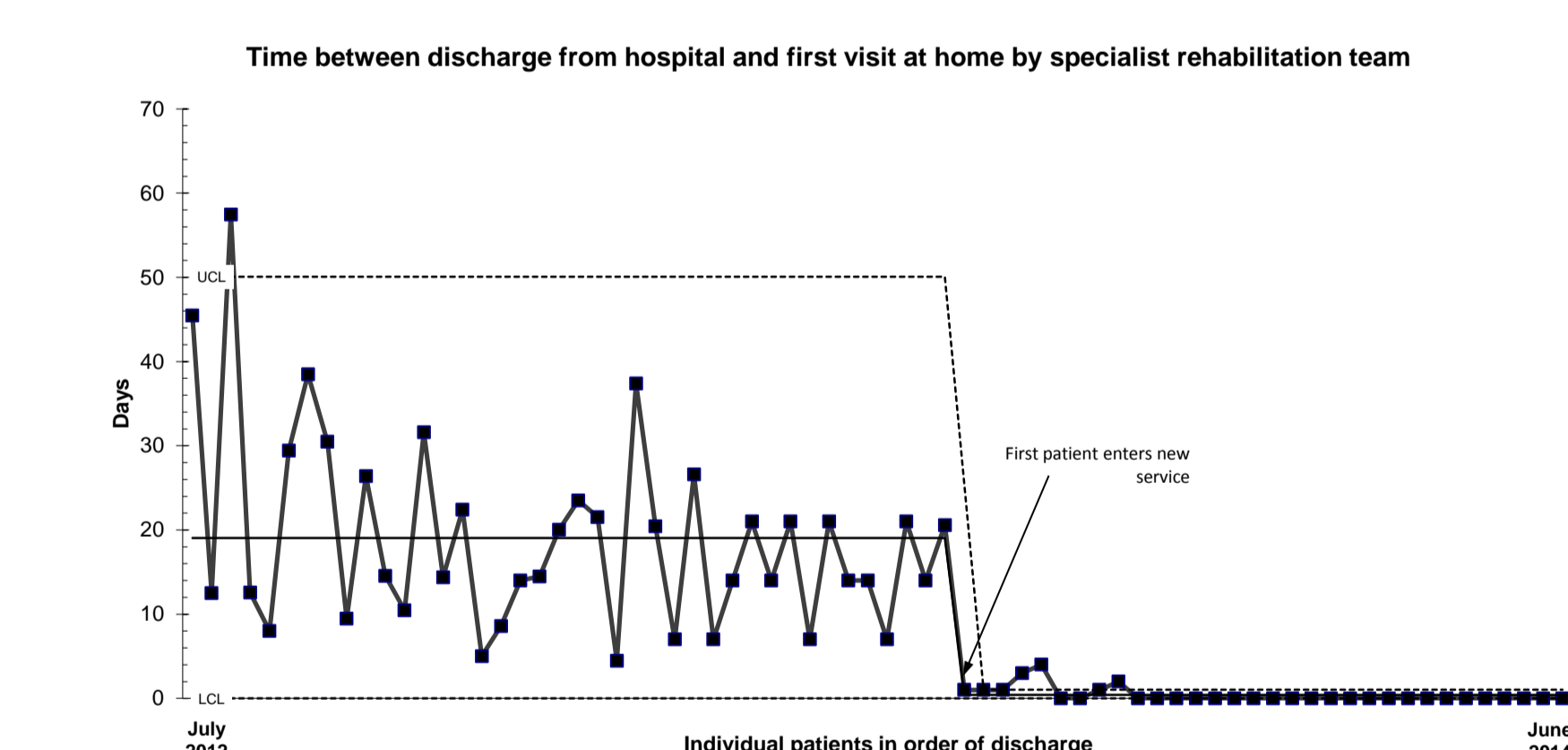


Patients are seen for an intensive three-week period and are then transitioned, if required, to another community team for ongoing rehabilitation.

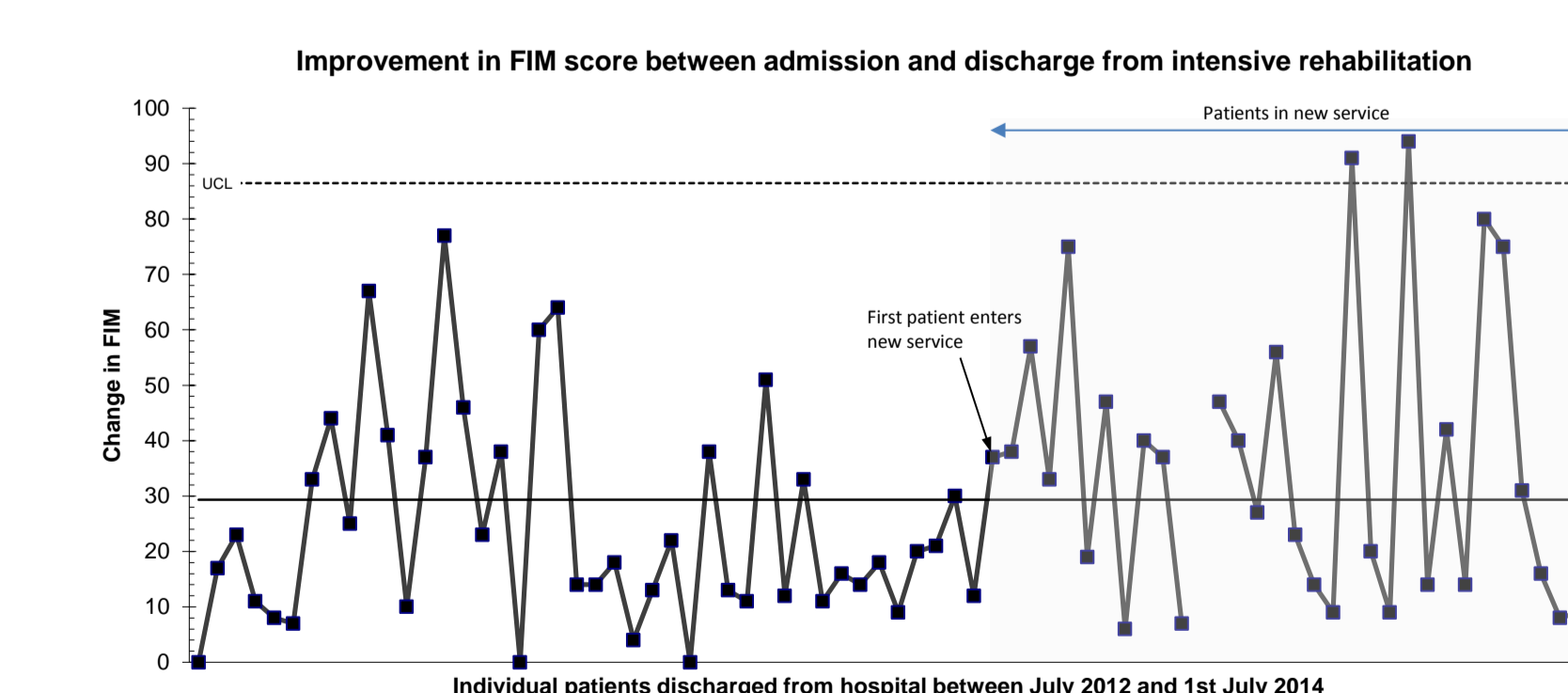
What were the results?



The average length of stay on rehabilitation ward for patients receiving care in the new service has been reduced by 16 days compared with the baseline patient group. Patients who stayed for 0 days are those in which an admission to the rehabilitation ward was avoided by having the ESD service.



Another benefit of the ESD service has been improved continuity of care. Prior to the introduction of ESD, patients who were discharged home waited, on average, 18 days before their first community rehabilitation visit. Feedback from patients about this delay indicated that it was a difficult time for them to adjust to being at home. Patients are now seen within 24 hours of discharge.



Patients achieved functional improvements comparable to those of inpatient rehabilitation as measured by the Functional Independence Measure (FIM). Patients also consistently achieved clinically significant improvements in the Nottingham Extended Activities of Daily Living (NEADL) score which measures a patient's own perception of their improvement.

What do patients say?

Patients were overwhelmingly satisfied with all aspects of the ESD service with a 99.5% positive response rate to the patient feedback survey.

99.5%
positive
feedback

“Home is best”
Mrs. Tua,
ESD Patient



Between September 2013, when the first patient went home under the care of the ESD service, until 1st July 2014 a total of 492 days have been spent at home with loved ones rather than in hospital.

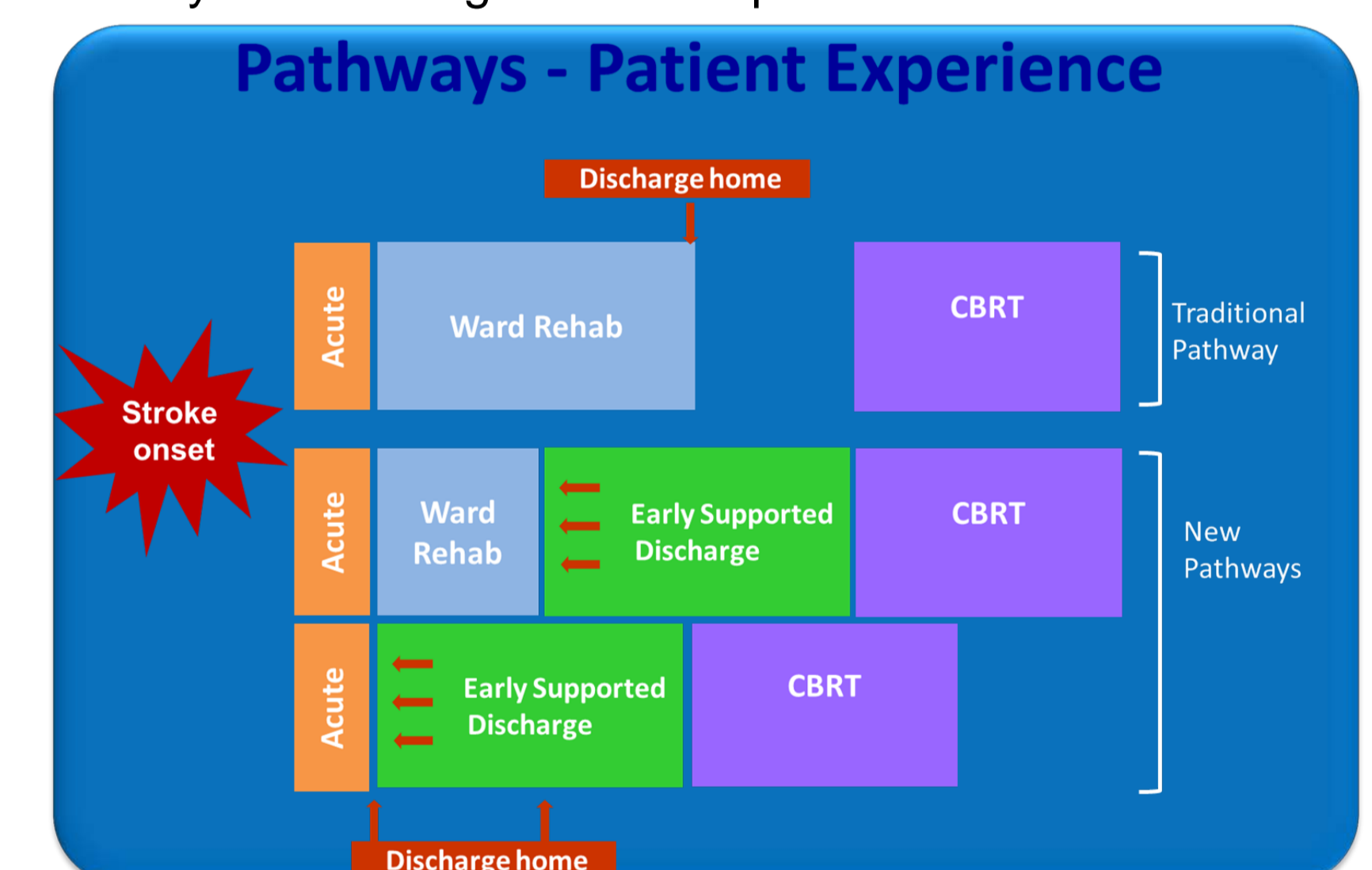
492
days at
home!

“Look at me now, I’m my own man, my own self and I enjoy being home.”
Mr. Williams,
ESD Patient



Where to from here?

The *Supporting Life After Stroke* project has demonstrated that an Early Supported Discharge service can successfully shift care for patients with mild to moderate stroke from inpatient rehabilitation to community care. This has also been shown to have significant benefits for both patients and the hospital system. The cost of the new service is also expected to be lower than the existing service and we are currently undertaking a cost comparison.



To sustain this service for our patients we are in the process of developing Standard Operating Procedures and training systems for both hospital and community-based staff involved in identifying and caring for patients in the new service.

We will continue to monitor the outcomes of the new service to make sure it is delivering optimal care for patients.

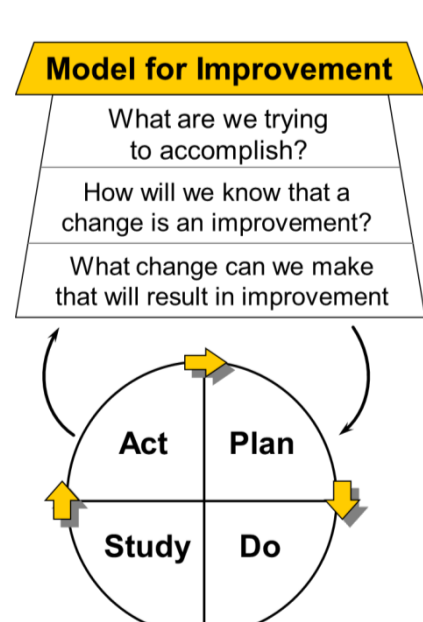
To continuously improve the new service we are also:

1. Investigating factors that determine which patients receive the greatest benefit from the service.
2. Developing a business case to spread the service to other areas of Counties Manukau DHB.

The *Supporting Life After Stroke* project has achieved all of its aims and has benefited patients, families and the health system. We have found that the Model for Improvement can be successfully applied to designing a new service that can then be implemented with confidence knowing that each element of the change has been tested.

What was our approach?

A new rehabilitation service needed to be designed that fitted in with the existing stroke pathway within Counties Manukau DHB. To do this, a working group and a leadership group were created to co-ordinate the project. They were supported by the Beyond 20,000 Days campaign.



We used the Model for Improvement to design and test each element of the service using Plan-Do-Study-Act (PDSA) cycles before moving to the implementation phase. This allowed the team to have confidence in each element of the service and the service as a whole.

For this project, we decided to start testing the new service in a representative locality of the Counties Manukau population including the suburbs of Manukau, Papakura, Manurewa, Takinini and Mangere.

The Supporting Life After Stroke collaborative team are:

Clinical Leads: Katrina Moles, Amanda Shapleski
Team: Deirdre Gough, Jill Grieve, Michele Moore, Dina San-Gabriel, Raewyn Macguire, Jacqui Hooper
Campaign Support: Stephanie Easthope (Improvement Advisor), Alison Howitt (Project Manager)
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