Quality Improvement in Action

Faculty guide

OFFICIAL

This guide is a resource for faculty running Quality Improvement in Action in their health service. Included in the guide are the goals of the program, training schedules and guidelines on how to run the activities and to ensure consistent delivery and learning outcomes for participants. This guide should be used alongside the run sheet, slide deck and participant activity resources.

About the training

Quality Improvement in Action

- **Time: 1 full day + 30 min online pre-work**
- **Delivery: Face-to-face workshop (guide contains tips on how to convert to virtual delivery)**

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Join us for a practical, fun, and skill-boosting day to and learn about the quality improvement process. Introduce the mindsets, methods, and tools needed to undertake and complete collaborative QI initiatives in your workplace. The workshop will also outline the type of data used to inform quality improvement. You will see how QI methodology and theory can lead to tangible, measurable outcomes and better care for patients, their families, and carers.

By the end of this program, participants will be able to:

- Start creating the conditions of change to enable quality improvement.
- Understand how a system assesses itself to identify where and when change can occur.
- Use the Model for Improvement as a framework for improvement.
- Use quality improvement tools and methods to understand the problem, set a goal, design the solution, implement the solution, evaluate the outcome, and sustain improvement.

Contents

About this program

Quality Improvement (QI) in Action is an introductory program based on the IHI Model for Improvement.

Concepts covered include:
- Identifying who is affected and should be involved in quality improvement work.
- Setting the right conditions for change.
- Understanding the human side of change.
- Identifying factors that influence their system.
- Understanding of variation to identify if a problem exists.

Participants will learn how to use the Model for Improvement, to create an aim statement, identify change ideas and how to construct a Family of Measures. They will also learn how to use Plan Do Study Act (PDSA) cycles to test change ideas and how to display data over time to determine the impact of their quality improvement work.
The program has four sessions:
1. Conditions of change
2. Understanding your system
3. Change ideas and testing change
4. Measuring and sustaining success

Each session should be run to ensure participants build upon their knowledge and understanding. While designed as a full-day learning program, the training can be adapted to be delivered as four short standalone modules or two half-day sessions.

This program has been designed to run face-to-face with case studies and practical application of the content through group work.

Virtual delivery

While the program has been designed for face-to-face delivery, it is possible to deliver the program virtually.
For virtual delivery you will require:
- MS teams or Zoom meeting software with breakout rooms enabled.
- Online collaborative whiteboards e.g. MIRO with your adaptation of activity templates in the faculty guide or workbook.
- Faculty for breakout rooms to assist participants with activities.

About the faculty

- This course should be delivered with two to three faculty members. This allows participants to receive a variety of presentation styles, experiences and examples and allows faculty to share the workload.
- We recommend staff from Quality Departments and Education Departments work together to deliver the program as they can share their expertise.
- If available, use a support person for technological and administrative support before, during and after the workshop.
- Faculty members should be confident, competent and have the capability to deliver this content. Ideally, they should have participated in quality improvement initiatives, have experience with stakeholder and consumer engagement and have knowledge of the tools, methods and data used in QI.
- Faculty members should also have experience teaching, facilitating and leading workshops. It is important for faculty to understand adult learning principles and be adaptable and mindful of participants' learning needs.
- Faculty members should review the slide deck in detail including the animations in the presentation.
- We suggest new faculty members, observe or practice delivering-sessions they plan to teach first, and if possible, co-deliver their first session.
- It is important that we 'walk the talk' when teaching this course. This means actively demonstrating how you are continuously improving the program based on different types of evidence and delivering the program in partnership with consumers. For example, you can do this by having consumers co-present sessions, share a case study they were involved in, present content or facilitate group discussion.

Note: At SCV, the term 'consumer' is used to refer to patients, people with lived or living experiences of the health system, carers, family, supporters, and advocates.
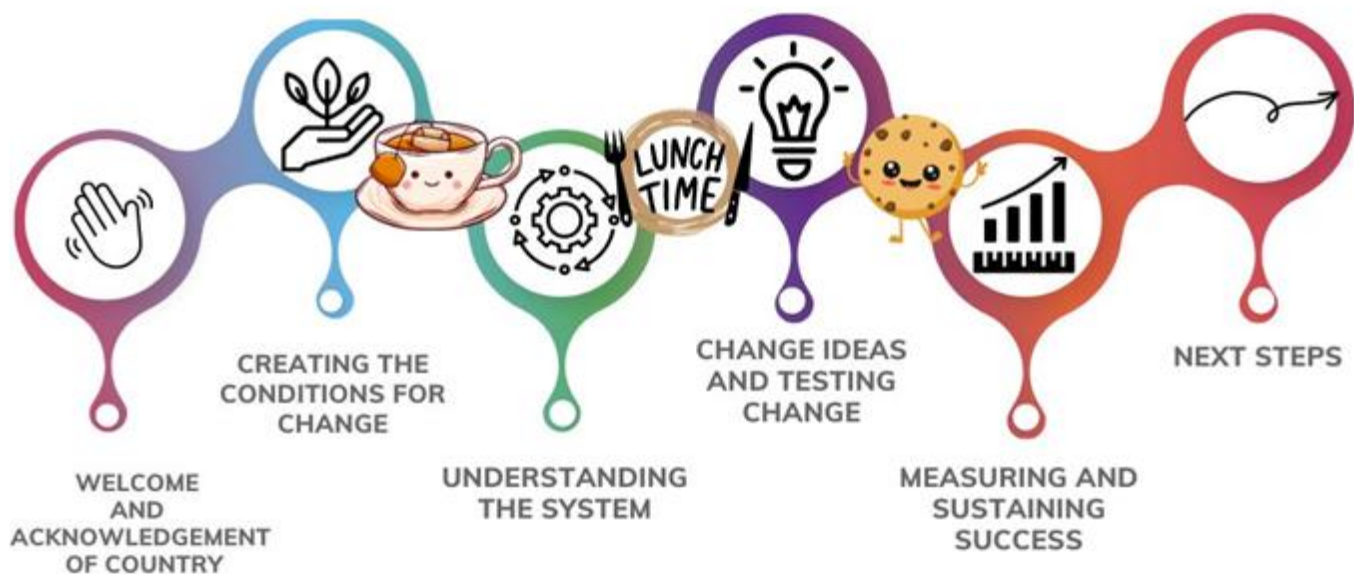
Suggested timings

Time	Session	Presenter
9:00 am	Introduction and welcome	
9:35 am	Creating conditions for change	
10:50 am	Morning tea	
11:05 am	Understanding the system	
11:25 am	Variation	
12:00 pm	Understanding the problem	
12:25 pm	Developing an aim	
1:00 pm	Lunch	
1:30 pm	Change ideas	
1:35 pm	Theory of Change	
2:05 pm	Testing changes	
3:05 pm	Afternoon tea	
3:20 pm	Measurement	
3:50 pm	Sustainability	
4:00 pm	Finish	

Requirements and resources

Participant requirements

As this is a foundational program, participants may have little to no experience in quality improvement science. To introduce participants to key concepts, which are then built upon in the workshop, there are three short eLearn modules for participants to complete before attending the workshop. The e-learning modules are located on the [Safer Care Victoria website](#).

- Introduction to Quality Improvement
- Introduction to Partnering and Co-Design in Quality Improvement
- Clinical Governance and Quality Improvement

Each module will take up to 10 minutes to complete and should be shared with participants one to two weeks prior to the training session.

Evaluation requirements

- Participant pre and post self-assessment is suggested to capture capability uplift after the session and feedback. SCV has created a self-assessment for this program. A copy of the questions can be found in **Attachment 1.**
- Participant and faculty feedback of "what worked well" and "what would be better" informs continuous improvement of delivery.

Technology and resource requirements

Face-to-face delivery
- PowerPoint slides and notes
- Mentimeter (or Slido)
- Large flip-chart paper
- Pens and markers

Virtual delivery
- PowerPoint slides and notes
- MS Teams or Zoom meeting software with breakout rooms
- Mentimeter (or Slido)
- Online interactive whiteboard e.g. MIRO (online interactive whiteboard templates are not included in the guide and will need to be created by the service)

Program resources

Resources for this program include:
- PowerPoint slide deck with notes
- Participant workbook
- Activity session printouts and resources
- Faculty guide
- Access to eLearning

Slides

The program has been designed with the ability to adapt some slides to include context on local policies and framework, while still delivering the core content. In each section of the faculty guide, notes will explain where slides can be substituted to include local frameworks, examples and other information relevant to the local context. Other adaptations to consider include adding images or other design elements that meet the needs of a specific participant group or audience.

Activities

The activities in this workshop have been specifically created to complement the sessions and learning objectives. This approach to experiential based learning, complements the learning activities, engages participants in their own learning and encourages collaboration, creativity, critical thinking and practical application of the concepts and tools being taught.
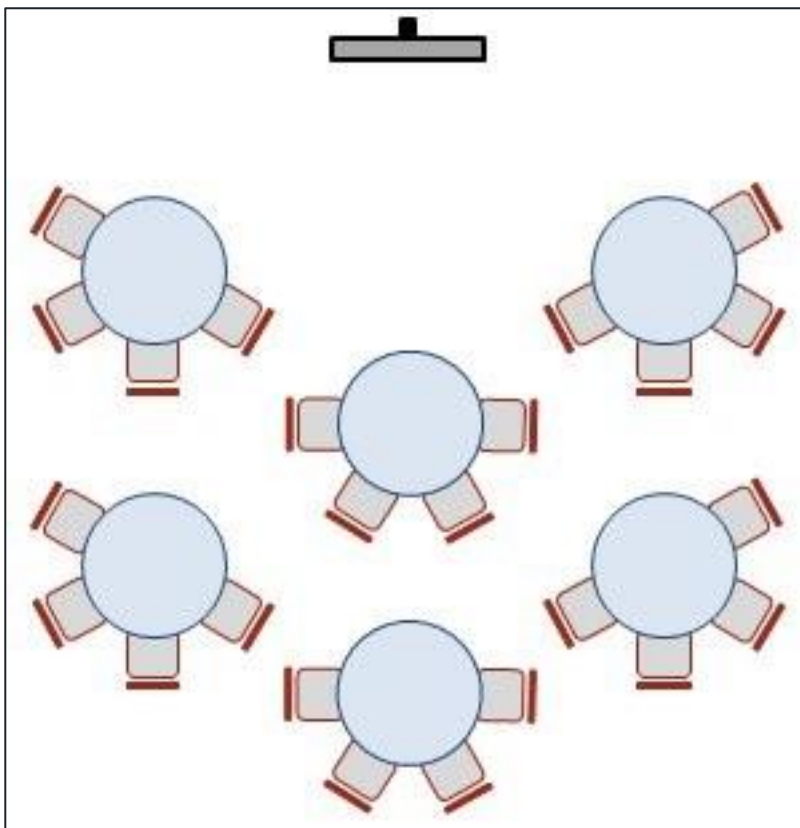
Pre-workshop preparation

Preparation checklist

- Prepare participant workbooks and print or email to participants.
- If using pre-learning, share with participants at least 1 week prior to session.
- Prepare activity handouts and print or set up templates in online whiteboard.
- For face-to-face delivery, ensure flip charts, pens and markers are available.
- Allocate sessions with faculty and breakout rooms.
- Check all technology and links to external sites are working.
- Check audio set up required for slides 18, 29, 68 and 74 to play audio/video links.

Room set up

This workshop uses group and experiential learning so tables and chairs should be set up in cabaret style. This style of seating allows participants to collaborate, and to have line of sight with the presentation and presenter. The participants will move about the room for the activities so please ensure there is space that allows people to move freely.

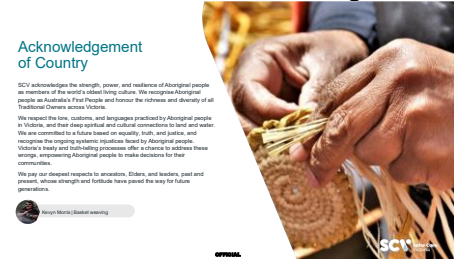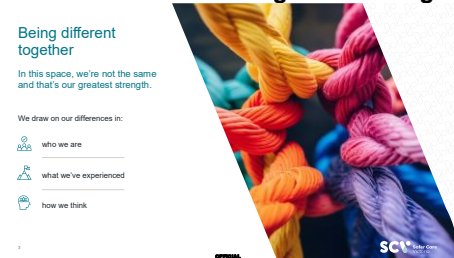**Figure 1: Cabaret style room set up**

Workshop preparation

Detailed run sheet

Start	End	Time (minutes)	Topic
09:00	09:10	10	Welcome and acknowledgement of country
09:10	09:20	10	Ice breaker: cats and dogs
09:20	09:35	15	Shared Agreement
Session 1: Creating conditions for change			
09:35	09:40	5	What is QI?
09:40	09:55	15	Activity 1: What does QI mean you?
09:55	10:05	10	Conditions for quality improvement
10:05	10:10	5	Mindsets for QI
10:10	10:20	10	Human side of change
10:20	10:35	15	Partnering and QI
10:35	10:50	15	Activity 2: Who is affected by the change?
10:50	11:05	15	MORNING TEA
Session 2: Understanding the system			
11:05	11:15	10	Systems thinking
11:15	11:25	10	How do you know you have a problem?
11:25	11:45	20	Variation
11:45	12:00	15	Activity 3: Variation
12:00	12:05	5	Understanding the problem
12:05	12:20	15	Activity 4: 5 Whys
12:20	12:25	5	Introduction to the model for improvement
12:25	12:30	5	Developing an aim
12:30	13:00	30	Activity 5: Aim statements
13:00	13:30	30	LUNCH
Session 3: Change ideas and testing changes			
13:30	13:35	5	Change ideas
13:35	13:45	10	Theory of change
13:45	14:05	20	Activity 6: Theory of change
14:05	14:20	15	Testing changes
14:20	14:45	25	Activity 7: PDSA coin spin
14:45	15:05	20	Activity 8: PDSA scenario
15:05	15:20	15	AFTERNOON TEA
Session 4: Measuring and sustaining success			
15:20	15:35	15	Measurement
15:35	15:50	15	Activity 9: Family of measures
15:50	15:05	5	Sustainability
15:55	16:00	5	Wrap up and finish

Workshop faculty guide

Welcome and introduction (35 min)

Time	Slides	Notes
09:00	**Session 1 Slide 1 – Welcome** 	**Faculty name:** **Session 1 Slides 1-6** **Time: 10mins** • Welcome to Quality Improvement (QI) in Action. • This is an introductory learning program on the mindsets, methods, and tools you can use in your everyday work to do quality improvement. • Introduce the faculty and support team for the day.
	Session 1 Slide 2 – Acknowledgement of Country 	**Session 1 Slide 2** • Photographs provided by Kevyn Morris who has given a consumer perspective to many SCV projects. Kevyn is Aboriginal, his ancestral lands are not in Victoria, but he has a deep connection to the land which is apparent in his beautiful photographs. • Acknowledge the traditional owners of the land we are on today. **Faculty note:** This is Safer Care Victoria's Acknowledgement of Country slide template. Please replace this with your own individual or organisation acknowledgement. Faculty can adapt this to their own acknowledgement. *Source: Kevyn Morris*
	Session 1 Slide 3 – Being different together 	**Session 1 Slide 3** Our diversity is one of our biggest assets. • We work together to allow people from different cultures, genders, abilities, sexualities, spiritualities, ages and backgrounds to contribute. • One of the biggest strengths of the model for improvement is that it emphasises including the diverse voices of those who use and benefit from the system – and that we need to work together to achieve better, safer, more person-centered care. Listen to difference in expertise, experience and needs – learn from difference and create a more holistic and deeper understanding of how we can all help ensure safe, quality and person-centered care together. • For today, it is important to acknowledge that everyone here will have different experiences of our healthcare system as consumers, carers, clinicians and this diversity of experience, ideas and perspectives will be a great strength to draw on in our shared learning. *Source: Safer Care Victoria*

Session 1 Slide 4 – Housekeeping	**Session 1 Slide 4**
	Before we get into it we have some housekeeping:
A spot of housekeeping	• Please ensure phones are switched to silent or off completely.
	• Bathrooms – describe where they are.
	• Consent for pics to be taken – **Note**: Ensure you have a way for participants to opt in or out of photos e.g. provide a coloured sticky dot if they do not wish to be in photos.
Phones on silent or aeroplane mode Restrooms Consent for photos to be taken Exit	• Emergency exits are marked and give details if venue has emergency procedure instructions.

Session 1 Slide 5 – Agenda	**Session 1 Slide 5**
	NOTE: Animations in slide
Disclaimer and Acknowledgement	
Agenda	The QI in Action program will we cover the following topics:
	• Creating the conditions for change and the role the organisation, we as individuals and our workplace culture has in supporting improvement work.
CREATING THE CONDITIONS FOR CHANGE CHANGE IDEAS AND TESTING CHANGE NEXT STEPS	• Understanding our system and the variation that commonly occurs to identify if you have a problem and how to set a goal/aim for your improvement.
WELCOME AND ACKNOWLEDGEMENT OF COUNTRY UNDERSTANDING THE SYSTEM MEASURING AND SUSTAINING SUCCESS	• The third session will cover change ideas and how to test them through PDSA cycles.
	• At the end of the day, we will discuss how to know if your change has led to an improvement through measurement and what affects the sustainability of the project.
	[Click]
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Session 1 Slide 6 – Learning objectives	**Session 1 Slide 6**
	By the end of the day, you will be able to:
Learning objectives	• Create conditions of change to enable quality improvement.
By the end of the day, you will be able to:	• Understand how your system works to help identify where and when change can occur.
• Start creating conditions of change to enable quality improvement	• Use the Model for Improvement as a framework for improvement projects.
• Understand how your system assesses itself to identify where and when change can occur	• Use quality improvement tools and methods to understand the problem, set a goal, design, and implement the solution, evaluate the outcome, and sustain improvement.
• Use the Model for Improvement as a framework for improvement	
• Use quality improvement tools and methods to understand the problem, set a goal, design and implement the solution, evaluate the outcome and sustain improvement	

09:10 **Session 1 Slide 7 – Icebreaker**

Faculty name:
Session 1 Slide 7
Time: 10+min
The goal of an icebreaker is to do just that – help get the participants comfortable leaning in and engaging. This is also a good opportunity for you to get to know who you have in the room and for your participants to get to know one another...

Activity instructions:

- Pose the statement - 'cats are better pets than dogs'.
- Designate opposite sides of room to represent the different ends of the continuum (i.e. one side are committed cat fans and the other side are committed dog fans).
- Ask people to choose a side of the room. There may be some people who choose to stand in the middle. There will often be a spread of people across the continuum.
- Invite participates to explain their reasons for choosing their "side" and to try and to convince 'fence-sitters' to join their side of the room.

Faculty to share reflections:

- We can look at the numbers of how many people like cats, dogs or something in between but what does that tell us really?
- Everyone shared different experiences and reasons behind their opinions (e.g. personality types, allergies, past experiences with animals, environmental reasons, some don't like cats or dogs). This would not have been captured if we just reflect on how many people placed themselves on the cat, dog side of the room.
- This activity is about fun and getting to know each other, but also:
  - is a way to demonstrate how different perspectives exist and the many reasons someone my like/dislike something
  - needs and experience are very personal, our understanding of what a problem may be and what would be an improvement will also be unique to our own unique experience.
- Being curious about the different ideas, experiences and perspectives strengthens QI work by really understanding the story behind the data to get to the truth of what a problem and its solution might be. We need to ask, explore and be curious in our QI work to consider diverse experience and perspectives to help create and sustain improvement.

Return to seats for the next slide

Source: Cats and Dogs 23 by Douglas Sprott license under: https://creativecommons.org/licenses/by-nc/2.0/

Session 1 Slides 8–11 – Shared agreement
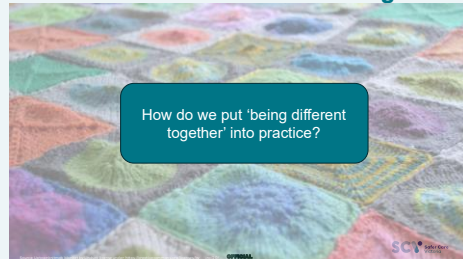
Faculty name:
Session 1 Slides 8-11
Activity time: 15mins (5mins per question)

A few slides ago, we mentioned how being different, together is one of the greatest strengths. But what does this mean when we all come together?

- In any QI process – it's critical to establish relationships and create an environment and a positive culture for your work.
- One tool we can use to do this is a shared agreement.
- A shared agreement is an important part of bringing any group of people to work together.
- It's about what the group decides is needed and important to work together.
- A shared agreement and understanding of HOW we'll work together helps us to have some joint and shared expectations about BEHAVIOURS and ATTITUDES that support us to learn, engage and participate.

Faculty discussion prompt: Show of hands who has used a shared agreement before?
- We are now going to do a very quick shared agreement to firstly set up some rules for how we are going to work today but also to give you your first tool that you can take away and use in your work.

Source: Uptownknitmob blanket by Lindsey license under: https://creativecommons.org/licenses/by-nc/2.0/

Session 1 Slide 9 – Question 1

Session 1 Slide 9
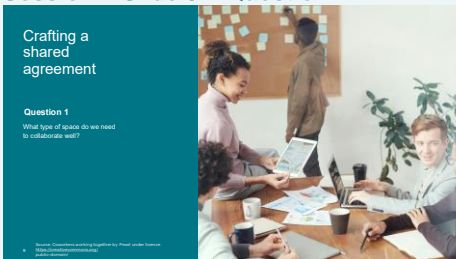
So – the first question to start us off with creating our shared agreement is:

Question 1: "What type of space do we need to collaborate or work together well?
Faculty discussion prompts:
- Perhaps think about times where you have felt comfortable and confident to participate.
- What it was from that experience that we should work towards building with each other today?
- Ask participants to write down 3 things they would need to feel comfortable and confident to collaborate and learn from each other today?
- Write each idea on one post-it note.
- Ask participants to place them up on the wall – grouping them with similar ideas as they go.
- Facilitator summarises what the main ideas, principles or values identified for creating a safe, confident space to collaborate are for the group.

If running the program virtually you might consider using these options:
Virtual activity option 1: Mentimeter word cloud
- Faculty to create the activity in Mentimeter and add QR code to the slide.
- Ask participants to respond to the question.
- Share the Word Cloud presentation screen to show the group the live responses to the question. Take a screen shot or download the Word Cloud image and share with the group in the chat.

Virtual activity option 2: Chat waterfall
- Ask participants to respond to the question and write down on paper their three responses.
- Tell them to then write them in to the chat function but don't press send. Count down the participants 3,2,1 Send. And all the responses should appear at once.
- Ask a team member to help identify themes in the responses so that you end up with a list of no more than 5 principles and values needed to create a safe, confident space to collaborate.

Source: Coworkers working together by Pexel under licenese: https://creativecommons.org/public-domain/

Session 1 Slide 10 – Question 2

Crafting a shared agreement

Question 2

How do we create these spaces together?

Session 1 Slide 10

Group Discussion

Question 2: How do we create these spaces together?
- Now that we have identified our top principles we want to hold ourselves accountable to today....the next question is...how do we create this space?
- What actions and behaviours will help us demonstrate these principles. Being specific about what we need to do helps us all to be accountable to our principles for a positive shared collaborative space and really understand what it takes to create the space we need.

Source: A smiling young woman presenting in a business meeting by rawpixel license under: https://creativecommons.org/publicdomain/zero/1.0/

Session 1 Slide 11 - Question 3

Crafting a shared agreement

Question 3

How will we deal with difference?

Session 1 Slide 11

Group discussion

Question 3: How will we deal with difference?
- How do we achieve healthy and curious and respectful debate when we have different ideas, experiences and opinions?
- How do we create this environment where everyone feels free to bring their valuable opinions and perspectives?
- So that's a shared agreement in 5 minutes or less. It can be as easy and quick as that.

Source: Ocean Wave by vnhelen license under: https://creativecommons.org/licenses/by-nc-nd/2.0/

Session 1: Creating conditions for change (1hr 15 min)
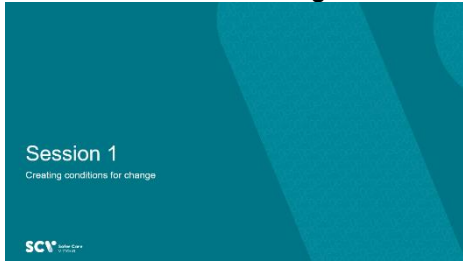
Session at a glance	Who?	How long?	Slides
What is QI	Faculty	5 min	12-14
Activity 1: What does QI mean to you?	Faculty and participants	15 min	15
Conditions for quality improvement	Faculty	10 min	16 -19
Mindsets for QI	Faculty	5 min	20
Human side of change	Faculty	10 min	21-25
Partnering and QI	Faculty	15 min	26-31
Activity 2: Who is affected by the change?	Faculty and participants	15 min	32

Learning objectives for the session

At the end of this session participants will be able to:
- Describe the factors that create conditions for change within an organisation.
- Describe the role of partnering and quality improvement in healthcare.
- Describe common mindsets for partnering and quality improvement.
- Identify key stakeholders and those that are affected by change in the system.

Slides for Session 1: Conditions for change

Time	Slides	Notes
09:35	**Session 1 Slide 12 – Creating conditions for change** 	**Faculty name:** **Session 1 Slides 12-32** **Time: 1hour 15mins** In this session we will be discussing what conditions are needed for change and how we engage people in the quality improvement journey.
	Session 1 Slide 13 – What is quality improvement 	**Session 1 Slides 13-14** **Time: 5mins** **NOTE: Animations in slide** But first, what are do we mean by quality improvement? When we are using quality improvement methods and mindsets we seek to: • Understand the big picture by assessing the system as a whole not just its individual parts and by doing this start to see patterns and trends. • Recognise how a system's structure influences the outcomes it achieves by testing cause and effect relationships. • Identify and test assumptions and resist the urge to jump to conclusions about what the problem or solution may be. • Find leverage points where we can make changes that improve outcomes. **Faculty note: Consider including an image in the slide to enhance understanding of the concept.**

	Session 1 Slide 14 – Change and improvement	**Session 1 Slide 14**
		All improvement requires change but not all change is an improvement.
		Faculty discussion:
		Let's have a little fun, would you consider the addition of a knitted woollen toilet seat an improvement?
		• Some people may consider this an improvement. Some may not?
		• When we are thinking about the changes we want to make, we must constantly ask 'does this change lead to an improvement?'
		Source: Image generated using Google Gemini from the prompt toilet with a colourful knitted seat cover 2024
09:40	**Session 1 Slide 15 – Activity 1** **What does quality improvement mean to you?**	**Faculty name:** **Session 1 Slide 15** **Activity Time: 10+min + 5min discussion/feedback**
		Now that you know a little bit about quality improvement, let's have a think about why we do quality improvement.
		Activity instructions:
		In your workbook you will find a template of a person. This person can represent you, your patients, or your community.
		Get as creative as you want to be and draw, write, doodle on the person outline anything that represents your thoughts and feelings about Quality Improvement. Use these prompts to help think about what to draw:
		• Why is quality improvement important to you?
		• What do you think learning about quality improvement and partnering will do to your work?
		• What does it mean for the patients, families, and carers you care for?
		• Why is quality improvement important to patients, families, and carers?
		Faculty to share reflections:
		• Ask participants to volunteer to share their 'why'.
		• Summarise key points brought up in the discussion.
		• Link back to health being a service industry and most people are in it to help and provide quality, safe care to consumers while constantly evolving and improving our services.

09:55	**Session 1 Slide 16 – Conditions for quality improvement**	**Faculty name:** **Session 1 Slides 16-19** **Time: 10mins**

Session 1 Slide 16 – Conditions for quality improvement
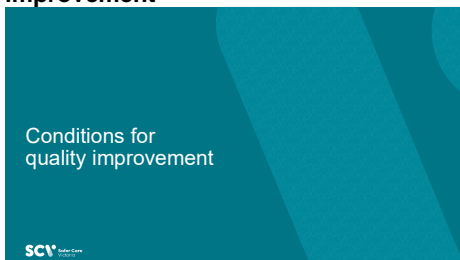
Faculty name:
Session 1 Slides 16-19
Time: 10mins

Quality Improvement means change – it's right there in the term 'improvement'. Taking something from what it is currently to something better!

- But for change to happen, there needs to be the right conditions.
- I'm sure we've all been in situations, either professionally or personally, we've seen some great change ideas, but they haven't worked no matter how great they might be because the conditions weren't right.
- Before we get into the details of how we do quality improvement, we're going to discuss the mindsets and conditions you need for change.

Session 1 Slide 17 – Creating conditions

Session 1 Slide 17

NOTE: Animation in slide

In your QI work, it is important to consider what the environment you are doing your work in looks like and what challenges and opportunities exist? This will have a significant impact on how successful you will be and how you plan your work.

We can look at conditions from three perspectives:
1. Organisation level: does the organisation have the policies, procedures, resources (people and tools), framework and desire to change?
2. Individual level (capacity and capability): are there individuals trained in QI to support initiatives and are they given time and resources to undertake the work?
3. Cultural level: Culture is the enabling force for change to happen. Do you have psychological safety to try and fail and bring up issues?

So what do you do if you answer no to these questions? In most cases, rather than just saying these are too hard, it is worth considering how to expand your circle of control and influence.

Faculty note: Insert information about local policy/frameworks to support creating the conditions at each level.

Session 1 Slide 18 – Understanding control and influence
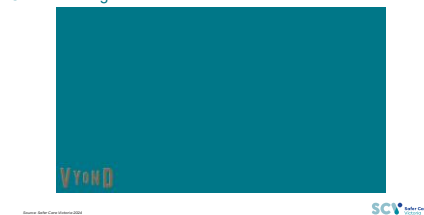
Session 1 Slide 18
NOTE: Click to play video

Transcript of video: video 1min in length
- Have you ever felt like your efforts are not making a difference?
- Let's talk about circles of control and how you can create a culture of continuous improvement.
- Circles of control are the things we can influence or change.
- We can partner with others who have influence to expand our circles.
- Creating conditions is another way to expand your circle of influence.
- By setting the right conditions, you can encourage others to take action and create change.
- Together, we can make a difference. Let's have a look at an example.
- Jane is looking at making a change to the electronic medical record (EMR) system in her ward. Jane has already been working with her team and exec sponsor on the project aims and measures, However, to make any changes to the EMR, Jane needs to partner with Toby from the EMR analyst team to help with her change. By partnering with Toby and the EMR team Jane and her team are able to ensure the changes are achievable, have correct oversight and governance and optimise sustainability. If the change affects more than one area, Jane needs to engage with the Informatics Manager Noah and other speciality teams as this change may affect their workflow. By engaging with the those most affected by the change ensure all perspectives are seen when decisions need to be made.

Faculty discussion prompt:
Ask yourself:
- Who is most affected by this change?
- And how might I connect with them?

Source: Safer Care Victoria 2024

Session 1 Slide 19 – Clinical governance
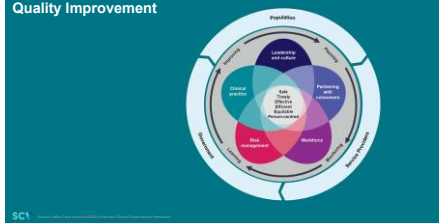
Session 1 Slide 19
- A framework that can be useful for thinking about the conditions for change and improvement is the Victorian Clinical Governance Framework.
- Clinical governance provides a framework to ensure services have systems in place and are accountable for their service and as the Victorian Clinical Governance Framework makes clear - it rests on a foundation of continuous improvement.
- Building on the circles of control, everyone has a role to play to ensure effective clinical governance from the frontline to the Board. It is the role of everyone in the health system to ensure the provision of safe, effective person-centred care.
- Understanding our role, how our role interacts with others, and how working together we can more effectively design, implement and measure change for improvement is key.

Faculty discussion prompt: What role do you see a role for yourself in clinical governance?

Faculty note: Insert information slide about your local clinical governance and improvement policy/frameworks.

Source: Safer Care Victoria. Victorian Clinical Governance Framework 2024

10:05   **Session 1 Slide 20 – Mindsets**

Quality improvement and partnering mindsets
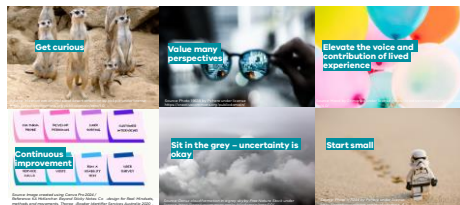
Faculty name:
Session 1 Slide 20
Time: 5mins

One of the most important things that we need for quality improvement to occur is the right mindset.

These are our 6 mindsets which are adapted from the book by KA McKercher – Beyond Sticky Notes. We use these across partnering and QI.

1. Get curious - And stay curious for as long as possible. Use empathy when working with others. Get inspired the stories they share. Question your own assumptions. Why am I disagreeing? What part and why?

2. Value many perspectives – Diversity is not a nice to have it's key! Understanding diverse views helps uncover the systemic causes of issues and overlooked resources as well as individual and community needs. Your QI and Partnering with consumers work will value hugely from having many perspectives.

3. Elevate the voice and contribution of lived experience - Elevate means to raise or lift something to a higher position. It requires more than just telling or sharing a story. It requires having a seat at the table, so voices can be heard and elevated and they can be used to make a positive impact not only for the health service but also for stakeholders.

4. Continuous Improvement – This really speaks to the notion that even if we are happy with the way our system is performing, we are continuously reviewing how we are doing things, what our systems outcomes are and looking for ways to perform even better. In other words – how we are continuously learning and how we are using that learning to inform the changes we need to make.

5. Sit in the grey – Uncertainty is okay - We need to grow our willingness to be uncomfortable, unclear and confused while learning and opportunities emerge.

6. Start small – The improvement methodology that we teach and advocate for is the model for improvement. There are other models out there, but one thing many have in common is that they advocate for small scale testing of change ideas in the real world BEFORE any changes are implemented.

Reference: KA McKercher. Beyond Sticky Notes: Co-design for Real: Mindsets, methods and movements. Thorpe-Bowker Identifier Services Australia 2020
Source: Meerkat zoo animal sand desert attention by pickpik under license: https://creativecommons.org/publicdomain/zero/1.0/
Source: Photo 19638 by Pxhere under license: https://creativecommons.org/publicdomain/
Source: Mood by Grimarika under license: https://creativecommons.org/licenses/by-nc/4.0/
Source: Image created using Canva Pro 2024
Source: Dense cloud formation in a grey sky by Free Nature Stock under license: https://creativecommons.org/publicdomain/zero/1.0/
Source: Photo - 71744 by PxHere under license: https://creativecommons.org/publicdomain

10:10	**Session 1 Slide 21 – Human side of change**	**Faculty name:** **Session 1 Slides 21-25** **Time: 10mins**
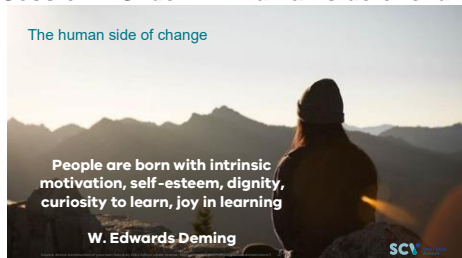
Faculty name:
Session 1 Slides 21-25
Time: 10mins

What we are talking about with mindsets is an important part of the human side of change.

- How do we get people to see that the work they are doing is actually something they want to be doing?
  - We identify, embrace and harness their intrinsic motivations. For some people the motivation to achieve better outcomes for patients is a strong intrinsic motivation for others it may be the opportunity to work collaboratively with others, or for others the joy they find in getting curious about finding solutions to problems. Finding what people's intrinsic motivation to get involved in improvement work might be provides you with a quality improvement superpower.
  - The doll activity we do in this program, is one tool we use to connect you to your motivations for QI.
- The next step is to ask, what is it that keeps us motivated to do things? Sometimes we get caught up in busyness of tasks at hand, or the obstacles we face and we can lose sight of this.
- Learning how to harness intrinsic motivations is a very powerful tool for getting people involved in, excited by and prepared for the changes involved in improvement work.

Reference: Peter M. Senge, The Fifth Discipline: The Art & Practice of The Learning Organization, New York: Doubleday Business,1990.
Source: Active construction of your own future by Dibs School under licence: https://creativecommons.org/publicdomain/zero/1.0/

Session 1 Slide 22–25 Resistance to change

Session 1 Slide 22
When talking about change, there is a topic we need to address head on. Resistance to change. As you seek to test, implement, spread & scale-up changes …. expect resistance.

Faculty discussion prompt: Ask audience when they have resisted change and when did they embrace it?
- So why do people resist change?

Faculty discussion prompt: Why do you think people resist change? Does anyone have an example of this? When have you embraced change and what enabled this? (Can be done in small groups or as a large plenary group)
- Discuss and reflect on some of the responses from the participants. Share an example or ask faculty to if they have an example of when they have faced resistance to change.
- The system we are in is run by humans, for humans and centered around care. When things change, everyone is affected in a different way. Harnessing and knowing how humans respond to change is instrumental in our ability to roll out change.

Source: Resistance by the blue diamond under licenese: https://creativecommons.org/licenses/by-sa/3.0/

Session 1 Slide 23 – 10 reasons people resist change Ten reasons people resist change 1. Loss of control 2. Excess uncertainty 3. Surprise, surprise 4. Everything seems different 5. Loss of face 6. Concerns about competence 7. More work 8. Ripple effects 9. Past resentments 10. Sometimes the threat is real	**Session 1 Slide 23** • Here are some of the reasons that people resist change. These come from an article written by Rosabeth Moss Kanter reflecting on her work as the co-founder of the Harvard University-wide Advanced Leadership Initiative and as previous leader in IHI. **Faculty discussion prompt:** How do these compare with the reasons we came up with? Can you see how what we discussed can fit within these 10 reasons? • If we think about all these factors about resistance to change and the reasons people resist, one thing is clear, no matter what we do to initiate and implement change. We should always expect there to be resistance. *Reference: Rosabeth Moss Kanter Ten Reasons People Resist Change. Havard Business Review 2012.* *Source: Hand Stand by J Horrocks, Getty Images Signature, Canva Pro 2024* *Source: Muñeco articulado duda by Ant Sanz, Getty Images, Canva Pro 2024* *Source: Untitled by Wezeli, Getty Images, Pro Canva 2024*
Session 1 Slide 24 – Resistance is good Resistance is good • Resistance = engagement • Resistance indicates a dilemma • Can initially present as emotion • Work through emotion to engagement	**Session 1 Slide 24** • Resistance = good • Resistance can be seen as an opportunity. It means there is a level of engagement, and the resistor has considered your suggested improvement idea. This opens the door for discussion on the idea and the reason why they are resisting. You can understand where their motivations are coming from. *Source: Wooden Mannequin Dummy by Stock Images_AT, Getty Images Signature, Canva Pro 2024* *Source: Wooden dummy looking up by Yalcinadali, Getty Images, Canva Pro 2024* *Source: Wooden pose puppet by Kuppa_rock, Getty Images, Canva Pro 2024*

Session 1 Slide 25 – Reframing the question
 	
Reframing the question
 	
From: How can I get all these people to do what **I** want them to do?
 	
To: How can I get all these people to do what **they** want to do?
 	
Let's activate their **agency** – the ability to act with purpose!
	Session 1 Slide 25
	
	If you ask, many people will say they want to see things done differently – they want change, the question we really need to tackle is
	• Ultimately, what we want to do is to go from:
	  • Getting people from simply agreeing that want to see change – to
	  • Activating their agency to be part of making the change happen.
	Finding what motivates people to engage in change themselves is key to activating this agency and engagement in the process of change.
	
	Source: Who-wants-change-crowd-change-management-blue by Alan O'Rouke under license: https://creativecommons.org/licenses/by/2.0/

10:20	**Session 1 Slide 26 – QI and partnering**	**Faculty name:** **Session 1 Slides 26-31** **Time: 15mins**
	Why quality improvement and partnering? 	• We've been talking about organisations, individuals and the culture that you need for your QI change work. The other side of the 'human side of change' are the patients. This might be the people that you drew in our first activity – 'what is your why?' • Quality improvement and partnering are intrinsically linked. • Partnering isn't just about partnering with consumers, though this is integral to your improvement work. • You should also be partnering with all those most affected by the changes that will occur in this improvement work. **Faculty note: Insert information slide about local policy/frameworks. How does your organisation partner with consumers?** *Source: Image adapted from:* *https://www.hqip.org.uk/resource/introduction-to-quality-improvement-for-patients-and-public*
	Session 1 Slide 27 – Partnering with each other	**Session 1 Slide 27**
	Who are we partnering with? Those who are most affected by our improvement work. • Our colleagues • Our workforce • Our organisation 	• Now we are going to speak more about who and how you need to partner in your QI work. • Firstly, you're going to need to partner with EACH OTHER. This includes your colleagues, your wider workforce and perhaps on an organisational level. *Source: Who-wants-change-crowd-change-management-blue by Alan O'Rouke under license:* *https://creativecommons.org/licenses/by/2.0/*
	Session 1 Slide 28 – Partnering with consumers	**Session 1 Slide 28**
	Who are we partnering with? • Our patients • Our carers • Our communities 	• Secondly, you are going to need to partner with consumers – people with lived or living experience who could be patients, carers, family members of those who participate in the service you are looking to improve. **Faculty discussion prompt: Who has heard of this quote 'Nothing about us, without us'**? It is pretty commonly used throughout health and human services by advocates and activists. • Partnering authentically represents all the interactions you have including your team, wider stakeholder engagement and with the consumer network. Understanding who is affected by the change and how they will be impacted. • Consider the different experiences and expertise that would be important to consider from anyone involved in how a service is delivered (for example, reception, IT, different clinicians, health information, education, communications, custodian, decision makers etc.) and those who engage with or receive the service (patients, carers and family/support networks). *Source: Image created using Canva Pro 2024*

Session 1 Slide 29 – Partnering quote
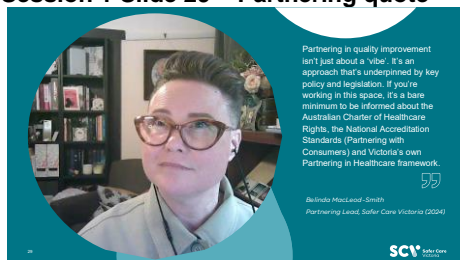
Session 1 Slide 29

- We are now going to listen to a quote from Safer Care Victoria's Partnering and co-design capability lead, Belinda MacLeod-Smith (2024)

PROMPT: Click on image to play audio.

Session 1 Slide 30 – Benefits of partnering

Session 1 Slide 30

- As Belinda said in the previous slide, partnering with consumers is not just a nice to have, it underpins our work in a very real way through policy and legislation.
- There is also good evidence that working in partnership with consumers, and fostering person-centred approaches to care can help improve the safety and quality of care.
- This slide outlines some of those benefits:
1. Better patient and community experience
2. Better workforce experience and improved wellbeing
3. Better clinical outcomes, safety and quality
4. Better value care through lower costs of care

Source: Australian Commission on Safety and Quality in Health Care. Review of the key attributes of high-performing person-centred healthcare organisations. Sydney: ACSQHC; 2018.

Session 1 Slide 31 – Gradient of partnering
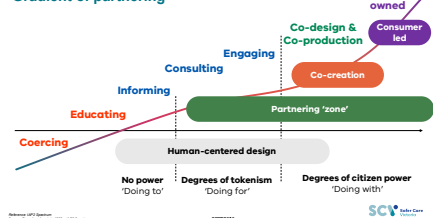
Session 1 Slide 31

When thinking about partnering, it can be helpful to visualise a spectrum of engagement. This 'gradient of partnering' picture outlines the different ways you can partner with those most affected by the change, particularly patients and consumers.

- We use the gradient of partnering as a way for our teams to figure out where they sit on the spectrum of participation and plan their engagement.
- Even though this may feel like a hierarchy, it's really not. What we are asking you to consider when thinking about how you will partner is what is the balance of power among and between partners at each level, what this means for decision making in the work, how we set expectations about the style of partnership we are using. It's about doing whatever you do, well and transparently.
- For example, in co-design, there is equal power in decision making – is this possible in your work? A lot of the work done previously in this space has been at the informing or consulting level with consumers - which is usually associated with doing things to or for other people.

Reference: IAP2 Spectrum
Source: Based on Arnstein 1969 + IAP2 Spectrum

10:35	**Session 1 Slide 32 – Activity 2**
	Activity 2: Who is affected? Using the case study allocated to your table, discuss the following questions. *Note: you will be using this case study for the rest of the day* 1. Who is affected by the problem? 2. Are there different levels of engagement for different groups? 3. How might you want to engage those who are affected by the improvement process? **Page 9 of workbook**
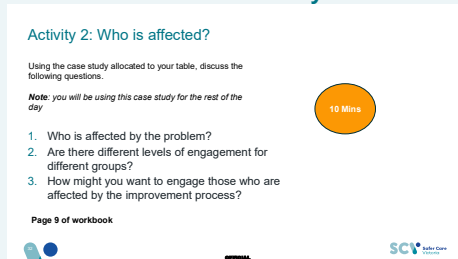
Faculty name:
Session 1 Slide 32
Time: 10+mins + 5mins discussion/feedback

Now that you know a little bit about partnering, let's think about the 'who' of our quality improvement work.

Activity instructions:
Work through your assigned case studies. Identify who is affected by the proposed improvement project. Consider:
- Who is affected by the problem?
- Are there different levels of engagement for different groups?
- How do you want to engage those who are affected in the improvement process?

Faculty to share reflections:
- Ask for a volunteer from each table to share their 'who'
- Was this activity useful? Could participants see how this could help their QI work?
- This activity may help with other QI tools including process maps.

Faculty note: Ensure participants are considering not only consumers and cares that may be affected, but anyone in their system e.g. ward clerk, doctor, nurse, admin, IT.

Session 1 Slide 33 – Where to next?

Where to next?

Session 1 Slide 33
Thank you for participating in QI in Action Session 1: Creating conditions for change. We have covered a lot of content including:
- How to set the conditions for change and support our improvement effort.
- How to identify who is needed to make the improvement work and to ensure we have a wide range of perspectives and views, including from consumers, at each step of our improvement process.

QI in Action Session 2: Understanding the system will now focus on:
- Learning about our system and how to look at data to find common and special cause variation and how to display data to tell a story.

Break time
Faculty note: Schedule a 15 minute break

Session 2: Understanding the system (2 hr)
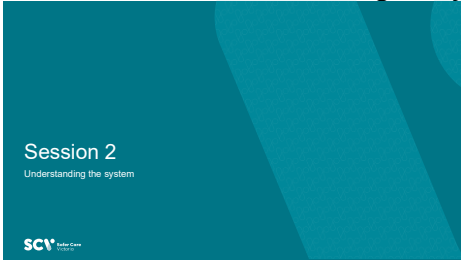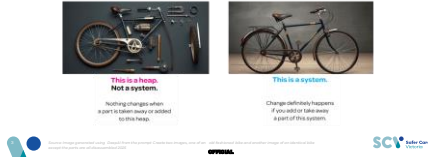
Session at a glance	Who?	How long?	Slides
Systems thinking	Faculty	10 min	2-7
How do you know you have a problem?	Faculty	10 min	8-16
Variation	Faculty	20 min	17-27
Activity 3: Variation	Faculty and participants	15 min	28-32
Understanding the problem	Faculty	5 min	33-37
Activity 4: 5 Whys activity	Faculty and participants	15 min	38
Intro to Model for Improvement	Faculty	5 min	39-40
Developing aims	Faculty	5 min	41-45
Activity 5: Aim statements	Faculty and participants	30 min	46

Learning objectives for the session

At the end of this session participants will be able to:
- **Describe the factors that help us monitor the system.**
- **Explain the difference between common and special cause variation and how to assess the system performance.**
- **Describe how the Model for Improvement (MFI) guides quality improvement projects.**
- **Discuss the implications of special cause variation for identifying problems in your system.**
- **Craft an aim statement using SMART objectives.**

Slides for Session 2: Understanding the system

Time	Slides	Notes
11:05	**Session 2 Slide 2 – Understanding the system** 	**Faculty name:** **Session 2 Slides 2-46** **Time: 2 hours** • In this session we will be discussing what a system is, how to identify if there is a problem in the system through interpreting data, applying QI tools and finally constructing an aim statement for your project.
	Session 2 Slide 3 – What is a system? 	**Session 2 Slides 3-7** **Time: 10mins** What is a system? • A system is an interdependent group of items, people or processes working together to a common goal. • A system can be as small as a team/ward and as large as an organisation or the entire health system. • Changes made to systems can result in delayed effects, minimal or magnified effects and unintended consequences. Here you can see a depiction of what a system is and isn't. • On the left we have a heap of equipment. When one piece is taken away or added, nothing changes to this heap • On the right we have a system. All the equipment is connected to one another. If you add or take away part of this system, a change is made. *Reference: Institute of Play – systems thinking design curriculum pack (instituteofplay.org.)* *Source: Image generated using DeepAI from the prompt Create two images, one of an old fashioned bike and another image of an identical bike except the parts are all disassembled 2025*

Session 2 Slide 4 – System theory
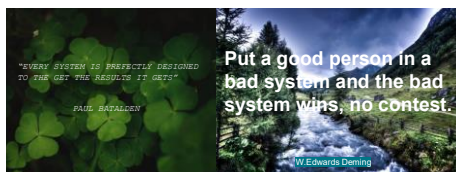
Session 2 Slide 4

Let's start talking about our system.
- Pictured are 2 quotes from pioneers of quality improvement Paul Batalden and W Edward Deming.
- Applying systems thinking means exploring the characteristics of components within a system and how they interconnect to improve our understanding of how outcome emerge. If there is harm or undesired outcomes, the system should be examined, rather than the individuals within the system.
- We can make improvements to the system rather than the individuals within the system.

Faculty discussion prompt: How often do we hear the blame game when it comes to things not going to plan, mistakes being made or poor performance results?

Reference: Dr Paul Batalden, the Dartmouth Institute, USA
Reference: W. Edwards Deming, Deming Four day seminar, Phoenix, Arizona, 1993
Source: Green leaves in close up by Pexel under license: https://creativecommons.org/public-domain/
Source: Photo 1492095 by Pxhere under license: https://creativecommons.org/publicdomain/

Session 2 Slide 5 – Quality control and quality improvement – changing our level of performance

Session 2 Slide 5

- While both are needed, what we often find in quality improvement is that we find ourselves focusing on quality control – or taking actions that maintain a current level of performance.
- Quality improvement is not about maintaining performance, but about making deliberate changes to a system, thinking it will lead to a new level of performance entirely.
- To get to a new level of performance we need to be asking ourselves – what changes to do we need to make that will change our level of performance for the better....

Session 2 Slide 6 – Reactive vs fundamental change

Session 2 Slide 6

NOTE: Animations in slide

Reacting to change:
It is important to distinguish between the types of change action we can take.
- Reactive change is often an immediate action that has a short-term or surface level impact. This kind of change isn't transformative change – it is more about what can we do to return the system to its prior condition or maintain it at a current level of performance (i.e quality control). Some examples that often appear as reactive change include more training, more rules, another audit, standalone information brochures or flyers.
- Fundamental change is transformative change. It is the changes we make to a system or service to change the level of performance and have a sustained impact.

Faculty discussion prompt: What changes have you seen in the quality improvement projects you have been involved in? Which category do they fall in?
Reference: The Improvement Guide, chapter 6, p.111–116.

Session 2 Slide 7 – Feedback

Where do you get feedback from your system?

Feedback | Incidents | System data (e.g. electronic records) | Shadow or observe the system | Tools: process maps, stakeholder analysis, Cause-and-effect diagrams

Session 2 Slide 7

How does your system receive feedback?

- There are many sources of feedback in a system on how it is performing.
- Some measures are quantitative: audits, wait times and mortality rates.
- Other feedback is qualitative: staff and patient feedback and observations.
- Both sets of data are important to provide the whole picture and tell the story of improvement.
- There are a number of tools that can help you assess how system is performing and identify areas for improvement.

11:15 **Session 2 Slide 8-16 How do you know you have a problem?**

How do you know you have a problem?
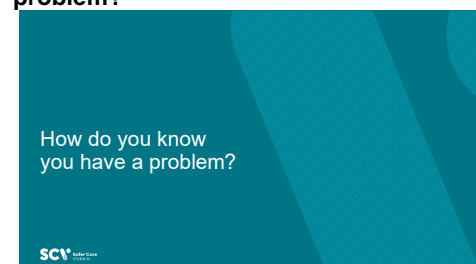
Faculty name:
Session 2 Slides 8-16
Time: 10mins

So, we have all this feedback from our system.

But:
- How do we know we have a problem and
- Where can we identify areas for improvement?

Session 2 Slide 9 – Using data to tell a story

Using data to tell a story

"The greatest value of a picture is when it forces us to notice what we never expected to see."

– John W. Tukey

Session 2 Slide 9
Using data to tell a story
- This is what we are trying to achieve through the use of data in Quality Improvement.
- Data visualisation lets us translate information (data) into a visual context, making things easier for the human brain to understand.

Reference: John W Tukey. Exploratory Data Analysis. Reading, Massachusetts: Addison-Wesley Pub Company,1977.
Source: Whimsical world of books by flickr under license: https://creativecommons.org/licenses/by/2.0/

Session 2 Slide 10 – Visual displays	**Session 2 Slide 10**
Pie charts 	**Note: Animations in slide** Not all visual displays help us tell the story of improvement. **Faculty discussion prompt:** What types of charts have you seen to display improvement work or quality data? Who would use a Pie Chart to illustrate their improvement efforts? Let's look at some of the differences the way we visualise our data can help or hinder our understanding of what is happening. *Reference: IHI Professional Improvement Coach Program (2023)*
Session 2 Slide 11–12 Static vs dynamic data	**Session 2 Slide 11**
Static vs. dynamic content 	Within data visualisation there are two main types of visuals: dynamic and static. • Static displays include bar charts, pie charts and gauges. Static data can hide variation. • People are used to before and after comparisons (bar charts, traffic light scorecards) • Dynamic is data over time (e.g. run charts) and can help us to shine a light on any variation in our systems and performance. *Reference: Peter Bohlin, Robin Cooper, Elisabet Engdahl, Staffan Larsson. (1999). Information states and dialogue move engines. Department of linguistics Göteborg University, Sweden.*
Session 2 Slide 12 – Traffic light system	**Session 2 Slide 12**
Traffic light system 	**NOTE: Animation in slide** **Faculty discussion prompt:** • Who has used a traffic light system before? • Does red mean bad in this system? What story does this tell you? What if the data is displayed over time **(click)**? **Faculty discussion prompt:** What can you see now with this same data but presented over time? • Presenting the data over time provides more information can help us analyse our systems better. *Source: The Data Guide. Provost and Murray 2010* *Reference: IHI Professional Improvement Coach Program (2023)*
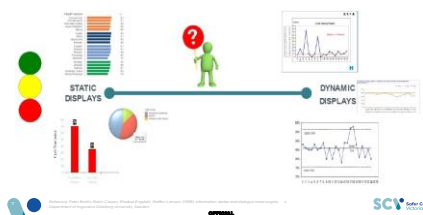
Session 2 Slide 13 – Anatomy of run chart

Anatomy of a run chart
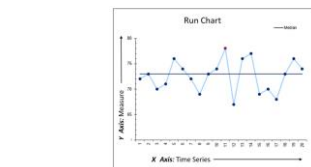
Session 2 Slide 13

There are many different types of charts that will display your data over time these include ranging from the basic to highly complex charts.

As this is a foundations program designed to be an introduction to the basic methods, mindsets and tools used in quality improvement, we focus on the most basic way to display data over time and that is a run chart.

Anatomy of a run chart
- X axis is a time variable e.g. weeks, months, or patient 1, 2, 3.
- Y axis is our variable we are wanting to measure e.g. admission, time waiting, falls, no of infections etc.
- Some other information you may find on a run chart are; median lines, goals line and annotations of when changes may have occurred.

Why use a run chart
- Can be for any type of performance data.
- No calculations are required.
- Can easily make by hand.
- They show performance behavior at a glance.
- They are readily understood by all.
- Can detect signals of change.
- Can start building with 1 data point.
- You don't need any fancy tools, equipment or software to build one!
- Can simply start with pen and paper or even on a whiteboard!

Use run charts when
- You want to visualise the overall performance of a process over time.
- You are looking for trends, patterns, or shifts in the data.
- You need a simple, easy-to-understand visualisation of process data.

Interpreting a run chart
- Using run charts, we can better understand our data and thus prompt us to ask the questions when we see data that appears out of place.
- Run charts can begin to distinguish between common and special cause variation.
- There are a set of rules for interpreting a run chart that defines what a signal is based on rules of probability which are out of scope of the QI in Action program but you can find more information at through the SCV QI Toolkit.

(but if you need to determine if a process is 'stable' you will need a more advanced type of chart to identify the presence of special cause and common cause variation (Shewhart - Statistical Process Control Chart with control limits)

Session 2 Slide 14–16– Examples of data display
Session 2 Slide 14 – Example

Session 2 Slide 14
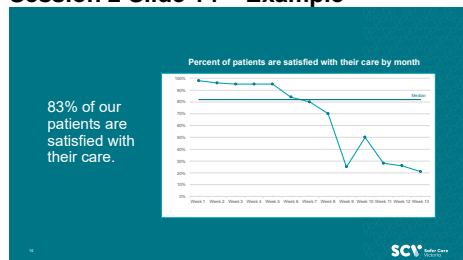
NOTE: Animation in slide

In this example we are given a statement of 83% of our patients are satisfied with their care by month……but what does that mean???
- Same data plotted over time **[click]**
- See the values month to month for 10 month period
- Different message
Median 10 months = 83%

Faculty discussion prompt:
- Does the median mean we are happy with what this actually is over time?
- Does the display of data over time tell a different story than the overall percentage?

Session 2 Slide 15 – Example 2
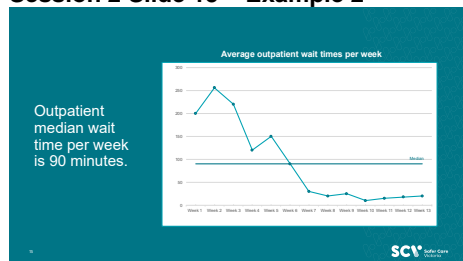
Session 2 Slide 15

NOTE: Animation in slide

This example we are given a statement of median wait time per week is 90mins

What does this look like over time though?

- Weekly values for the 10 week period
- Median count cross 10 days is 90 mins

Faculty discussion prompt: What happened in week 3? And week 6?

Session 2 Slide 16 – Example 3
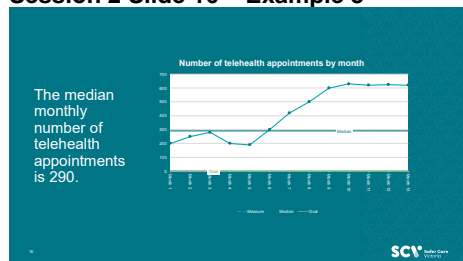
Session 2 Slide 16

NOTE: Animation in slide

- All 3 when variation is visible there is useful information there.
- Median monthly number of telehealth appointments.
- A single figure is not enough to understand the patterns, performance of our system – making variation visible through data over time tells a clearer story...helps us understand if our change ideas are working or if there is a problem to explore.

11:25	Session 2 Slide 17–27 Variation	Faculty name: Session 2 Slides 17-27 Time: 20mins **Session 2 Slide 17** In this section we will be covering what variation is and whether it is common or special cause variation and what you can do.

	Session 2 Slide 18 - Variation	**Session 2 Slide 18**
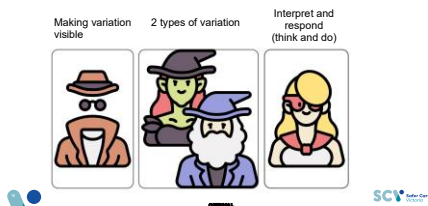
- When looking at data from our system, we need to understand what variation is and the different types.
- We need to know how to make it visible for all to see. We need to be able to interpret which type of variation is occurring and respond accordingly.
- We also need to understand what it means in the context of our quality improvement project/s.

Source: Image created using Canva Pro 2024

Session 2 Slide 19 – Variation definition

Session 2 Slide 19

Variation refers to the measurable differences, fluctuations, or changes observed in a set of data or a process.

In a nutshell, variation is all about difference, and we expect difference.
- No two apples from an apple tree are the same.
- There is variation in their colour, size, shape, and flavours.
- If we choose to, we can measure and collect data for each of our apples based on these characteristics….this data can then be organised to understand the type of variation of each characteristic.

In health care variation may occur in many things including:
- Patient characteristics
- Care delivery processes (e.g. how people are using EMR, wait-times)
- Patient outcomes

Let's have a look at the way we can use data over time to start understanding what different types of variation might look like.

Source: Four apples arranged neatly by Freerangestock under licence: https://creativecommons.org/publicdomain/zero/1.0/

Session 2 Slide 20– 22 Types of variation charts	**Session 2 Slide 20**
My commute to work (minutes) 	Graph 1: Measuring commute to work overtime. **Faculty discussion prompt**: Is this an accurate representative of real life? Where commute time is exactly the same each day? **Faculty note: Faculty to consider adding an image to the slide to enhance interest.** *Graph reference (slide 20-22): IHI Professional Improvement Coach Program (2023)*
Session 2 Slide 21 - Common cause variation	**Session 2 Slide 21**
First type of variation 	Graph 2: Variation type 1: Common cause variation **Faculty discussion prompt:** Is this more indicative of a normal commute time? There is randomly distributed variation with points above and below the median line. This type of variation is called: Common cause – normal variation that is inherent in the system.
Session 2 Slide 22 - Special cause variation	**Session 2 Slide 22**
Second type of variation 	Graph 3: Variation type 2: Special cause variation **Faculty discussion prompt:** Can you see any changes to the data now? What looks different in this graph? What we have here is an indication of Special Cause variation - We have an action that has led to something unexpected e.g. I now walk to the train station rather than drive. This has created a 'signal' that something has changed within the system. (In QI in Action program, remember we talked about quality improvement needing conscious and deliberate action to change the level of performance).
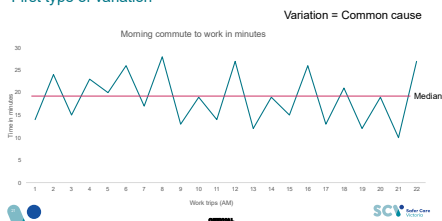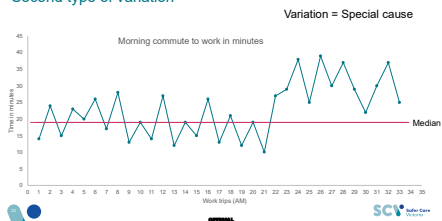
Session 2 Slide 23 – Types of variation

Types of variation

Special cause variation – a 'signal'
- Due to irregular or unnatural causes that are not inherent in the design of the process
- Due to something **not** inherent in the process
- Affect some (but not all) outputs
- Statistically different from other data points
- Results in an 'unstable' process that is not predictable
- Also referred to as non-random variation

Common cause variation – 'noise'
- Due to regular, natural or ordinary causes that are inherent in the design of the process
- Always present, inherent to the process
- Affects all outputs
- Statistically similar to other data points
- Results in a 'stable' process that is predictable
- Also referred to as random variation

Session 2 Slide 23

This slide provides more of an explanation about what we mean by Special and Common cause variation. Let's go through these quickly:

Special cause variation – a signal
- Due to irregular or unnatural causes that are not inherent in the design of the process
- Due to something NOT inherent in the process
- Affect some (but not all) outputs
- Statistically different from other data points
- Results in an 'unstable' process that is not predictable
- Also referred to as non-random variation

Common cause variation – 'noise'
- Due to regular, natural or ordinary causes that are inherent in the design of the process
- Always present, inherent to the process
- Affects all outputs
- Statistically similar to other data points
- Results in a 'stable' process that is predictable
- Also referred to as random variation

All things vary naturally – this is a fact of life
- We need tools to identify true changes in data versus variation that is inherent in a system and we want to identify true changes as soon as is possible.
- Run and control charts are tools that help us begin to interpret special cause and common cause variation (which we will define).

Session 2 Slide 24 – Special cause variation

Where does **special cause variation** come from?

Intended Variation
- Deliberate changes or adjustments made to processes or systems to achieve specific goals or outcomes
  - E.g. changes implemented as part of improvement project

Unintended Variation
- Changes introduced into a healthcare process that are not purposeful, planned or guided. Usually, these changes arise from factors such as equipment, supplies, environmental or human factors.
  - e.g. medication errors due to outdated syringe pump program

Session 2 Slide 24

Special cause variation, also known as non-random variation, originates from specific factors or events that are not part of the regular, inherent variability of a system. Unlike common cause variation, which is a natural and expected part of any process, special cause variation is often linked to identifiable, external influences.
- **Intended Variation** is an important part of effective patient-centred healthcare. It is desirable to have variation with the intent to best match the care being provided to patient preferences. Quality improvement initiatives also be another source of intended variation within a system.
- **Unintended Variation** creates inefficiencies, waste, re-work, ineffective care, errors, and harm in our healthcare system.

Focussing on reducing unintended variation that is occurring within a process/system usually results in improved outcomes and reduced costs.
Faculty discussion prompt: Can you think of any examples of both intended and unintended variation?
How did you or your organisation respond to any unintended variation?
Understanding and identifying the sources of special cause variation are crucial for effective quality improvement efforts. By addressing these specific causes, you can work to minimise variability and improve the stability and predictability of their systems.

Session 2 Slide 25 – When to take action	**Session 2 Slide 25**
	NOTE: Animation in slide Understanding variation will help ensure you will act appropriately. **Common cause Variation** • You don't want to react to fluctuations in data that is actually common cause variation – this is called tampering and may result in a more unstable system. • If your current level of performance is not satisfactory (e.g. Benchmarking Hospital vs Hospital or Ward vs Ward), you want to develop and test theories that might result in improvements to the system. • **This is the principal of continuous quality improvement** **Special cause Variation** **- If undesirable (worsening performance) – Investigate & Eliminate from system** **- If desirable (improving performance) – investigate and propagate or spread across system** If you don't recognise special cause variation occurring it can be seen as a missed opportunity to learn there is something unstable in the system. As mentioned in previous slide "**instability in the process" is a cause of special cause variation.** *Source: Sprinter at starting blocks in a race by Freerange under license: https://creativecommons.org/publicdomain/zero/1.0/ Reference: IHI Professional Improvement Coach Program (2023)*
Session 2 Slide 26-27 When we get it wrong	**Session 2 Slide 26**
	• If we don't correctly identify variation, we are more likely to take the wrong action. • **See** trends where there are no trends. Shifts where there are no shifts. • **Blame** and give credit to people for things over which they have no control. • **Spend** a lot of wasted time trying to explain normal variation as special events. • E.g. red data point = everything is terrible/repercussions. *Source: Photo 1450419 by Pxhere under license: https://creativecommons.org/publicdomain/*
Session 2 Slide 27 – When we get it right	**Session 2 Slide 27**
	• Variation is an expected in our measurement. • When you are more comfortable navigating variation and able to distinguish between common and special cause variation (the variation that is expected in your system and the variation that isn't) your learning is enhanced and the actions you take are more appropriate. • Remember when you put a good person in a bad system the system always wins. *Source: Photo 1640023 by Pxhere under licence: https://creativecommons.org/publicdomain/ Slide informed by: Institute for Healthcare Improvement (IHI) Professional Improvement Coach Program (2023).*

11:45	**Session 2 Slide 28 – Activity 3 Variation**	**Faculty name:**

Session 2 Slide 28 – Activity 3 Variation

Activity 3: Variation

At your tables…

1. Look at the three graphs you have been given in handouts
2. Discuss and answer the following questions for each graph
   • Are there patterns or changes in the data that may indicate special cause variation?
   • Would you take action?
   • Has a new level of performance been reached?

Pages 12-13 of workbook

10 Mins

Faculty name:
Session 2 Slide 28-32
Time: 10mins + 5mins discussion/feedback

Now that we have learnt about variation, let's have a look at some examples.

Activity instructions
Participants to review the 3 graphs in their workbook
Discuss and answer the following questions:
• Are there patterns or changes in the data that may indicate special cause variation?
• Would you take action?
• Has a new level of improvement been reached?

Faculty to facilitate discussion when group comes back
• Graph 1: indicates common cause variation – no action required.
• Graph 2: indicates an astronomical point – participants might look into the astronomical point but not take action.
• Graph 3: indicates a deliberate change and new level of performance. More data would tell us if the new level is sustained but shows early signs of a change.

Activity graphs reference: IHI Professional Improvement Coach Program (2023)

Session 2 Slide 29 – Activity graphs example 1

Example 1

• Treat as part of the system? ✅

• Panic! Inform GP!
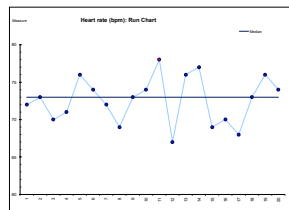
Heart rate (bpm): Run Chart

Session 2 Slide 29

NOTE: Animation in slide

Graph 1: Common cause variation
• Are we seeing any patterns, trends or changes in the data that may indicate something worth investigating?
• Do we treat it as part of the system?
• Do we panic and inform the GP?

Session 2 Slide 30 – Activity graphs example 2

Example 2

• Investigate what happened on day 7? ✅

• Standardise approach to commuting?
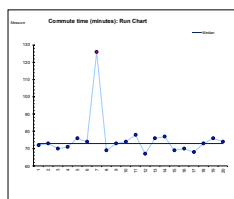
Commute time (minutes): Run Chart

Session 2 Slide 30

NOTE: Animation in slide

Graph 2: Astronomical point
• Are we seeing any patterns, trends or changes in the data that may indicate something worth investigating?

Should we:
• Investigate the astronomical point (#7)
• Standardise the approach to commuting?

Session 2 Slide 31 – Activity graphs example 3

Session 2 Slide 31

NOTE: Animation in slide

Graph 3: Special cause variation
- Was the improvement activity successful?
- Has a new level of performance been reached? It looks positive but more data is needed to determine this.
- Is the change sustainable/being sustained? More data is needed to determine this.

Session 2 Slide 32 – Summary

Session 2 Slide 32

- In improvement we are trying to introduce favourable special cause variation (signals) through testing changes and then hold these gains over time so they become part of the system (random variation that is sustained).

12:00

Session 2 Slide 33– 37 Understanding the problem
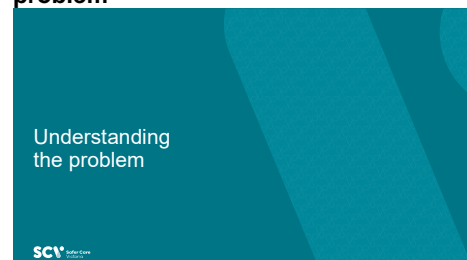
Faculty name:
Session 2 Slides 33-37
Time: 5mins

- Now that we can assess our system and identify common and special cause variation. We can use other QI tools to interrogate whether there is a problem there or opportunity for improvement.

Session 2 Slide 34 – Tools for understanding the problem
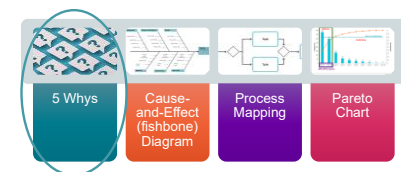
Session 2 Slide 34
- There are many QI tools we can use to understand the problem and each tool has its place in understanding the problem. It is good to keep in mind that often it can be good to use more than one tool to unpack the root causes of the problem. Today we are going to teach you about the 5 Whys.

Session 2 Slide 35 – The 5 whys	**Session 2 Slide 35** **NOTE: Animations in slide**
The 5 Whys Important to identify the root cause of a problem and not the symptoms. Ask 'why' five times to get to the root cause – a *very* simple tool! 1. Write down the specific problem 2. Ask why the problem happens 3. If the answer is not the root cause of the problem in Step 1, ask 'why' again 4. Repeat Step 3 until you agree that you have identified the root cause By identifying and removing the root cause of a problem, we move from short-term problem solving to long-term problem prevention Tip: Use all five Whys – resist the urge to skip!	• 5 Whys is the practice of asking why repeatedly whenever a problem is encountered in order to get beyond the obvious symptoms to discover the root cause. • This can be applied in conjunction with other QI tools like a cause and effect diagram to help interrogate your understanding of the root cause of your problem and therefore bring more focus to your improvement efforts. *Reference: Olivier D Serrat. The Five Whys Technique. Knowledge Solutions 2009. https://www.adb.org/publications/five-whys-technique Accessed January 2025.* *Source: Question1 by Flickr under license: https://creativecommons.org/licenses/by-nc/2.0/*
Session 2 Slide 36 – The 5 whys video	**Session 2 Slide 36** **NOTE: Click to play video**
The 5 Whys The 5 Whys Tool	• This 3 min video demonstrates how the 5 Whys can be applied to interrogate the root cause of a problem. *Source: Safer Care Victoria (2025) The 5 Whys Tool **https://vimeo.com/safercarevic/5whys?ts=0&share=copy*** **The 5 Whys Tool – video transcript** Often when we try to solve a problem, we jump to the first solution that comes to mind without investigating the underlying cause. The 5 Whys Tool is a simple way to peel back the layers of a problem and identify the root cause. Let's have a look at how the 5 Whys technique helped Barry. Barry is a cafe owner and is dismayed at the sharp increase in his café's cleaning bills during the summer months due to frequent cleaning of bird droppings. Determined to find the root cause, Barry starts asking why and conducts a 5 Whys analysis. He starts with identifying the problem. The cafe's high cleaning bill in summer. Why is the cleaning bill so high in summer? Because of frequent cleaning of bird droppings. Why are there so many bird droppings? Because the cafe attracts a lot of birds. Why are there so many birds around the cafe? At first, Barry blames the birds that come to eat the crumbs left by customers. The workers sweep up more frequently and notice that while the birds have stopped coming during business hours, the cafe continues to be plagued by bird droppings. Barry and the workers notice that things seem to be messy when they open the cafe in the morning. Barry tries a different approach and visits the cafe after hours.

He finds some birds eating insects that are flying around the building.

Why are there so many insects around the cafe?

It turns out that the insects are drawn to the lights that are kept on at night.

Why are the lights left on at night?

Barry had installed night lights outside the cafe as a security measure and as the weather turned warmer, more insects appeared.

He replaces the night lights with motion censored lights to reduce the time the lights are kept on while retaining its security features.

The motion sensor lights kept the insects away, which in turn stopped the birds from visiting the cafe and making a mess.

Barry now has a lower cleaning bill and as a bonus, his electricity costs have reduced, too. A win for the 5 Whys and for Barry.

Can you see how asking why over and over again helped Barry uncover the root cause of his high cleaning bill?

If he had only asked one why, the insects would have remained, the birds would have kept coming and his cleaning bill would have stayed sky high.

How might you use the 5 Whys Tool to help understand the problem you're trying to solve?

You may need to ask why more than five times and explore different approaches to understand the various factors that can contribute to something going wrong.

Session 2 Slide 37 – Example Resident falls and worn-out walker pads 1. Why do tennis balls used as walker pads stop working? • Because the ends of the walker break through the tennis balls. 2. Why are they breaking through? • Because the material of the tennis ball is breaking down. 3. Why is the material breaking down? • Because the tennis balls have a lifespan and they are being used for too long. 4. Why are they being used for too long? • Don't know they have broken down until there is a fall or other adverse event. 5. Why are they waiting for a fall to happen to initiate a change of pads? • Because there is no standard policy for checking on tennis ball wear. **Change idea to test:** Standard process for regularly evaluating and replacing tennis balls. OFFICIAL	**Session 2 Slide 37** Let's look at applying the 5 Whys to a health example: • In this example you can see the problem is resident falls and warn out walker pads. • But using the 5 Whys Tools, you can identify the root cause and therefore potential change ideas to test. **Faculty discussion prompt:** read through examples on slide (you may wish to replace this example with one of your own). In this example, the use of tennis balls was a solution because getting access to the rubber stoppers that are usually on the bottom of walkers was a challenge. The team have solved one problem but created another. *Reference: IHI Professional Improvement Coach Program (2023)* *Source: Senior Woman with Walking, Pixelshot, Canva Pro 2024*

12:05	**Session 2 Slide 38 – Activity 4 5 Whys**
	
	Activity 4: 5 Whys
	
	Using the Cause-and-Effect diagram for your case scenario, interrogate the circled 'cause' using the 5 Whys.
	
	Pages 14-15 of workbook
	
	• What is the problem?
	• Where is there opportunity for improvement?
	
	10 Mins
	
	Identifying this now will help you to develop an aim statement later in the session.
	
	OFFICIAL · SCV Safer Care Victoria
		Faculty name:
		Session 2 Slide 38
		Time: 10mins + 5mins discussion/feedback
		
		We will now apply the 5 Whys to a case study/scenario to see if we can drill down to the root cause.
		
		Activity instructions
		Use the same case scenario your group has used for previous activities in QI in Action.
		Each group will have a cause and effect diagram with a circled cause. You can use this "Cause" or select another from the cause and effect diagram example for your scenario.
		
		● Using the 5 Whys template
		  ● Identify what the problem is?
		  ● Where the opportunity for improvement might be?
		This activity will help you develop your aim statement in a later activity.
		
		Faculty to facilitate discussion when group comes back
		Participants can choose to do 1 (or more cause if they wish) applying the 5 Whys.
		Ensure participants are truly questioning why and getting to a root cause rather than superficial statements.

12:20	**Session 2 Slide 39– 40 Model for Improvement** The model for improvement MODEL FOR IMPROVEMENT What are we trying to accomplish? → Setting aims How will we know a change is an improvement? → Establishing measures What change can we make that will result in improvement? → Selecting changes Test agaiin!! Plan · Act · Do · Study Ideas are tested in real life, with people who will be impacted by the change, to determine if the idea was: › Acceptable › Effective › Efficient OFFICIAL · SCV Safer Care Victoria	**Faculty name:** **Session 2 Slides: 39-40** **Time: 5mins** **Slide 39** **NOTE: Animation in slide** • Introducing the model for improvement. • The IHI model for improvement is a framework and method to undertake your improvement work. It asks as series of questions followed by small scale testing to gain insights and learnings from the system you are trying to change. • The model helps to identify, define, and diagnose a problem, create a theory of change and to test 'change ideas' to determine if they will result in system performance improvement. *Reference: Safer Care Victoria (2024) SCV Quality Improvement Tool* *Source: Square Wheels Tandem by Norbertsobolewski, Canva Pro 2024* *Source: Retro Tandem by Norbertsobolewski, Canva Pro 2024* *Source: Safer Care Victoria (2024) SCV Quality Improvement Tool*

	Session 2 Slide 40 – Partnering and QI	**Session 2 Slide 40** **NOTE: Animation in slide** • Quality improvement cannot be done alone. • To understand our system, understand the problem we are trying to solve, the improvement we want to see and to identify changes we want to test…..we need to work together with the people most affected by the system we want to improve…..form service delivery to consumers/carers….. • Collaboration and co-development and partnering is the foundation of QI work…as you can see in the MFI questions that highlight "We" not "I" as the basis for who is working through the three key questions. *Source: Safer Care Victoria (2019) Partnering in healthcare: a framework for better care and outcomes* *Source: Safer Care Victoria (2024) SCV Quality Improvement Tool* *Source: Image created using Canva Pro 2024*
12:25	**Session 2 Slide 41– 45 – Developing an aim**	**Faculty name:** **Session 2 Slides 41-45** **Time: 5mins** **Faculty discussion prompt:** What is the purpose of an aim statement? • Aim statements are our communication piece. In this section we will find out the key components of an effective aim statement and how to craft one.
	Session 2 Slide 42 – JFK moon speech	**Session 2 Slide 42** **Note**: **Audio quote from JFK moon speech to congress. Click image to play audio.** • Consider the aim statement heard by JFK and think about how this motivated the world into action. **[PLAY AUDIO]** • Crafting an aim statement requires translating the purpose that brought the team together into operational terms that can be used to drive the work forward. • An aim statement must represent an accomplishment that is compelling and be collectively owned by the team. An effective aim statement will be motivating to the team and all those interested in the desired improvement. *Reference: JFK's 'Landing a man on the moon' speech by NASA/Langley Research Center (NASA-LaRC), Internet Archive, 1987 https://archive.org/details/NIX-LV-1998-00007 accessed 12/12/2024* *Source: President John F. Kennedy's Special Address to a Joint Session of Congress, May 25, 1961. (JFK Library Digital Identifier JFKWHP-ST-M19-1-61)*
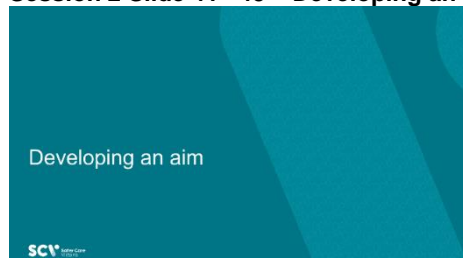
Session 2 Slide 43 – Setting an aim statement	**Session 2 Slide 43**
	NOTE: Animation in slide • Setting an aim answers the first question in the model for improvement: "What are we trying to accomplish?" • Using the model for improvement, we can break each component down to provide a framework for our improvement efforts. Each question requires us to think deeply and collaboratively to answer. *Reference: Institute for Healthcare Improvement (IHI). (2021). How to Improve. Link Accessed 13 August 2021,* *http://www.ihi.org/resources/Pages/HowtoImprove/default.aspx* *Reference: Institute for Healthcare Improvement (IHI). (2021). Science of Improvement: Testing Changes. Link Accessed 13 August 2021,* *http://www.ihi.org/resources/Pages/HowtoImprove/ScienceofImprovementTestingChanges.aspx* *Source: Safer Care Victoria (2024) SCV Quality Improvement Tool*
Session 2 Slide 44 – Constructing an aim statement	**Session 2 Slide 44**
	NOTE: Animation in slide **Overall key points** • The key elements of a strong aim statement: for whom, what, when, how good, why. • A strong aim statement operationalises the identified problem. **Notes for going through each element**: **[CLICK] FOR WHOM or WHAT** • Be **S**pecific – e.g. location, patient population, service, system etc. • Make sure that the aim statement describes the system to be improved, and the population. Some aim statements also contain information about key strategies and other guidance for the improvement project. But the aim should be succinct and not contain extraneous background information or side issues. It should be easy to understand exactly where we're going and what we expect to accomplish. **[CLICK] HOW GOOD** • **M**easurable – we need to be able to tell when we've reached the aim. • Setting numerical goals clarifies the aim, helps to create tension for change, directs measurement, and focuses initial changes. For example, the aim "reduce wait times for walk-in services by 60%" is clearer than "reduce wait times". Including a numerical goal not only clarifies the aim but also helps team members begin to think about what their measures of improvement will be, what initial changes they might make, and what level of support they will need. **[CLICK] BY WHEN** ● **A**ctionable – we need to be focusing on something we really can influence and make changes to. ● **R**ealistic – we should be ambitious (who wants to buy into a goal of exercising 5 minutes more) but also possible (e.g. exercising 24/7 is not realistic). ● **T**ime based - How good by when?

- A "stretch" goal is one to reach for within a certain time. Setting stretch goals such as "Reduce wait times for walk-in services by 60% within 12 months" communicates immediately and clearly that maintaining the status quo is not an option. Effective leaders make it clear that the goal cannot be met by tweaking the existing system. Once this is clear, people begin to look for ways to overcome barriers and achieve the stretch goals.

[CLICK] WHERE: where is this improvement taking place e.g. Victoria or ward Y.

[CLICK] WHY
- It is very easy when we start to achieve precision in our aim statements that our focus becomes cold and definitively numerical.
- BUT a solid aim statement is almost defunct if the system and people can't see the narrative or align to the purpose (HEART) for the improvement.

Reference: Institute for Healthcare Improvement (IHI). (2021). How to Improve. Link Accessed 13 August 2021, http://www.ihi.org/resources/Pages/HowtoImprove/default.aspx
Reference: Institute for Healthcare Improvement (IHI). (2021). Science of Improvement: Testing Changes. Link Accessed 13 August 2021, http://www.ihi.org/resources/Pages/HowtoImprove/ScienceofImprovementTestingChanges.aspx

Session 2 Slide 45 – Example aims	**Session 2 Slide 45**
What difference will it make to your QI project We will reduce the rate of severe perineal trauma by 50 per cent by June 2021 or We aim to reduce the harm Victorian women experience during childbirth by reducing the rate of third- and fourth-degree perineal tears by 50 per cent in participating services by June 2021	Here are two aim statements for the same project. Aim statement 1: has a goal of reducing perineal trauma by 50%, has an end date, by June 2021. This aim statement, however, does not include the who or why or where for the improvement project. There is also no definition of what 'severe' means. **Faculty discussion prompt: Let's have a show of hands**: • who likes the first aim statement? • who thinks it requires work? Aim statement 2: provides us with more clarity of the 'who', 'why' and the 'harm'. It provides more of a story and pulls are the heart strings of why this improvement project needs to go ahead. **Faculty discussion prompt: Which of these aim statements would make you take part in the improvement work?**
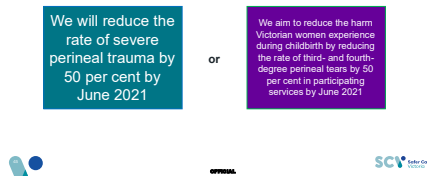
12:30	**Session 2 Slide 46 – Activity 5** **Aim statements** Activity 5: Writing an aim statement 1. In your workbook read your assigned case scenario. Scenarios have been assigned based on table number (for example, table 1 is doing scenario 1). 2. Collaborate with your group to review and refine the aim statement provided. Consider these questions: • What improvements can you make? • For whom or what? • How good? • By when? • Why? Pages 18-19 of workbook 15 Mins	**Faculty name:** **Session 2 Slide 46** **Time: 15mins + 15mins discussion/feedback** **Activity instructions:** Working through your assigned case studies, re-work the provided aim statement to ensure it includes all elements. Consider these questions: ● What improvements can you make? ● For whom or what? ● How good? ● By when? ● Why? **Faculty to facilitate discussion when group comes back** ● Ensure all groups write their aim statement on flip chart paper to present back to the group. ● Each group should provide their new aim statement. ● Provide feedback to ensure critical reflection and where adjustments are needed. The example aim statements for scenarios are in the participant workbooks and a summary is provided below.
	Faculty resource: Example aim statements for case scenarios.	Below are some examples aim statements. **Scenario 1: reduce falls** Example aim: We recognise the risk of serious harm caused by inpatient falls and aim to have reduced falls in Unit X by 20% by June 2023. **Scenario 2: improve attendance or reduce waiting time in clinic** Example aim: We want to improve your access to quality healthcare. By June 2023, will improve our processes to ensure that 80% of client bookings are seen within 10 minutes of their scheduled appointment time. **Scenario 3: reduce delays in theatre** Example aim: By April 2023, we will have improved our processes to achieve a 30% reduction in theatre delays ensuring more patients have their surgery when required. **Scenario 4: increase reports of care being what matters** Example aim: By October 2023, we will have a 50% increase in the number of patients reporting that care received in our organisation is consistent with what matters most to them. Note: When facilitating this session, it's important to get participants to complete each section of the template. Get participants to reflect back on who they identified as most affected in the improvement work from the earlier activity. Ensure the 'who' and 'why' are answered clearly in their aim statement.

Session 2 Slide 47 – Where to next?

Where to next?
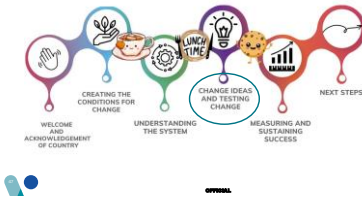
Session 2 Slide 47
Thank you for participating in QI in Action Session 2: Understanding the system. We have covered a lot of content including:

● Learning about our system and how to look at data to find common and special cause variation and how to display data to tell a story.

QI in Action Session 3: Change ideas and testing changes will now focus on:

● Working through the Model for Improvement to learn how to set an aim, come up with change ideas, and document and undertake PDSA cycles to test our ideas in the real world, under a variety of conditions.

Break time
Faculty note: Schedule a 15 minute break

Session 3: Change ideas and testing changes (1hr 35 mins)
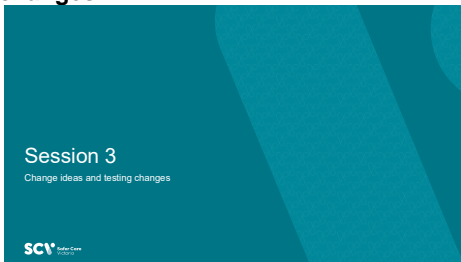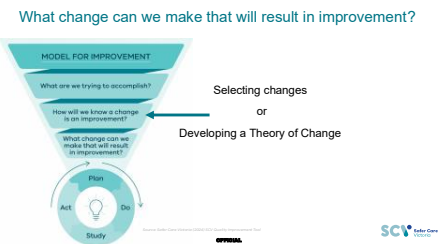
Sessions at a glance	Who?	How long?	Slides
Change ideas	Faculty	5 min	2-5
Theory of change	Faculty	10 min	6-10
Theory of change activity	Faculty and participants	20 min	11
Testing changes	Faculty	15 min	12-25
Activity 7: Coin spinning	Faculty and participants	25 min	26-28
Activity 8: PDSA scenario	Faculty and participants	20 min	29-30

Learning objectives for this session

At the end of this session participants will be able to:
- **Discuss the components of and rationale for using a Theory of Change in improvement work.**
- **Design a Theory of Change using visual tools.**
- **Identify key components of the Plan, Do, Study, Act cycle.**
- **Discuss the role of PDSA cycles in small scale testing of change ideas.**
- **Demonstrate documentation of PDSA cycle.**

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Slides for Session 3: Change ideas and testing changes

Time	Slides	Notes
1:30	**Session 3 Slide 2 – Change ideas and testing changes** Session 3 Change ideas and testing changes	**Faculty name:** **Session 3 Slides 2-30** **Time: 1hour 35mins** In this section we will cover: • How to generate change ideas. • How to depict your Theory of Change. • How to ensure your change ideas link back to your aim. • How to ensure rigor and robustness in your testing changes ideas through PDSA cycles.
	Session 3 Slide 3 – Model for Improvement What change can we make that will result in improvement? Selecting changes or Developing a Theory of Change	**Faculty name:** **Session 3 Slides 3-5** **Time: 5mins** **NOTE: Animation in slide** ● After developing an aim statement and goal, we need to work out what changes are required to get there. ● We are now looking at question 3 in the model, 'what changes can we make that will result in improvement?' ● It is all about articulating our Theory of Change – by this we mean articulating the assumptions, enablers, and evidence (as we understand it today) that surround the work and making explicit the activities we believe will lead to the outcome we're trying to achieve. *Source: Safer Care Victoria (2024) SCV Quality Improvement Tool*
	Session 3 Slide 4 – Theory of Change Why do we need a theory of change? Aims Change ideas	**Session 3 Slide 4** **NOTE: Animations in slide** **Ask Audience** How often do we in healthcare jump straight to our change ideas without thinking about when/where/why/how of our problem/system? **Key messages / talking points** ● A theory of change bridges the canyon between what we want to achieve (our aims) and our change ideas. ● Establishing a theory of change helps you to step back consider your aim and change ideas and to consider the system in which you work in to bridge between these 2 key items. ● Describing the connections between aims and change ideas will help drive the success/failure of your improvement activity. *Source: Image generated using Deep AI from the prompt picture of a canyon in the distance with a bridge 2025*

Session 3 Slide 5 – Change ideas

Generating change ideas

Session 3 Slide 5

NOTE: Animations in slide

Health professionals are good at coming up with change ideas, that is what we/health professionals are trained to do. We are problem solvers. Quality improvement asks you to step back, understand your system and work with others before jumping to solutions.
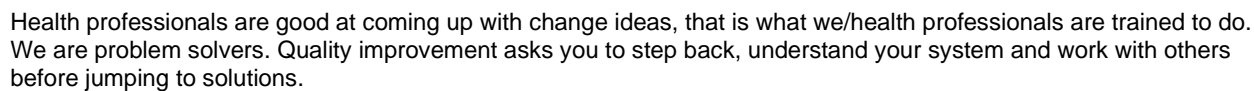
We can do this by using:
● The SCV QI toolkit: for example cause and effect diagrams or process maps to identify possible areas of change.
● Creative thinking exercises. [Share link with participants]
● Group brainstorming activities.
● And most importantly, ask the people using the system! People who use the system often are most likely the people with ideas for how to improve it.

Remember, what is important in Quality Improvement is ensuring your change ideas should link back to the aim/goal of your project. We do this by creating our theories of change.

Source: Photo 1370218 by Pxhere under license: https://creativecommons.org/publicdomain/
Source: UI of charts and graphs by Freerange under license: https://creativecommons.org/publicdomain/zero/1.0/
Source: Colourful cogs turning in a circle by theskorys under license: https://creativecommons.org/licenses/by-nd/4.0/deed.en
Source: Lightbulb with brain form by mqpaloma under license: https://creativecommons.org/licenses/by-nd/4.0/deed.en

1:35

Session 3 Slide 6 – Building your Theory of Change

Building a theory of change
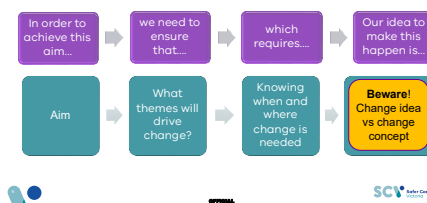
Faculty name:
Session 3 Slides 6-10
Time: 10mins

NOTE: Animation in slide

Building a theory of change
A Theory of Change states that:
- **In order to achieve this aim...** Clearly define the ultimate goal or desired change that you want to achieve.
- **We need to ensure…** Consider the high-level factors or themes that you need to influence that will help you achieve the improvement aim.
- **Which requires…** Determine when and where your efforts will have the most significant impact. Consider the specific contexts and settings where change is most crucial.
- **Ideas to make this happen…** Identify the key areas where change is needed to address the problem. Identify potential 'change concepts' and 'change ideas' that you can test to understand their influence.

When thinking about change ideas there are many ways to identify them.

It is always important to remember to interrogate your ideas to make sure that they are Change ideas and not Change concepts.... As many of you will be going forward to test change ideas – it is important to explore this difference a little more.

A theory of change takes us through the linkages from aim to change idea and back again.
- Firstly, what is the aim of the improvement work?
- Secondly, what are the high level themes (process, norms and structures) that will help us drive the change.
- Thirdly, when and where can we test our changes to see if they make an improvement.
- Fourth, what change ideas can we come up with to work towards our aim. We don't want to be making changes on something that won't have any impact on the aim of the project.

Session 3 Slide 7 – Theory of Change example

Theory of change example: **Reducing ED wait times**
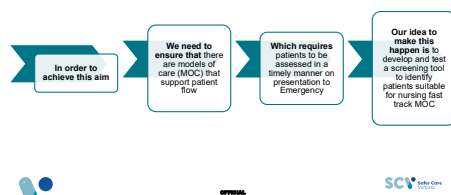
Session 3 Slide 7

NOTE: Animation in slide

- Here is a one-line example of a theory of change from the example.
- You can see here how a Theory of Change can be used to link a change idea (screening tool) logically and specifically to a place (ED presentation), to a need (MOC) right back to our aim.
- Consider using a real life example to aid understanding of the concept.

Session 3 Slide 8 – Change concept vs change idea

Change concepts vs. change ideas

Change concept	Change idea
Change concepts are general notions or approaches to change that are useful in developing specific ideas for changes that lead to improvement	Change ideas are **specific, actionable ideas** for changing a process. The things you can **specifically test** to see if they make a difference

'Improve communication in the team' is a **concept**

'Introduction of a weekly huddle' is a **change idea**

Session 3 Slide 8

NOTE: Animations in slide

When coming up with changes, it's important to understand the different between a Change concept and a Change idea.
- Change concepts can be used to help you come up with your change ideas.
- Change ideas should be actionable and able to be tested. Starting a change idea with a **verb** is a good way to ensure the idea can be followed through and actioned.

For example: If you are trying to improve sleep, a change idea would be 'charge phone in kitchen overnight' as opposed to a broad change concept like 'reduce technology use at night'.

Session 3 Slide 9 – Visualising your theory of change

Visualising your theories of change
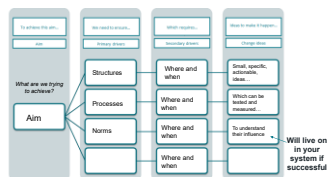
Session 3 Slide 9

Faculty discussion prompt:
- Hands up if you've heard of a Driver Diagram?
- Keep hands up if you've used a Driver Diagram?
- Keep your hands up if you felt you completely understood DD and how to use them the first time you heard about them?
- Did you instinctively read the DD from right to left (or vice versa)? Essentially it doesn't matter….

Key Teaching Points
- The driver diagram is a way of displaying visually what you believe will influence your aim.
- It is very rare for an improvement aim to be achieved by only 1 change idea. A driver diagram is a tool to show the display and organise the theories you have about how your change ideas will influence improvement fit together.
- Each pathway through your driver diagram is a different theory of change.
- As long as you start with the aim, any order is ok to create a driver diagram (left to right vs right to left).
- Should be created with a team including those who use or are affected by the system you wish to change.
- Don't get too excited with numerous primary drivers. If you have more than 3 or 4 it is likely you may need to look at the scale of the improvement you are trying to accomplish in your aim.

Primary drivers this can be a good way to start thinking about primary drivers, although not all primary drivers will fit neatly into these boxes. Essentially these are the major overarching themes that influence the aim.
- **Structures** = physical design of the space or product or even policy/governance structures (e.g. buildings, Computer software, equipment etc).
- **Processes** = workflow, how things are accomplished, what steps are taken in what order.
- **Norms** = written and unwritten rules that govern the behaviour of the people in the system "the way we do things around here".
- It can sometimes be useful to cluster your change ideas to help identify some of the key overarching themes or primary drivers.

Secondary Drivers – The where, when, and who
- In other words, what are our ideas for change, when and where will these need to occur and what major themes/factors do they support toward achieving our aim.

The thing to remember about driver diagrams is that they are living theories – the whole purpose is to map your initial theory, test ideas and update it if needed. They don't have to remain 'set in stone' if evidence emerges for new change ideas. NOT CHANGING TOO OFTEN.

Session 3 Slide 10 – Example Theory of Change
 	
	Session 3 Slide 10
	
	NOTE: Animation in slide
	
	Ok let's look at an example of how to display a theory of change.
	
	Driver Diagram Example: Reducing Emergency Department Wait Times
	Discuss primary & secondary drivers & change ideas in context of this example
	● **Primary Drivers:** ED wait times are influenced by level of hospital occupancy, how many people are presenting to ED & the models of care being used.
	● **Secondary Drivers:** The where and when / the timepoints of the system that we can act at / target our change ideas.
	    ● They decided on Discharge, Admission, presentation and before presentation.
	● **Change Ideas:** Can link to multiple primary and secondary drivers, as a team.
	    ● They came up with some change ideas they could test including referral to network hospitals, changes to models of care, cares plans to fast track diagnostics and virtual appointments.
	
	Discussion Points
	● A driver diagram communicates multiple theories of change.
	● Each pathway through the driver diagram from aim to change idea represents an individual theory of change.
	    - This is highlighted by the animated circling the example theory of change from earlier in presentation.
	
	Source: Safer Care Victoria (Canto) 2024

1:45 **Session 3 Slide 11 – Activity 6** **Build your Theory of Change.** 	**Faculty name:** **Session 3 Slide 11** **Time: 15mins + 5mins discussion/feedback** Working through your assigned case studies. Construct a theory of change using the driver diagram template **Activity instructions:** Continue on with your case scenarios 1. Start with the aim statement you created earlier. 2. What are your change ideas? Get creative and make sure they are change ideas – not change concepts. 3. Group your change ideas into themes. We have provided you with some prompts for themes – please change, remove, and add themes of your own! **Faculty to facilitate discussion when group comes back** Prompt groups/tables to consider ideas from perspective of different 'hats'. For example, consider consumer/patient: 'what ideas do you think you might have as a patient'. Interrogate whether change concepts or change ideas have been added. Emphasise the importance of engaging with different expertise and experience as well as working together.

2:05	**Session 3 Slide 12–13 – Testing changes**	**Faculty name:** **Session 3 Slides: 12-25** **Time: 15mins** Now that we have our change ideas, we need to test them in our real-world environment to collect information on whether we should adopt, adapt, or abandon our idea.
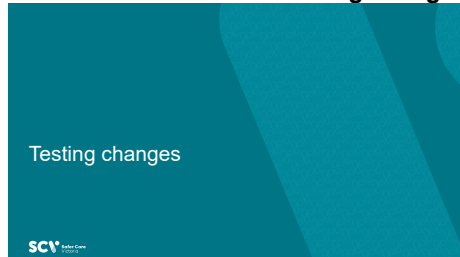
Testing changes

Session 3 Slide 13 - Execution

How can we achieve improvement?
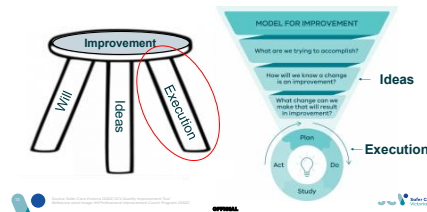
Session 3 Slide 13

Even if we answer all three questions in the Model for Improvement there is an important element that is needed. The doing. We might have Will for change, Ideas of what needs to change, but without any doing or action we will never see any results!

When we consider where the "Plan Do Study Act (PDSA)" cycle fits in out broader improvement work, it's about execution – the doing. The PDSA cycle is the machine of our improvement work.

The stool is another way of looking at three important considerations for when we are doing improvement work: What this image of the stool is saying is….
- Will – Is there a 'will' for the improvement and is there enough? Does this topic matter to people?
- Ideas – What new things will you test and try. What are the things you are trying to create?
- Execution – How will things get done? What needs to happen for action and how do you make your change ideas a reliable part of your system and ensure they do result in improvement?

Source: Safer Care Victoria (2024) SCV Quality Improvement Tool
Reference stool image: IHI Professional Improvement Coach Program (2023)

Session 3 Slide 14– 15 – Typical approach

Typical approach

Design → Approve → Implement
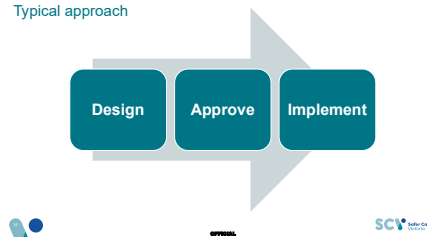
Session 3 Slide 14

- A traditional approach to improvement often involves people who may be distant from the problem, coming up with a solution or designing a change, and then implementing the change.
- I wonder if this sounds familiar to any of you?

Faculty discussion prompt: Think of a time in your organisation when change has occurred. How many of those doing the work or who benefit from the work were part of the design process? What were the outcomes?

Session 3 Slide 15 – QI approach
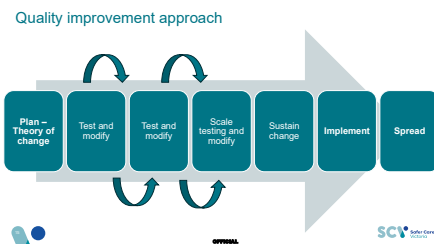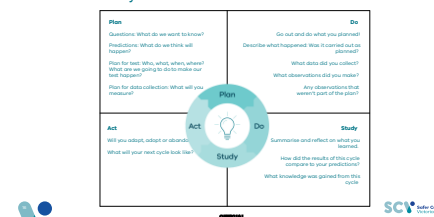
Session 3 Slide 15

- In QI, we know that if we don't test – we don't learn!
- Using a QI mindset, we want to start with small scale tests in the real world to learn about and get feedback from the system we are trying to change.
- PDSA cycles are our vehicle for testing and modifying the change in the real world before investing in widespread implementation. These cycles provoke the system and generate learning and data about what is the best approach in a particular context.
- By testing in your system, you can understand what conditions influence if your change idea works or doesn't work and so you can learn how to adapt them.
- Testing helps to build your degree of belief that the change idea will work and what needs to be considered for it to work before starting to scale and spread.

Session 3 Slide 16 – PDSA

Session 3 Slide 16

NOTE: Animations in slide

Key points:
- A PDSA cycle is a process that gives structure to testing your change ideas and can be used as a decision aid to determine your next steps: Based on what you have learned in your test, will you adopt, adapt, or abandon your change idea?

PDSA cycles have 4 steps.
- **[CLICK] Planning phase**: we want to test our change idea. In this step we want to make a prediction as to what will happen during the 'do' phase. What do we think will happen if we introduce this change? We want to plan for when and where the test will occur and who with and most importantly what data or information are we going to collect during the test. In a PDSA you are wanting to measure the effectiveness of a single change idea so makes sure to identify what measures you will use to do this. (PDSA measures are different from your overarching program measures (or Family of Measures) – as these measure the progress and outcomes of multiple change ideas).
- **[CLICK] Do phase**: carry out the testing and describe what happened during the test and what your observations were. Did it go to plan? Were your predictions correct? What data did you collect?
- **[CLICK] Study phase**: during the study phase we want to summarise and reflect on what we learnt. What knowledge did you gain from this cycle to help you inform the next? What can you tell from the test about how this change idea might help influence how you can achieve your aim?
- **[CLICK] Act phase**: PDSA cycles must result in a decision about next steps. Once we have our data from our test, we need to make a decision. Will you adapt the change, adopt the change or abandon it altogether? If you are adapting, what change will you make during the next test?

Session 3 Slide 17 – Robust testing	**Session 3 Slide 17**
Robust testing under a variety of conditions	- We do PDSA cycles to give our testing more rigor and ensure we have robust learning from the tests. - Robust testing includes running tests in a variety of conditions over time and generating new knowledge that is built sequentially over time. Looking at the tree in the image here, as it grows it is tested under the conditions of each season and adapts how it grows and thrives over time. - As the learning is coming in, teams decide if it makes sense to increase the complexity of their tests over different areas, or with new conditions including looping in different staff, providers, testing at different times of day/days of the week etc. *Source: Um, perfect by Flickr under licensee: https://creativecommons.org/licenses/by/2.0/*
Session 3 Slide 18 – Small-scale testing	**Session 3 Slide 18**
Small-scale testing People Time Location	**Key points:** When we start testing, we want to go small, small scales means we can test in the real world and gain knowledge that we can apply in real time to the next test. The main building blocks of our systems are people, time, location. So, when you are trying to scale back, you are often scaling back one of these components. It is important to keep asking yourself when planning your PDSA cycles: How small can we go? Example: Change idea might involve wanting to include assessment tool during admissions. Instead of investing all your time to develop the full tool, write the questions/assessment tasks down on a piece of paper and ask 1 willing person to give it a go. Get some feedback about the wording, usefulness, experience, and adapt it for your next test. As a general rule your first PDSA cycles should be as small as: - One person - One shift - One ward Then build in complexity to the conditions you are testing under as you learn more and build your degree of belief in the change idea and how it works. *Source: A group of people by AI Emojis under license: https://creativecommons.org/licenses/by-nd/4.0/deed.en* *Source: Clock by AI Emojis under license: https://creativecommons.org/licenses/by-nd/4.0/deed.en* *Source: Map with a pin by AI Emojis under license: https://creativecommons.org/licenses/by-nd/4.0/deed.en*

Session 3 Slide 19 – Are changes working?

Are your change ideas working?

Utilise measures for each PDSA cycle so you can:

– assess the impact of a specific change or intervention

– help teams understand whether the planned change resulted in the desired improvements

– inform further adjustments in subsequent cycles

Session 3 Slide 19

- PDSA measures are small-scale measures designed to assess the impact of a specific change for an individual PDSA cycle.
- These measures will help guide your decision-making about your future PDSA cycles.
- Will you adopt, adapt or abandon your change idea?

Source: Question mark by Flickr under license: https://creativecommons.org/licenses/by-nc-nd/2.0/

Session 3 Slide 20–21 – Example

Example of a completed driver program
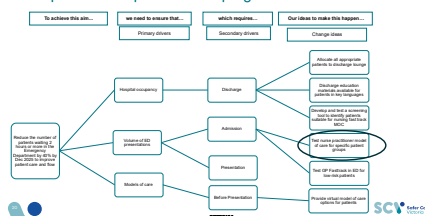
Session 3 Slide 20

NOTE: Animation in slide

- In this example: the team have decided to test a new model of care with a nurse practitioner (NP) for specific patients.

Source: Safer Care Victoria (Canto), 2024

Session 3 Slide 21 - Documentation

Documenting your PDSA cycle

Session 3 Slide 21

- Documentation of a PDSA cycle can be as simple as this four-box table, or as complex as a multi-page form – whatever is most meaningful to your team.
- Ensure you complete each section, including the prediction of what you think will occur during the test.
- Completing each section is helpful for telling your story but also, if for some reason you move on or need to go back and review why certain changes did or didn't work, you will have evidence and documentation. It leaves a paper trail for others to follow.

- **PLAN**: In this example the team are testing the NP model of care with low risk patients with 1 nurse on a Tuesday morning shift. They have identified the data they want to collect and their prediction of what will happen.
- **DO**: The team then document what happened on the day, what data they observed and collected e.g pts, time to be seen, outcome.
- **STUDY**: What was learnt from this test was then documented in the study section.
- **ACT**: This is where your decision for the next test will occur. Using the data and learnings, will you adopt, adapt or abandon this idea? This team saw the test as a success and have decided to adapt and change the time of the clinic to after hours.

Session 3 Slide 22 – Goals of PDSA Measures

Goals of PDSA measures

PDSA Measures

- Measures that are employed during each iteration of the PDSA cycle
- Assess the impact of a specific change or intervention
- Help teams understand whether the planned change resulted in the desired improvements and inform further adjustments in subsequent cycles

Session 3 Slide 22

- When we are measuring our PDSA cycles, our measures are specific to the continuous improvement process and are focused on assessing the effectiveness and impact of individual changes or interventions within that process and test. They have a much smaller and specific scope than project measures.
- In PDSA cycles, measurement is taken immediately after an idea or change has been tested, or in real-time.
- Remember, your PDSA cycles are helping you build your degree of belief in a change idea and to understand the conditions in which it is most effective.
- We will discuss project measures in another section of QI in Action to help you to understand the effectiveness and impact of multiple change ideas and how their implementation is helping to achieve your aim.

Session 3 Slide 23 – Documenting your PDSA measure

Documenting your PDSA measure

No. Pts seen by NP

Wait time when NP clinic running

Pts – patients
NP – nurse practitioner

Session 3 Slide 23

- Along with documenting your cycles in the PDSA template, it can also be a good idea to monitor your PDSA results in a run chart.
- Monitor for changes/patterns/signals of change in your data to see the impact of your change ideas.
- In this example the team measured both, number of patients seen by the NP and what wait time looked like at the corresponding times the NP model of care was operational.
- In this example, these 2 measures would form part of this project's family of measures – however this is not always the case. You will have measures that will be specific to a PDSA cycle or ramp that may not be included in the family of measures.
- For example, a PDSA measure would be how you test/understand the effectiveness of questions used on a new admissions form. Your project measures would likely measure the implementation progress and outcomes once the form is implemented.

Session 3 Slide 24– 25 – Scaling and spreading

Plan-do-study-act

MODEL FOR IMPROVEMENT

What are we trying to accomplish?

How will we know a change is an improvement?

What change can we make that will result in improvement?

Session 3 Slide 24

NOTE: Animation in slide

- PDSA cycles are the engine of the Model for Improvement.
- Where the work and learning is done.
- Is this about developing (designing) a change/testing a change/or implementing/spreading a change?
- The diagram shows one cycle, but in reality, we undertake many, many cycles for improvement work **[CLICK]**
- We may start with information gathering to help us work out what we could change. For instance, we, might go and watch the process or get some simple data. Next, we carry out a very small-scale test, and then we gradually build and test in different conditions until we are ready to implement.

Source slides 24-25: Safer Care Victoria (2024) SCV Quality Improvement Tool

Session 3 Slide 25 – Ramping

Improvement sequence

Change that results in improvement

Implementation of change

Large scale tests of change

Small scale test of change under a variety of conditions

Very small scale test

Theory of change

Session 3 Slide 25

- As we collect information about our system, our confidence in this change idea grows and we can continue to learn and test under different conditions and increase in complexity and scale as part of the process.
- This is PDSA ramping.
- The idea of a ramping is to take us from ideas we think might work and build our degree of belief that they will work, by doing a series of tests.
- We may start with information gathering to help us work out what we could change. For instance, we, might go and watch the process or get some simple data. Next, we carry out a very small-scale test, and then we gradually build and test in different conditions until we are ready to implement.
- The SCV QI toolkit has a section and template for PDSA ramping you may wish to refer to after this program.

2:20	**Session 3 Slide 26 – 27 – Activity 7**
	PDSA coin spinning
	
	Activity 7: Coin spinning
	
	Improvement goal: To achieve a coin spin that lasts no less than 10 seconds
	
	Group change ideas:
	What ideas **might you want to test that will impact the length** of the spin?
	
	Page 26 of workbook
		Faculty name:
		Session 3 Slide 26-27
		Time: 15min + 10min discussion/feedback
		
		Practicing documenting PDSA cycles with coin spin.
		● Our improvement goal for this activity is: To achieve a coin spin that lasts no less than 10 seconds.
		
		Faculty discussion prompt: If we are to achieve this, what ideas might you want to test that could impact the length of the spin?
		
		Faculty activity note: explain the activity before they start spinning coins.
		● Each table should have:
		   ● 1 bag of coins,
		   ● 1 A3 run chart and
		   ● 2 PDSA templates.
		● Example documentation can be found in the participant workbook.
		
		Faculty note: Insert an image to the slide to enhance understanding of the activity.

	Session 3 Slide 27 – Coin spinning Activity 7: Coin spinning **Pages 27-29 of workbook** **15 Mins** **How to play:** 1. Assign roles (Person/Timekeeper/Data collector) 2. Decide on coin, spinning technique, person and surface 3. Start spinning and get your baseline data 4. Document your PDSA cycles on your PDSA and run chart templates. Don't forget to make a prediction for each test! **PDSA Cycles** **Cycle 1:** Baseline 10 spins **Cycle 2: Change first variable** • Change one variable (coin/technique/person/surface) • Make your prediction • Test for five spins • Decide if you want to adapt, adopt or abandon your change? **Cycle 3: Make second change** • Change one of coin/technique/person/surface • Make your prediction • Test for five spins • Decide if you want to adapt, adopt or abandon your change? Make sure you document your PDSAs on your PDSA Template and spin times on your run chart	**Session 3 Slide 27** **Activity instructions:** ● Document your PDSA cycles on your PDSA and run chart templates. ● Assign roles (Who is the Person/Timekeeper/Data collector). ● Decide on specifics of what they are testing (which coin, spinning technique, person/spinner and surface etc). ● Start spinning and generate your baseline understanding of your spin length. Do 10 spins to get your baseline. ● Then start making changes! Decide the change you will test, make a prediction of what it will achieve and test that change for 5 spins. **PDSA Cycles:** Cycle 1: Create a baseline of 10 spins – document on run chart graph and in table. Cycle 2: Change one variable (coin/technique/person/surface). ● Predict what the outcome of your change will be. ● Test for five spins. ● Decide if you want to adapt, adopt or abandon your change? Cycle 3: Make second change. ● Predict what the outcome of your change will be. ● Change one of coin/technique/person/surface. ● Test for five spins. Decide if you want to adapt, adopt or abandon your change? **Faculty call out timing to keep on track:** ● First 5 min – baseline data ● Second 5 min – change 1 ● Third 5 min – change 2. **Faculty to facilitate discussion when group comes back**

	Session 3 Slide 28 – Reflect	**Session 3 Slide 28** **NOTE: Animations in slide**
	Time to reflect • What did you learn? • Did you stick to your plan? • Did you measure the way you intended to? • How did you respond to your data? • Were you testing to prove yourself right? • Did you reach a new level of performance? • Were your results sustainable?	• Participants to reflect on the process using the questions on the slide as a guide for discussion. **Faculty discussion prompts:** a sample of questions to prompt reflection: • What was that like? • Did it accelerate learning? • Did you want to disregard any tests? • How did you decide when to start and stop the coin spin? • Did everyone do it the same way? (importance of operational definitions) *Source: Photo 1403206 by Pxhere under license: https://creativecommons.org/publicdomain/*
2:45	**Session 3 Slide –29 – Activity 8 PDSA scenario** Activity 8: PDSA scenario Continue with your scenario. You have been given a change idea and an associated PDSA cycle. As a group discuss your PDSA cycle scenario and how you will make decisions about your next testing steps. • Will you adopt, adapt or abandon • What will your next test look like? **Pages 31-37 of workbook** 15 Mins	**Faculty name:** **Session 3 Slide 29-30** **Time: 15min + 10min discussion/feedback** **Activity instructions:** • Use the pre-filled out PDSA examples from your scenarios. *[NOTE You can use the scenarios provided below or create your own scenarios using the PDSA form in the SCV QI Toolkit for this activity]* • Each team have a change idea to document. • Based on the information, would you recommend they adopt, adapt, or abandon the cycle? • What would your plans be for the next cycle? **Faculty note:** • Ensure each group has the opportunity to provide feedback. • Summarise change they tested and key info that helped them to decide whether they adopted, adapted or abandon the next test. • Summary of each PDSA Scenario is in the faculty guide.
	Session 3 Slide 30: PDSA form PDSA form	**Session 3 Slide 30** • This is what the example looks like in the workbooks for this activity. • You have now used several different ways to document your PDSA cycles from the simple quadrants, the form, and run charts.

Session 3 Slide 31 – Where to next?

Where to next?

Session 3 Slide 31
- Thank you for participating in QI in Action Session 3: Change ideas and testing changes. We have covered a lot of content including:
- Working through the Model for Improvement to learn how to set an aim, come up with change ideas, and document and undertake PDSA cycles to test our ideas in the real world, under a variety of conditions.

QI in Action Session 4: Measuring and sustaining success will now focus on:
- Learning about an improvement project's family of measures that help measure the impact our theory of change is having in the system.
- And finally, we will touch on how to sustain our change.

Break time
Faculty note: Schedule a 15 minute break

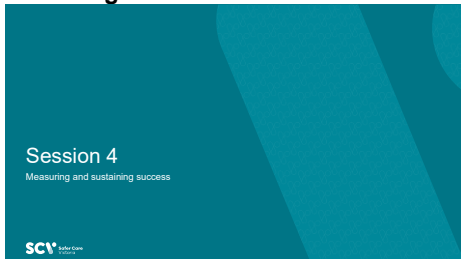| Faculty Resource – Scenarios	
	Scenario 1: Reducing/preventing falls Cycle: 1 Change idea: Identify patients who are high risk of falls with a coloured wrist band. Things they did well: ● Tested on one day, with one nurse at a particular time. Talking points: ● What did the team think of the change idea? ● Will it make an impact to the system? ● Would you collect any other data? Suggested outcome: Adapt
	Scenario 2: Improving attendance/reducing time waiting for appointment Cycle: 3 Change idea: Adding an optional telehealth appointment selection for patients attending follow-up clinic. Things they did well: ● Tested on different types of appointments to collect data. Talking points: ● Are there alternatives when having technical issues? ● Would you collect any other data? Suggested outcome: Adapt
	Scenario 3: Reducing theatre delays Cycle: 1 Change idea: addition of fasting brochure added to pre-op theatre pack. Things they did well: ● Addition of information in pre-op pack Talking points: ● Team went straight to testing on a whole theatre list. Suggested outcome: Abandon
	Scenario 4: Improving care to be more consistent with what matters to a patient Cycle: 5 Change idea: imbedding 'what matters to me' into nursing handover form. Things they did well: ● Tested multiple other versions. ● Trialling in one ward only. Talking points: ● Suggest different data collection measures. Suggested outcome: Adopt
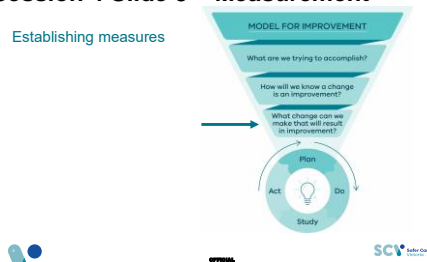
Session 4: Measuring and sustaining success (40 min)

Session at a glance	Who?	How long?	Slides
Measurement	Faculty	15 min	3-12
Activity 9: Family of Measures	Faculty and participants	20 min	13-14
Sustainability	Faculty	5 min	15-18

Learning outcomes for this session:

At the end of this session participants will be able to:
- **Identify different measures for a project and how to construct a Family of Measures.**
- **Understand the difference between PDSA measures and Family of Measures.**
- **Discuss strategies and measures to help QI projects sustain improvement.**

Slides for Session 4: Measuring and sustaining success

Time	Slides	Notes
3:20	**Session 4 Slide 2-20 Measuring and sustaining success** Session 4 Measuring and sustaining success SCV Safer Care	**Faculty name:** **Session 4 Slide 2** **Time: 40mins** ● Our final session is on how we know our changes are making a difference and what things to consider when we want our improvement to be sustained.
	Session 4 Slide 3 – Measurement Measurement SCV Safer Care	**Faculty name:** **Session 4 Slide 3-12** **Time: 15mins** ● Once we have defined what we are going to improve and then set our aim, we need to establish measures to know if the changes we make lead to an improvement. Measures are indicators of change. To answer this key question ("How will we know that a change is an improvement?"), several measures usually are required. These measures also can be used to monitor a system's performance over time.
	Session 4 Slide 3 – Measurement Establishing measures MODEL FOR IMPROVEMENT What are we trying to accomplish? How will we know a change is an improvement? What change can we make that will result in improvement? Plan / Act / Do / Study OFFICIAL SCV Safer Care	**Session 4 Slide 4** ● Linking back to the Model for Improvement, we measure to answer the questions 'how will we know that a change is an improvement?' *Source: Safer Care Victoria (2024) SCV Quality Improvement Tool*

Session 4 Slide 5 – Goal of family of measures

Goal of family of measures

Project measures / family of measures

- Assess overall performance and success of a project
- Align with the project's aim
- Provide a high-level view of whether the project is meeting its intended outcomes and objectives

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Session 4 Slide 5

- We have discussed measuring the effectiveness of PDSA in Session 3, lets now focus on the family of measures and how they are different.
- Project measures (our family of measures) and measures used for a PDSA cycle are both related to the quality improvement processes, but they serve different purposes within the broader field of project management and continuous improvement.
- Project measures provide an overall assessment of a project's success.
- In most quality improvement projects, there will be several change ideas/PDSA measures feeding up into the family of measures to make an impact to the system at large.
- Your project measures help you to understand the effectiveness and impact of multiple change ideas and how their implementation is helping to achieve your aim.

Session 4 Slide 6 – Data collection

Data collection and measurement

Aspect	Improvement	Judgement for accountability	Clinical research
Aim	Improvement of care process, system and outcomes	Judgement, choice , reassurance, spur for change	New generalisable knowledge
Testing strategy	Sequential tests, observable tests	No test, evaluate current performance	One large test, blinded test
Bias	Accept consistent bias	Measures and adjusts to reduce bias	Design to eliminate bias
Sample size	'Just enough' data, small sequential samples	Obtain 100% of available and relevant data	'Just in case' data
Hypothesis	Hypothesis flexible; changes as learning takes place	No hypothesis	Fixed hypothesis
Determining if change is an improvement	Run charts; Shewhart Charts	No focus on change	Hypothesis tests (T-tests, F-tests, Chi-square), p-value
Confidentiality of data	Data used only by those involved in Improvement	Data available for public consumption	Research subject's identities protected

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Session 4 Slide 6

Not all measurement is the same but all approaches to measurement are valuable if used in the right context. This table looks at three of the main reasons we might collect data in healthcare.
- Measurement for improvement
- Measurement for judgement/accountability
- Measurement for clinical research

In health care, people are often more familiar with measurement for performance (accountability) or research.

Some of the important distinctions between data collection and measurement for improvement and the other two categories include:
- Improvement work is more accepting of bias. Improvement work seeks to test, learn and apply changes in the real world. The real world is messy and we need to embrace and work with the reality of messiness in our improvement work.
- Data for improvement projects need to stay practical and try to reduce the burden of data. We don't want the balance of work to be weighted in collecting the data and not actually focused on testing changes and improving the system.
- Improvement involves lots of little sequential tests that we adjust as we learn. Things change – but we need to systematic and structured in documenting what we learn and how that learning influences decisions to adapt or adopt changes.
- In improvement work our hypothesis is flexible based on what we learn along the way.
- Our sample size is 'just enough' rather than seeking a large data set.
- Improvement work involves real time analysis during change.
- The focus is on preventing an identified problem from occurring, rather than more structured research to explore and explain why the problem occurred.
- Ethics requirements for improvement work: You should always be guided by the ethics requirements of your organisation. Often ethics for improvement work are less complex as clinical trials/research, but it is important to ensure your work complies with local ethics requirements.

Reference: Lief Solberg, Gordon Mosser and Sharon McDonald. The Three Faces of Performance Measurement: Improvement, Accountability and Research. Journal on Quality Improvement vol. 23, no. 3, (March 1997), 135-147

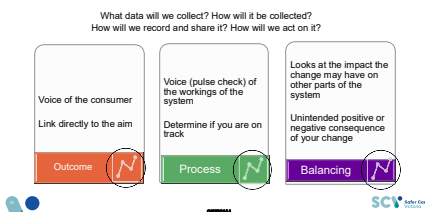|	

Session 4 Slide 7-8 – Why data
 	
How will we know change is an improvement?
 	
'All improvement requires change, but not all change leads to improvement'
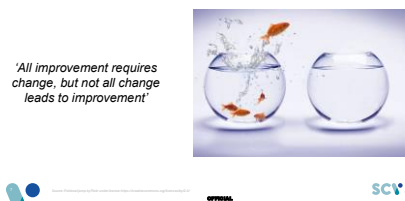 	
	Session 4 Slide 7
	
	Key points
	Measurement is critical to generate learning.
	● Good measurement will help prevent ineffective 'busy work'.
	
	Measurement will help us determine:
	  - Is this change making a positive impact?
	  - What is the best next action to take?
	  - Are we on track to meet the aim of our project?
	  - Are we making a difference?
	
	Source: Fishbowl jump by Flickr under license: https://creativecommons.org/licenses/by/2.0

Session 4 Slide 8
 	
Data
 	
	Session 4 Slide 8
	
	Key points:
	● Without data you are just another person with an opinion.
	  ● Perception of what is occurring in a system is impacted by recency, bias and emotion. For example, there can be assumptions made about frequency and impact of a perceived problem where data might show the opposite.
	  ● Measurement is critical for an objective view of complex systems.
	  ● Importance of both qualitative and quantitative data to inform you measurement
	
	Source: Without data you're just another person with an opinion by Sketchplanations under licence: https://sketchplanations.com/without-data Licensed under a Creative Commons 4.0

Session 4 Slide 9 – Family of Measures Family of measures 1 Outcome measures 2 Process measures 3 Balancing measures	**Session 4 Slide 9** When thinking about measurement in improvement, there are a Family of Measures that we are interested in. ● Outcome measure ● Process measure and ● Balancing measure We will talk about the definitions on the next slide.

Session 4 Slide 10 – Family of Measures

Family of measures: Three levels of measurement

What data will we collect? How will it be collected?
How will we record and share it? How will we act on it?

Session 4 Slide 10
Key points:
Improvement work involves developing and collecting outcome, process and balancing measures.

Outcome measures: Typically represent the voice of the consumer, relate directly to your aim and help determine if you are achieving your intended outcome (e.g. percentage of patients experiencing diabetic foot ulcers).
● *You would normally have 1 or 2 outcome measures for a project.*

Process measures: Help you determine if you are doing the right thing to achieve your outcome measures. Like a pulse check on the inner workings of your system, they help you understand the voice of the system and determine if you are on track (percentage of patients with completed risk assessments).
● *You would normally have 3-5 process measures.*

Balancing measures: Help determine if changes in one part of the system are impacting another part. They are defined at the start of the project and measured throughout the life of the project. They identify the unintended positive or negative consequences to the system (e.g. staff workload).
● *You would normally have 1-2 balancing measures.*

Measurement also requires a clear data collection strategy. Make sure you plan for the data collection and analysis of your family of measures from the outset.
● What data will we collect?
● How will it be collected?
● How will we record and share it?
● How will we analyse it?
● How will we act on the analysis?

Reference: IHI Professional Improvement Coach Program (2023)

Session 4 Slide 11-12 – Example scenario

Aim: Reduce number pressure injuries resulting in harm of high-risk patients over 65 on ward W by 20% within 12 months
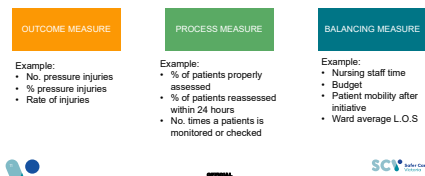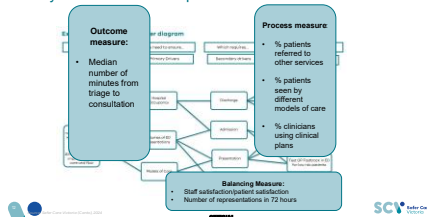
Session 4 Slide 11

● In this health-related scenario we can see how the outcome measures, process measures and balancing measures link back to the aim of the improvement project.
● The aim is to reduce the number of pressure injuries. The outcome measure could therefore be the number of pressure injuries or the percentage of pressure injuries or the rate of injuries.
● A process measure can see if we are on track with our improvement. In this example, a process measure could be the number of patients monitored or checked, or the percentage of patients reassessed in 24 hours.
● A balancing measure looks at the impact to the system, including the impact on budget or time spent by nursing staff undertaking the assessments.

Reference: IHI Professional Improvement Coach Program (2023)

Session 4 Slide 12 – Family of measures example

Family of measures example

Session 4 Slide 12

NOTE: Animations in slide

In our example from the driver diagram from session 3, in our theory of change we have:
Outcome measure: median numbers of minutes from time of triage to consult.

Process measures:
● % patients referred to other services
● % patients seen by the different models of care with the department
● % clinicians using clinical care plans

Balancing measures:
● Patient and staff satisfaction
● Numbers of representations within 72 hours

PDSA measure:
● Would be related to your specific change ideas
● Note: what you are testing in your PDSA – when you get to a certain point, then it will feed into process measures and your large project. E.g % of pts participating in the change.

Source: Safer Care Victoria (Canto), 2024

3:35	**Slide 13 – Activity 9 Family of Measures**	**Faculty name:** **Slide 13** **Time: 10mins + 5mins** **Allocate each measure to either an outcome, process or balancing measure.** **Activity instructions** Continuing with your case scenario, we have provided you with a list of scenario specific measures. As a group, allocate each measure to its appropriate category: ● Outcome measure ● Process Measure ● Balancing Measure If you have time, consider what other measures you might want to include or whether you would change any of the ones provided. **Faculty notes:** Bring group back together to go through answers on slide 14. Note: This activity can be made more interactive if the measures are printed out on cut-out cards and participants can move them to the correct category.

| Session 4 Slide 14 – Activity Family of Measures answers	Session 4 Slide 14
Activity 9: Family of measures	**Note: This is the solution for measure category activity (slide 13)** Run through the correct answers for each scenario. **Faculty discussion prompt**: Ask if any of their answers were different or whether they added any measures? Ask for explanations about why they added/changed or chose a different category. (*A summary of the case scenario provided measures is also provided in the Faculty Guide section for this slide*) **Key point**: - The solutions provided are not set in stone. It is important that a discussion is had about the differences, and reasons why people chose categories to embed learning about what each of the measure categories means (outcome, process and balancing).
Faculty resource: Scenario examples	Below are some examples of other measures for each scenario. **Scenario 1: Reducing/preventing falls.** Outcome measure: Number of falls/months on ward X Process measures: • Percentage of patients who have documented falls management plan in EMR/Medical file • % patients with falls assessment completed • Balancing measure: Number of pressure injuries **Scenario 2: Improving attendance/reducing wait-time for appointment.** Outcome measures: Percentage of appointments attended per week Process measures: • Number of follow-up calls made per week • Time in waiting room from arrival to seeing the doctor • Balancing measures: Staff satisfaction **Scenario 3: Reducing theatre delays.** Outcome measure: % of patients that have surgery on the day booked Process measures: • % of patients that received fasting information • % of cancelled surgeries Balancing measure: Surgery waitlist times **Scenario 4: Improving care to be more consistent with what matters to a patient.** Outcome measure: Weekly % of patients that report on discharge that care is consistent with that they said mattered most to them. Process measure: • % of patients with documented care plans that include what matters to them • % of patients/families being asked 'what matters to me?' Balancing measure: Time spent doing handover at bedside

Session 4 Slide 15-18 – Sustainability
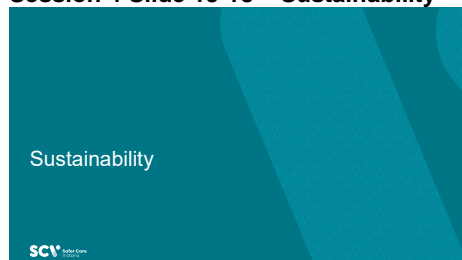

Faculty name:
Session 4 Slide 15-18
Time: 10mins

- In our final section, we will discuss what mechanisms and processes are needed to make change stick.
- If we are working hard to test and learn how to improve our systems and the outcomes we can achieve, we also need to be thinking about we can prevent our achievements from slipping back into the way things were.
- For example, often people are exposed to improvement work as part of a professional development program or on a rotation and then move on and the learning may be lost.
  - But there are ways we can ensure that the hard work of the team can be sustained.

Session 4 Slide 16 – Sustainable level of performance
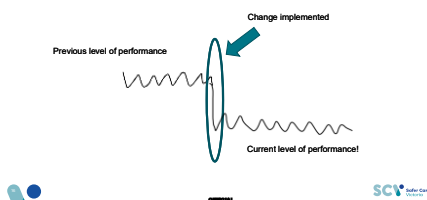
Session 4 Slide 16

Post-implementation of our theory of change, we would hopefully be able to distinguish our previous level of performance from our new, current level of performance.
- Sustainability is all about maintaining that new level of performance after the change has been implemented.
- We need to continue to monitor performance over time to determine if a change has been sustained.
- As with any system, there will be fluctuations in performance due to random variation and as mentioned earlier we don't want to react to at any slight uptick or deterioration in performance after our change.
- It is important to not celebrate too early. We want to avoid drawing conclusions from a 'sugar hit' a short-term spike in improved performance before it returns to the previous level of performance.

Session 4 Slide 17 – Testing changes into the big picture

Session 4 Slide 17

This program is focused on building your foundations level skills for quality improvement.
At this foundations level you will be conducting you PDSAs and testing your change ideas at a small scale. This can often feel very removed from the lofty goals or changes you want to see happen in your system.

Let's look at some ways to starting small contributes to the bigger picture:

Iterative Learning

- **Small Scale:** By implementing incremental changes and running small PDSA cycles, teams can observe the immediate impact of these changes and learn from the results. It is important to remember – "from little things big things grow", chances of integrated sustained change is enhanced by testing small and building a degree of belief in our change ideas.
- **Bigger Picture:** The iterative learning process allows organizations to accumulate knowledge and insights over time. This knowledge can then be applied to larger-scale improvements and strategic initiatives.

Risk Mitigation

- **Small Scale:** Testing changes on a small scale helps identify potential risks and unintended consequences in a controlled environment.

- **Bigger Picture:** Mitigating risks at a small scale minimizes the chances of major disruptions when implementing changes organization-wide. It enhances the likelihood of successful and sustainable improvements

Engagement and Collaboration

- **Small Scale:** Involving frontline staff and consumers in small-scale testing fosters engagement and collaboration, as they become active participants in the improvement process.
- **Bigger Picture:** A culture of continuous improvement is cultivated throughout the organization. Employees at all levels and consumers can feel empowered to contribute ideas and solutions, creating a collaborative and innovative environment.

Data-Driven Decision Making

- **Small Scale:** Running small PDSA cycles involves collecting and analysing data to inform decision-making.
- **Bigger Picture:** The data generated from small-scale tests provide a foundation for evidence-based.

Culture

- **Small Scale**: Involving frontline staff and consumers in small-scale testing fosters a culture of continuous improvement at a local level.
- **Bigger Picture:** Builds organisational culture for continuous improvement.

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Source: This is the real red button by Flickr under licenase: https://creativecommons.org/licenses/by-nc/2.0/
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Source: Dashboard Week Day 1 – Analysing Stock Performance on ASX by the data school under license:
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Source: Colorful people png holding hands by raxpixel under license: https://creativecommons.org/publicdomain/zero/1.0/

Session 4 Slide 18 – Sustainability
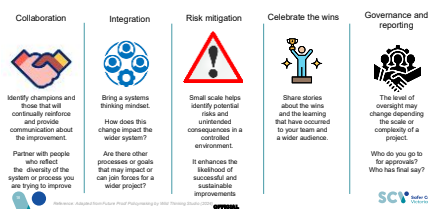
Session 4 Slide 18

To ensure your quality improvement lasts, it's important to think about these key areas at the beginning and throughout your QI journey.

These five principles can be applied to sustaining a change idea but also to your overall project goal.
- **Collaboration**: We spoke about this a lot today. Quality improvement cannot be done alone. We need to collaborate with those most affected by and who have control over what we are trying to improve. Having people on your team that can champion your quality improvement efforts is also very important.
- **Integration**: How does this change fit into the wider system? Knowing your role and the role your project sits may lead to wider spread of the improvement work or linkages with other work.
- **Involvement**: Ensuring you have the people most affected by the improvement on your team means you will have diversity of ideas and greater understanding of the process you are trying to improve.
- **Celebrate the wins**: Improvement is also about sharing the wins and telling stories to the wider community about your progress. Don't get too focused on the tasks that you don't celebrate the big and small success you have along the way!

- **Governance and reporting**: Ensuring you are keeping the right people in the loop is integral to the success of any quality improvement project. For example, have you considered who your executive sponsor is? How is your work connected to your organisation's Quality Improvement and Clinical Governance team? And what kind of reporting is required, or that you need to help share the improvements you are working on and the lessons you are learning?

Reference: Adapted from Future Proof Policymaking by Wild Thinking Studio (2024).

|		
4:00 Finish	**Session 4 Slide 19 – Summary**	**Session 4 Slide 19**

Thank you for participating in QI in Action. We have covered a lot of content across the 4 sessions including:
- How to set the conditions for change and support our improvement effort.
- How to identify who is needed to make the improvement work and to ensure we have a wide range of perspectives and views, including from consumers, at each step of our improvement process.
- We learnt about our system and how to look at data to find common and special cause variation and how to display data to tell a story.
- We then worked through the Model for Improvement to learn how to set an aim, come up with change ideas, and document and undertake PDSA cycles to test our ideas in the real world, under a variety of conditions.
- QI in Action Session 4: Measuring and sustaining success we learnt about an improvement project's family of measures that help measure the impact our theory of change is having in the system.
- And finally, we touched on how to sustain our change.

Evaluation

- As any QI practitioners we like to use data to help refine and improve our work. Please take a minute to complete the course evaluation using the QR code on the screen.
- **Faculty note: Introduce your evaluation here. Add QR code for your evaluation questionnaire/form to the slide. An example has been provided in Attachment 1 with the QI in Action package.**
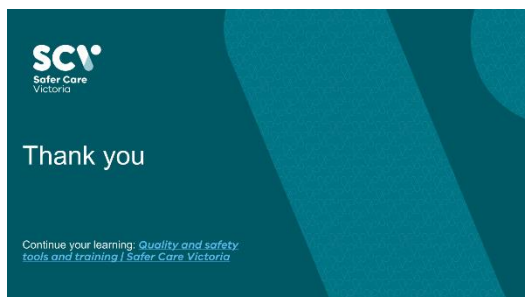
Slide 20

- Thank you
- Options to continue your learning: Quality and safety tools and training | Safer Care Victoria (https://www.safercare.vic.gov.au/improvement/tools-frameworks-training/quality-improvement)
- **Faculty prompt: Add in details for any internal training or learning resources here**

Attachment 1: Self-assessment evaluation questions

Quality improvement in Action evaluation

A pre and post training self-assessment for participants is recommended to capture capability uplift and guide continuous improvement of how QI in Action is delivered.

SCV has created a set of suggested participant self-assessment questions for QI in Action. These can be used as a standalone tool, or be used together with your organisation's standard training evaluation tool.

QI in Action participant self-assessment questions

1. Are you completing this self-assessment pre or post the training program?

    a. Pre training program

    b. Post training program

2. Please indicate your current confidence in understanding and skill for each of following areas:

	1 No knowledge	2 Knowledge	3 Basic application	4 Analysis & application	5 Highly experienced	6 Expert
Understand how I can play my part in improving care and services for patients/ consumers	◯	◯	◯	◯	◯	◯
Understand how the culture in my workplace influences the quality and safety of care and services	◯	◯	◯	◯	◯	◯
Understand importance of involving consumers and their carers/ families in planning care and in quality improvement activities	◯	◯	◯	◯	◯	◯
Understand, use and present data over time to improve care and services	◯	◯	◯	◯	◯	◯
Using the Model for Improvement as a framework for improvement projects	◯	◯	◯	◯	◯	◯
Creating an aim statement	◯	◯	◯	◯	◯	◯
Can explain and use PDSA cycles to test small-scale changes that will improve care and patient services	◯	◯	◯	◯	◯	◯

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Self-assessment scale key:

1	**No Knowledge**	"I cannot tell you what this tool, skill or method is."
2	**Knowledge**	"I can tell you what this skill, tool, or method is and give you facts about it."
3	**Basic Application**	"I can tell you what this skill, tool, or method is and given a defined situation, I can apply it with assistance."
4	**Analysis and Application**	"I have knowledge of this skill, tool, or method, I have **some** experience correctly applying and adapting it in one or more situations, and I can explain my decisions for doing so."
5	**Highly Experienced**	"I have knowledge of this skill, tool, or method, I have a **high degree** of experience correctly applying and adapting it in various situations, and I can explain my decisions for doing so."
6	**Expert**	"I am highly experienced, and I can teach others the theory behind it and coach them in its use."

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