

Primary care improvement case study

Nelson Marlborough Health: Improving medication adherence post cardiac stent

Number 2 in a series of 18

Project overview

Synergy. That's what happens when a small group of diverse people get together to do an improvement project using the Model for Improvement.¹

In 2017 an integrated health team worked on how to make it easier for patients to take their life-saving medication in the year after having a cardiac stent. The medicines are known to be effective in reducing morbidity and mortality, so how could we influence improved patient adherence?

Nelson Marlborough Health and two other health providers were the first to be involved in the Health Quality & Safety Commission's Whakakotahi, a New Zealand-wide primary care quality improvement initiative.

¹ www.ihi.org/resources/Pages/HowtoImprove/default.aspx

The problem

Problem statement

In Nelson Marlborough only six out of 10 patients (62 percent) were taking appropriate medication in the 12 months following their stent procedure.

How could this be improved?

The project aim

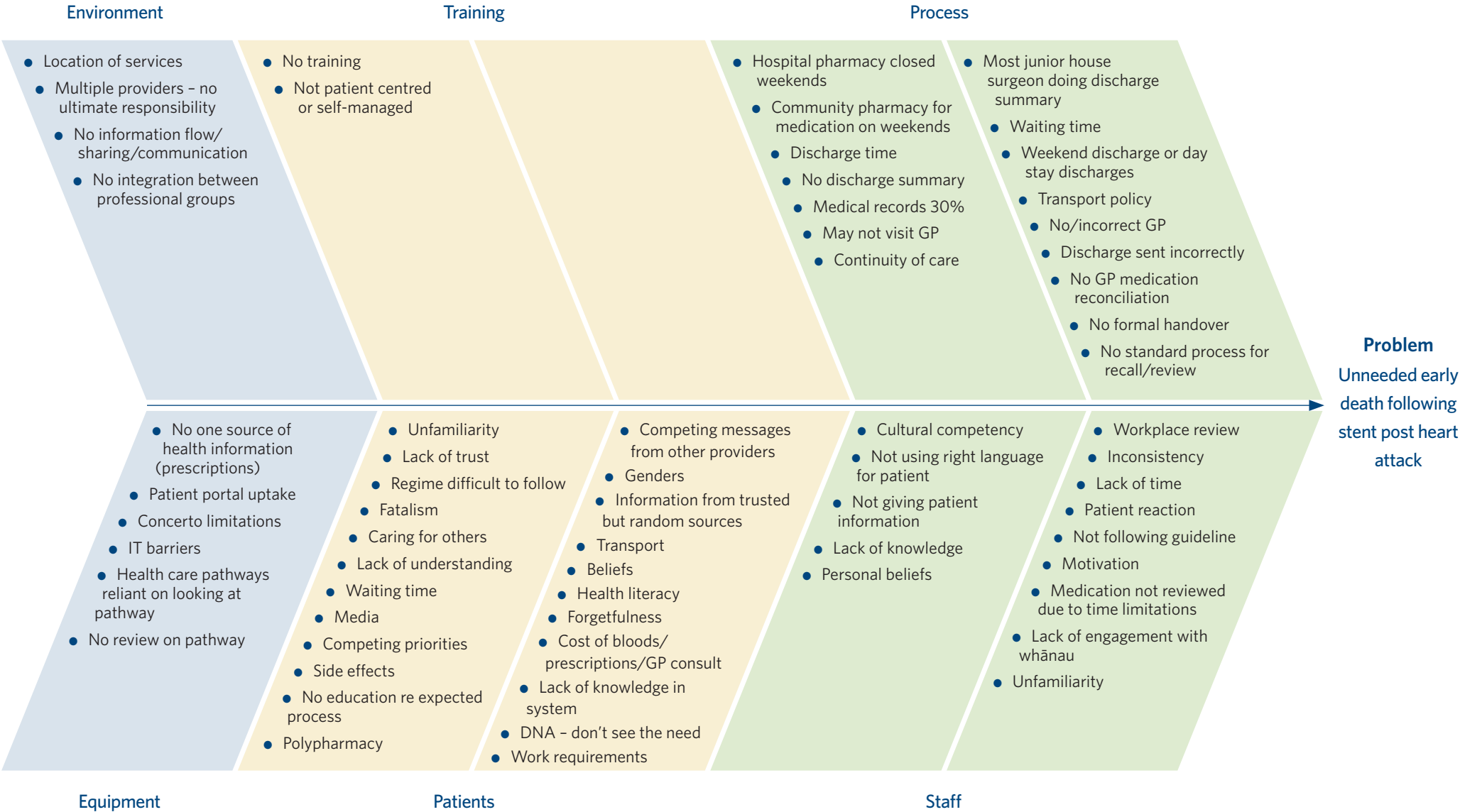
One hundred percent medication adherence at three and 12 months post stent across three general practices in Nelson Marlborough by December 2017.

Defining the problem

Group brainstorming allowed us to identify some causes for someone dying an early death post stent.

Fishbone diagram

Potential causes



The project team

A diverse and enthusiastic team was formed from the community, including a consumer representative and staff from primary and secondary care; this was the foundation for the project's success.

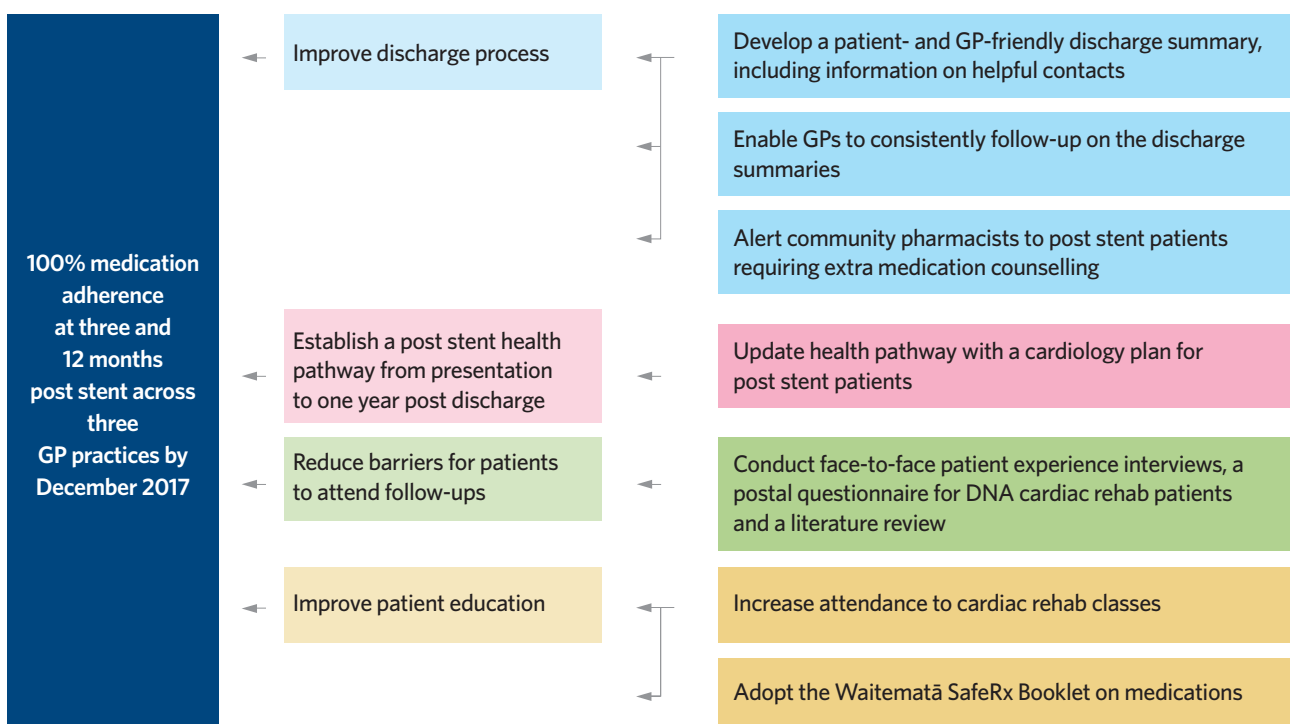
Pictured: (from left) Megan Peters, community pharmacist; Valerie Steel, consumer representative and Nelson Bays Primary Health (NBPH) clinical governance committee member; Bee Williamson, NBPH community education coordinator (heart and diabetes); Dr Sue Stubbs, GP Tima Health Limited and NBPH clinical governance committee chair; Fran Mitchell, improvement advisor; Dr Rachel Mackie, GP Harley Street Medical and NBPH clinical governance committee member; and Dr Kerry Johnston, cardiologist.



Members not in the photo: Dr Elizabeth Wood, GP Mapua Health Centre and hospital clinical governance committee chair; Annie Egan, intensive care unit pharmacist; Jane Shadwick, medical unit pharmacist; and Averil West, manager Heart Foundation Nelson. Te Piki Oranga (kaupapa Māori health provider) was also involved initially.

The measures

Driver diagram



Project successes

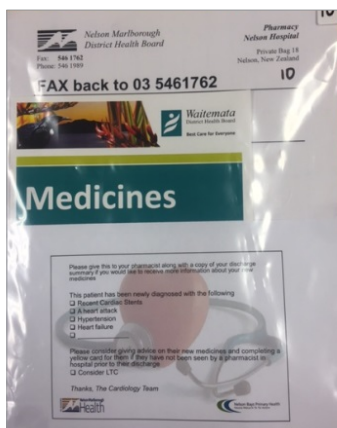
1. More patients are counselled on their medication.
2. An improved discharge summary for both patients and GPs.
3. General practices consistently get the discharge summary same or next day.
4. Increase in Healthy Hearts attendance.
5. Invaluable insights from patients' experiences.

1 More patients are counselled on their medication

Medication counselling, which takes place on or immediately after discharge, has increased from 59 percent to 77 percent (as at November 2017). This was achieved by introducing the 'Your Home Safe checklist', orientating house officers to the importance of medication counselling and, most importantly, partnering with community pharmacies.

If medication counselling cannot be done at the hospital the patient is given a pack to take to their community pharmacist. The pack contains:

- the patient's Yellow Card, listing their medication
- their prescription
- Waitematā DHB's *Medicines for Heart Failure* booklet



- an alert to community pharmacists (see below) that extra medication counselling is needed.

We numbered the packs to track a fax-back confirmation that the patient had visited their community pharmacy.

Alert to community pharmacists

Please give this to your pharmacist along with a copy of your discharge summary if you would like to receive more information about your new medicines

This patient has been newly diagnosed with the following

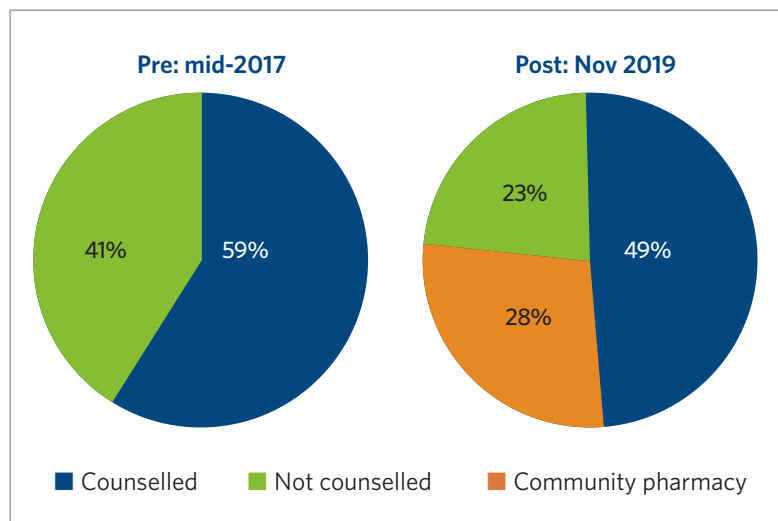
- Recent Cardiac Stents
- A heart attack
- Hypertension
- Heart failure
- _____

Please consider giving advice on their new medicines and completing a yellow card for them if they have not been seen by a pharmacist in hospital prior to their discharge

Consider LTC

Thanks, The Cardiology Team

More patients are counselled



2 An improved discharge summary for both patients and GPs

We revised the cardiology discharge summary by:

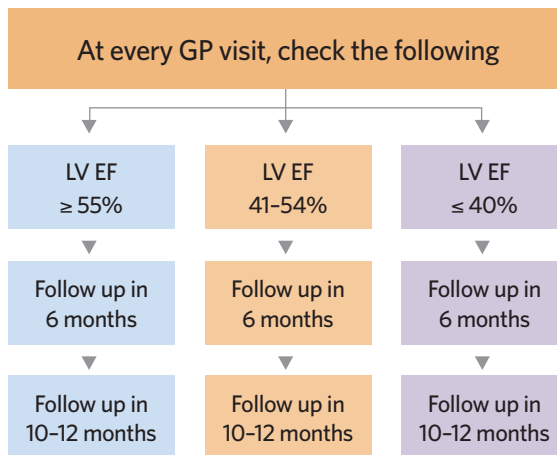
- putting the patient’s diagnoses at the very top, as requested by GPs
- adding a patient section
- improving the GP section.

Discharge summary - patient section

The patient section covers general advice about follow-up and maintaining wellness. It also includes contact information for the cardiac nurse specialists, the heart function specialist nurse, the PHO Healthy Hearts² coordinator, New Zealand Heart Foundation and Te Piki Oranga.

Discharge summary - GP section

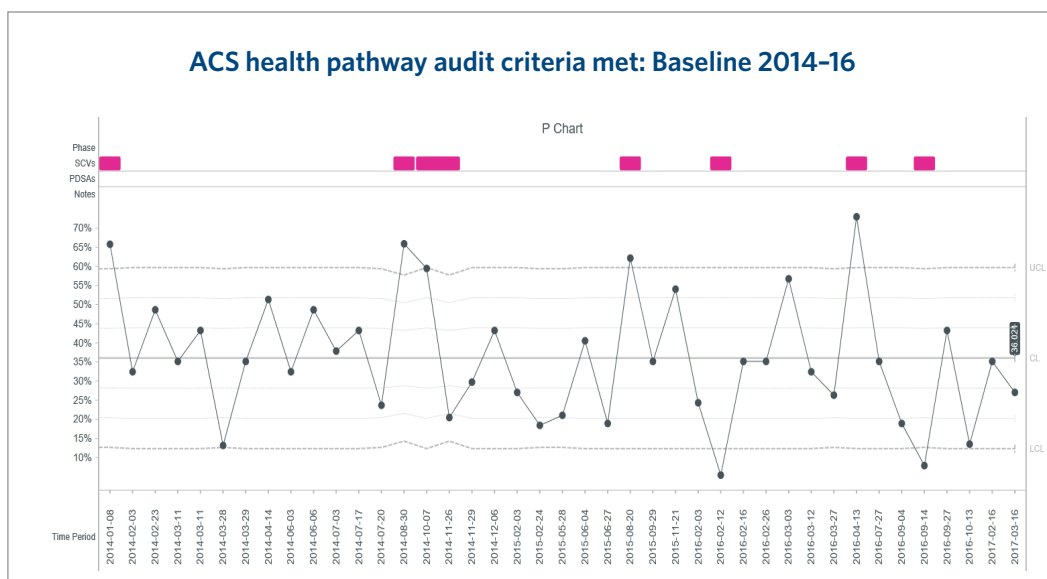
The GP section includes a précis of the acute coronary syndrome (ACS) health pathway outlining specific management according to the patient’s left ventricular ejection fraction (LVEF). See flowchart next column and also [Appendix 2: LV function flowchart](#).



Audit as a measure

To gather baseline data we used a clinical professional development (MOPS) approved audit (see [Appendix 3: Audit of LV function flowchart](#)) to find out how the three general practices involved in the project were meeting the ACS health pathway criteria. The result showed that only 36 percent of the criteria was met; there was plenty of opportunity for better transfer of care.

GP section of the discharge summary



Thirty-six percent of the audit criteria being met gives plenty of opportunity for improvement.

² Nelson Bays Primary Health’s cardiac rehabilitation programme <https://nbph.org.nz/healthy-hearts>

3 General practices consistently get the discharge summary same or next day

We collectively process-mapped the patients' journey and then analysed it for areas of waste (see the coloured stars on the process map below).

Waste

Our 'Ah-ha' moment was realising the biggest waste for everyone, patient and family/whānau included, was at discharge.

The analogy was that being in hospital was like travelling first class and being discharged was like being dumped at the terminal in the dark in an unknown country with the patient being left to navigate their own way in primary care.

Receiving a timely discharge summary

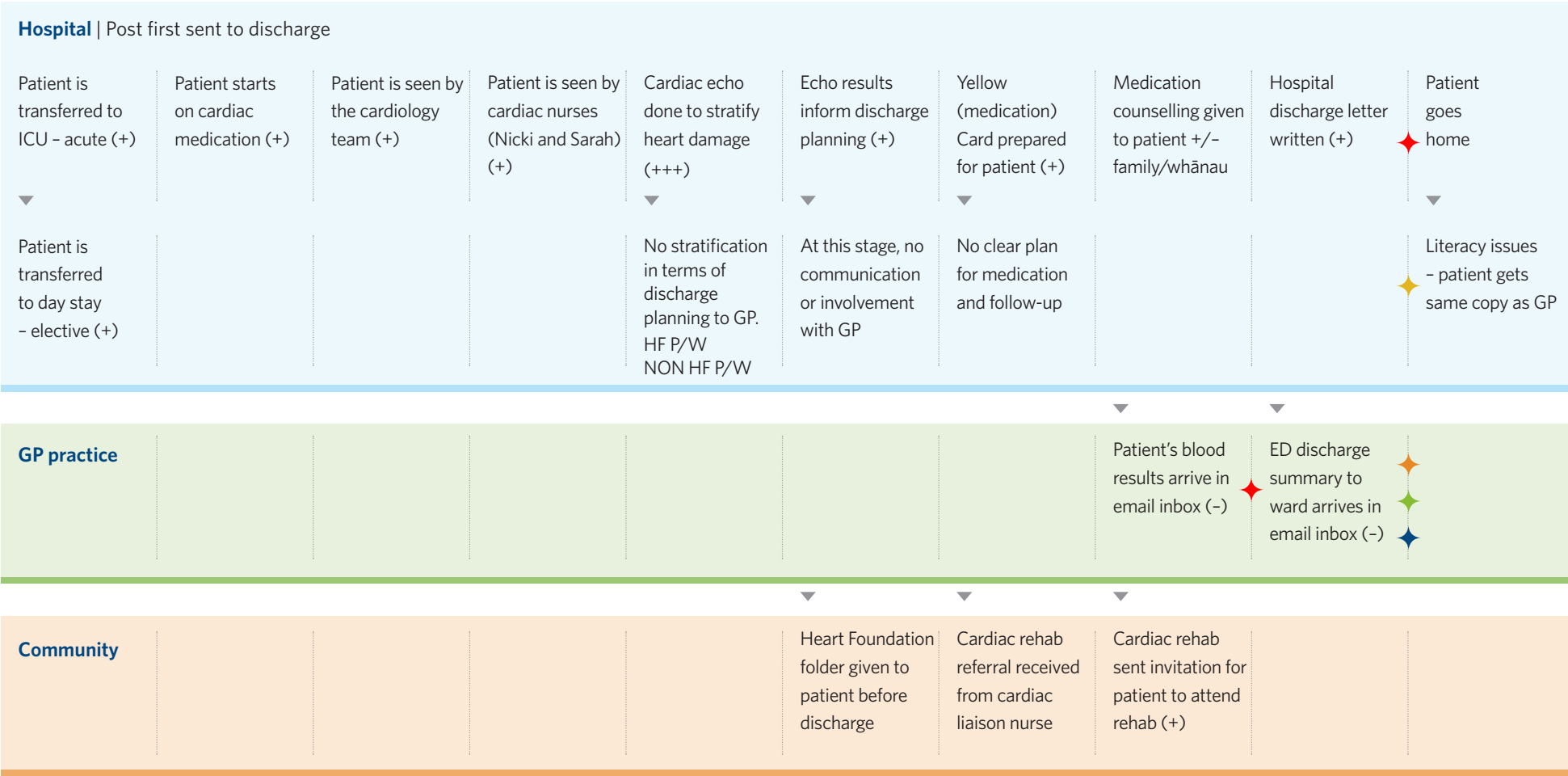
We also found that GPs strongly felt they were not getting the discharge summary in a timely manner. Data showed, however, that they were almost always receiving it on the same or next day. The insight was the variation in how general practices manage their incoming information and, in particular, discharge summaries.



↳ 'We simply had to focus on a better secondary primary care interface.'

GP Dr Elizabeth Wood

Process map

Whakakotahi: Living longer and feeling better following a cardiac event



Legend  Time  Underutilisation  Defects  Waiting  Motion + / - with (or without) family/whānau (+) importance rating

What were the lessons learned?

Wisdoms

- Form a team including consumers with diverse knowledge, skills and experience.
- Agree to meet regularly; use agendas and minutes.
- Keep a record of people's participation to help with costs and remuneration.
- As a group, use your quality tools to collectively understand the problem.
- Take time as a group to develop the project aim and scope.
- When process mapping, get each person to explain their section to the others for a collective understanding.
- Prioritise your driver diagram change ideas to the critical few vs the trivial many.
- There are numerous tools and methods to involve consumers and hear their voice.
- Test the survey questions before sending them out to make sure they will illicit the required information.
- Invite patients to be involved and make sure the process is safe for them.
- Identify themes in the findings to help identify new change ideas.
- Thank patients for their input and let them know how they made a difference.

Our top 10 tips for the Model for Improvement

- 1 A diverse and integrated team is gold. Remember too that it's about co-design; involve consumers (patients, clients, service users and their families/whānau).
- 2 Engage end-users and others early and inspire them to be involved. Where possible, give them an incentive via professional or quality standards or funding, eg, Cornerstone MOPS.
- 3 Use quality tools, such as brainstorming, to generate ideas and find root causes.
- 4 Be very clear on the project aim, scope and how you will measure success. Create a driver diagram - it is your project on a page.
- 5 Prioritise your change ideas then test them using the plan-do-study-act (PDSA) cycle. Start PDSA cycles small, eg, one test, one person, one day.
- 6 Testing cycles are complete when you are able to adopt, adapt or abandon the change idea.
- 7 Measure, measure, measure your progress.
- 8 Sometimes it gets hard. Keep the momentum going; know that every small step helps.
- 9 When implementing, support your stakeholders until it becomes routine.
- 10 Celebrate your success and share the learnings.

Presentations

We gave presentations on this project at the following events:

- New Zealand Hospital Pharmacists Association Conference, July 2017
- Cardiology Interactive Day, September 2017
- Heart Foundation/Primary Care Symposium, November 2017
- Goodfellow Symposium, March 2018
- National Rural Health Symposium, April 2018
- South Island Cardiac Rehabilitation Update Day, June 2018
- Quality Improvement Scientific Symposium, October 2018
- Nelson Marlborough Health – Health Innovation Awards, November 2018.

References

- *Raising the bar on the national patient experience survey* (report prepared for the Commission by Ogilvy & Mather, May 2017)³
- Data from the Health Quality & Safety Commission's Atlas of Healthcare Variation⁴
- Facebook Heart to Heart.

Acknowledgements

We wish to warmly acknowledge all those who were involved in the project:

- post stent patients, and their families/whānau
- project members and others who helped with the project, eg, our Heart Foundation volunteer, other general practices, IT, the cardiology Quality Assurance Group and Waitematā DHB
- the Whakakotahi team at the Health Quality & Safety Commission
- Ko Awatea improvement facilitator course leaders and fellow learners.



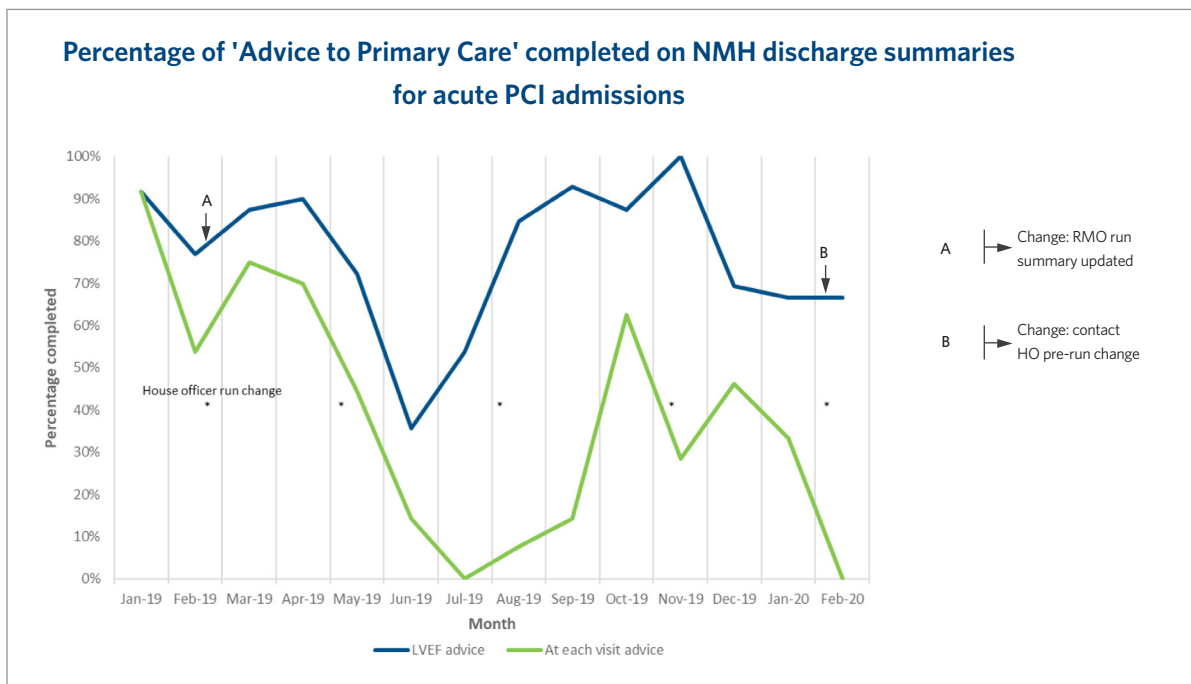
³ www.hqsc.govt.nz/assets/Consumer-Engagement/Publications/Raising_the_bar_on_the_National_Patient_Experience_Survey_-_May_2017.pdf

⁴ www.hqsc.govt.nz/our-programmes/health-quality-evaluation/projects/atlas-of-healthcare-variation

Nelson Marlborough Health follow-on projects

1. Home on time - earlier discharge project
2. Medication counselling for high-risk patients - robust medication counselling for complex patients in the medical unit
3. Standardised layout of the discharge summary
 - The layout was successfully changed, however, our data (graph below) showed that two crucial sections - the 'LVEF' advice and the 'At each visit' advice - were not routinely completed. This was due to ageing software forcing the section to be completed manually.

- As a weak solution the discharge summary instructions were added to the cardiac RMO run summary, however, we discovered it was not an effective communication tool. All RMO run summaries now follow a consistent format and have document control.
- The strong solution was to develop an improved discharge summary template with more auto-filling fields. District-wide consultation and reference to the [Raising the bar](#) report resulted in a project brief for a standardised discharge summary format. This project is now in active development with our IT team.



Contacts

- Elizabeth Wood, GP, hospital clinical governance chair, project owner and executive sponsor Elizabeth.Wood@nmdhb.govt.nz
- Fran Mitchell, improvement advisor and project lead, Fran.Mitchell@nmdhb.govt.nz.

Appendix 1: Your Home Safe checklist



Home Safe Checklist

Your Home Safe Checklist for WARD 10

Before you leave hospital we need to make sure that you understand the next steps in your care. Please read and answer the following questions by circling Yes, No, or n/a (not applicable). It's important that you answer honestly, so we can share the right information with you, and get you home safely.

please circle


Do you know why you were admitted to hospital?	Yes	No	
Do you know how the medicines you are going home with differ from the medicines you came to hospital with?	Yes	No	n/a
Do you know what your new medicines are for?	Yes	No	n/a
Do you know the side effects of any new medicines that you are being prescribed?	Yes	No	n/a
Do you know what you should do, and not do , to manage your condition at home? (Including any driving restrictions for medical reasons.)	Yes	No	n/a
Do you know what follow-up care you will receive? (Including further tests, appointments, district nursing, etc.)	Yes	No	n/a
Have you received the equipment that you need to manage at home?	Yes	No	n/a
Do you know the warning signs to look out for?	Yes	No	n/a
Do you know who to contact and their contact details if you have concerns or experience any of these warning signs?	Yes	No	n/a
Do you have a safe place to go home to?	Yes	No	n/a

YOUR QUESTIONS Please write down any questions or comments that you have here:

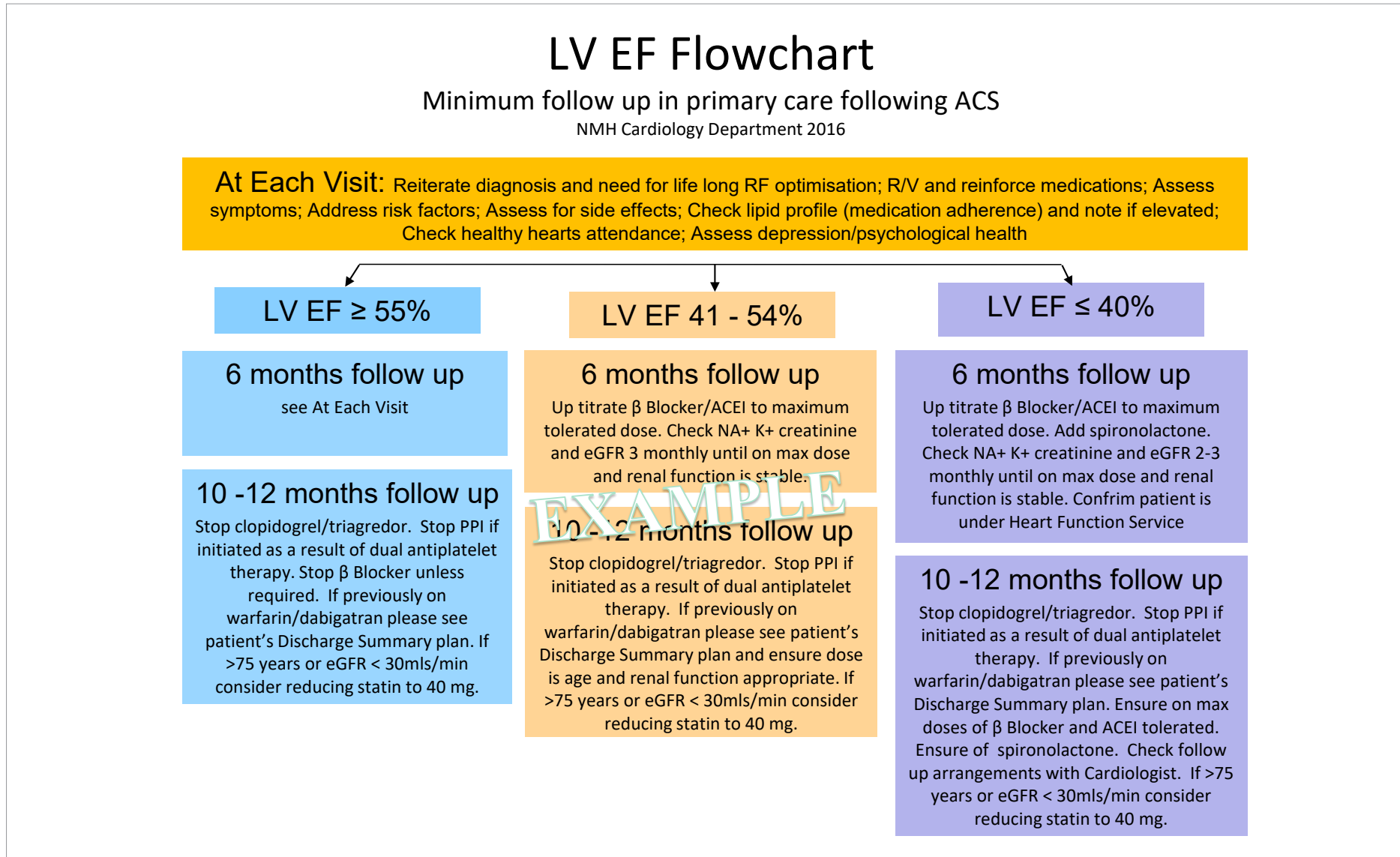
I HAVE MY: Discharge summary letter Pharmacy script

Patient Signature.....

Staff Signature.....

Issue Number	001	Name	Carolyn Anderson	Author	Home on Time Project
Date Approved		Position	CNM, Ward 10	File name	Your Home Safe Checklist
Date Review		Signature		Page	1 of 1

Appendix 2: LV function flowchart



Appendix 3: Audit of LV function flowchart

Audit of LV Function Flowchart

NHI:	Ethnicity:	No. of Classifications/comorbidities:
Age (Circle one): 30-39 / 40-49 / 50-59 / 60-69 / 70-79 / 80+	Gender (Circle one): Female / Male / Other	LV EF (Circle one): ≥55% 41 – 54% ≤40%
Date of Stent insertion:	Date of Discharge:	Date D/Summary received at Practice:
Practice:	Lead GP:	Auditor and Date:

Timeframe	Items to check and/or do	Yes	No	n/a
Within the first week of discharge	Did the general practice contact the patient?			
Within the first 2 weeks of discharge	Was the blood test done for renal function?			
Before 3 months from discharge	Was the first repeat prescription done before 3 months, implying that the patient is taking their medications correctly?			
At 10 – 12 months from discharge	Were the medications reviewed / changes / stopped?			
	Total number of criteria met out of 4 (For n/a criteria the auditor decides if it is met or unmet)			

Notes or comments to clarify the findings

Appendix 4: Healthy Hearts programme survey



Healthy Hearts Programme Survey

Q1) Before leaving the hospital, were you told you would soon be contacted about a Healthy Hearts session?

- Yes No Can't remember

Q2) What stopped you from responding to the invitation? (tick all boxes that apply)

- Never received a Healthy Hearts invitation
 Didn't understand what it was all about
 Overwhelmed with information, appointments etc.
 Confident with what I already knew and/or what I was told at the hospital
 Already doing everything to stay healthy
 The time/day/venue didn't suit
 Transport or transport costs
 It was too soon after my heart event
 Inconvenient i.e. back at work
 Didn't want to make any lifestyle changes
 Other health priorities
 Family or other commitments
 I forgot
 Other (please state)

Q3) What do you think happens at a Healthy Hearts session? (tick all boxes that apply)

- You get information about heart conditions, treatments and how to prevent it happening again
 You meet other people who have been through a similar thing
 You are told about exercise, diet, smoking and drinking
 You sit in a group talking about your heart event
 Other (please state)

Q4) What would have made it more likely for you to respond, or attend a session? (tick all boxes that apply)

- Hearing about it from someone who has attended
 More information on the benefits of attending a session
 Nothing
 Other (please state)

Please state: Age: Gender: Ethnicity: Smoking status:

Any further comments?

Please provide your address below to receive your copy by post. Alternatively, to collect your free recipe book anonymously, please hand this form in to Reception at Nelson Bays Primary Health, 281 Queen Street, Richmond. Thank you.

Appendix 5: Patient stories – letter inviting GPs to make initial contact with the patient



[Date]

[Address]

Dear [GP's name]

Re: [Inviting patient's to share their experience]

Nelson Marlborough Health is currently leading a Primary-Care-based quality improvement project that aims to support 12 month medication adherence among patients who have undergone a cardiac stent procedure. Your Practice has been selected to be involved in a pilot to help meet this aim.

In order to gain valuable insight into the patient experience, we would like to capture some patient stories via face to face interviews. Support from your Practice is sought to make *initial contact* with patients who have had a stent over the last 2 years to seek their permission to be contacted by one of the project team members, who are: [full name and role of team members involved].

This will involve your phoning the patient to explain that a project member would like to call to invite them to share their story in an interview. We would like to interview 3 to 4 patients from your Practice who will have a diversity of backgrounds and stent experiences. An outline of that phone conversation is included below.

Patient privacy and confidentiality will be adhered to throughout the process as per the Privacy Act/Health Information privacy code.

If you are willing to be involved please let me know when you have made contact with the patients who would like to be interviewed. You are most welcome to contact me with any queries. Thank you in advance for your support with this project.

Kind regards

[Name]

[Position title and contact details]

Appendix 6: Patient stories – invitation script for GPs

Kia Ora/Greetings,

INTRODUCE SELF

This is..... (name), (role) from (GP Practice).

CONFIRM CORRECT PATIENT

Please can I speak with patient name?

REASON FOR CALLING

Our General Practice has been chosen to be part of a quality improvement project that aims to review the care patients receive following a heart stent. Do you have a couple of minutes to discuss this?

If not, when would be a convenient time?

(If ok to continue now...)

Your experience of having a heart stent could provide some valuable insights into possible areas for improvement. Would you be willing for a project team member to contact you to learn more about taking part in the project by sharing your story in an interview? (Your privacy and confidentiality is guaranteed at all times, and your decision to take part *(or not)* will not affect your on-going medical care in any way).

IF NO

That is quite alright. Thank you for your time. I wish you all the best.

IF YES

The project team members are:

Valerie Steel (Consumer representative), Fran Mitchell (Quality Improvement Coordinator NMH) and Bee Williamson (Cardiac Rehabilitation Coordinator Nelson Bays PHO).

They will be able to answer any of your questions about the project and if you agree to take part they will discuss the next steps with you.

When/how is the best way for one of them to contact you?

CHECK DETAILS

Let me check your contact details.....Thank you.

A team member will be in contact with you within the next week.

THANK YOU FOR YOUR TIME TODAY

Appendix 7: Patient stories – consent to record the interview



Recorded Interview CONSENT FORM

The project team member is to discuss the purpose and intent of the recording and how the material may be used before they sign this consent form. The person's decision is to be respected at all times, including any decision to withdraw their permission at any stage.

Once the form is signed one copy is to be given to the person and one copy kept on the project files.

I understand that:

- my conversation is being recorded to inform quality improvement as part of the 'Whakakotahi: living longer and feeling better' project.
- the interview material will not be used for any other purpose and any recording will be erased afterwards.
- the on-going medical care that I receive will not be affected in any way by taking part in this project, or withdrawing from this project.
- I can withdraw this release at any time by contacting the project leads, Fran Mitchell, Quality Improvement Coordinator fran.mitchell@nmdhb.govt.nz or in her absence Dr Elizabeth Wood, Chair person of the Clinical Governance Committee Elizabeth.wood@nmdhb.govt.nz

I (name) give permission for Nelson Marlborough Health (NMH) to use the material recorded on (date) at (location), of (myself, or subject of recording) for the 'Whakakotahi: living longer and feeling better' Primary Health project.

Signed: **Date:**

Contact details: (phone no; email address)

Project team member making recording: (name)

Contact details: (phone no; email address)

Appendix 8: Patient stories – interview questions

Whakakotahi PDSA cycle patient experience interview questions

Time-Frame	Questions to guide the conversation
	Ethnicity/ies, gender, age range Date of their cardiac event which resulted in having the stent
Introduction	1 How are you feeling now?
Leading up to the stent	2 What led up to your heart event? 3 How did you feel when you were told you were going to have a stent put in?
After stent and hospital stay	4 Tell me how you were feeling after the stent? 5 What did you understand about your condition at that point? 6 Tell me about your experience of your care while in hospital?
Preparing for going home	7 How did you feel about going home? 8 What support did you get to prepare you? <i>[Information pack? Med side effects?]</i> 9 What opportunities did you have to ask questions? 10 How did you get answers to your questions or concerns?
At home and getting back on track	11 Tell me about your experience picking up. And taking your medications? 12 When did you next see your own GP? 13 How have you been managing at home? <i>Change in meds?</i>
Now	14 Looking back, could anything have been done differently to help you through this experience? <i>[Is there anything else you would like to talk about?]</i>

Appendix 9: Patient stories – an example

IMPROVING CARE FOLLOWING A HEART STENT

Whakakotahi Project 2017: Living longer and feeling better after a heart event

Understanding patients' experiences is priceless when embarking on making changes that are an improvement. For the 'Living longer and feeling better after a heart event project' seven people who had heart stent(s) were individually interviewed. We wish to acknowledge and thank them for sharing their very personal stories. Their comments enabled these invaluable issues and insights. Below is a précis of the report.

YOU SAID

Who is looking after me?

- ❖ A few days after going to ED and having tests the patient was rung about making a "routine appointment" for an angiogram. They did not know what a stent was or what this would entail.

On a positive note:

- At hospital, staff explained things each step of the way and included their partner.

Please explain my condition to me and my support person

- ❖ Limited knowledge of disease progress and the signs and symptoms to look out for can play on people's minds. A common misperception is that patients think the stent has cured them rather than assisting them to be well.

On a positive note:

- Seeing the scan of my heart gave me an absolute picture of what was going on.

Please explain my medications to me and my support person

- ❖ The patient was told to stop beta-blockers but not told How to stop them or Why they were being stopped. This resulted in their lack of confidence and trust in the system.

On a positive note:

- After discharge the patient received a thorough explanation of their medications by the community pharmacist. They praised the Yellow Card and still carries it around in their bag.

WE DID

Cardiac Stent DVD is shown to patients prior to their procedure wherever possible.

Family/ whanau inclusion so they can provide support at every step of the journey.

Home Safely Checklist prompts a discussion between the health professional and patient.

Cardiology Discharge Summary now has a 'Patient' section at the top.

Angina Action Plan has been added to the patient's Yellow Card (of medications).

Alert to community pharmacies if the patient is discharged before the hospital pharmacist can talk with them.