



HEALTH QUALITY & SAFETY
COMMISSION NEW ZEALAND

Kupu Taurangi Hauora o Aotearoa

Connecting care

Learning Session 2

Measurement for quality improvement

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Purpose of session

- Linking measurement to your theory of improvement
- ‘Nail down’ process and balancing measures
- Collect and analyse your data – ready to bring along to learning session 3
- Learn about run charts

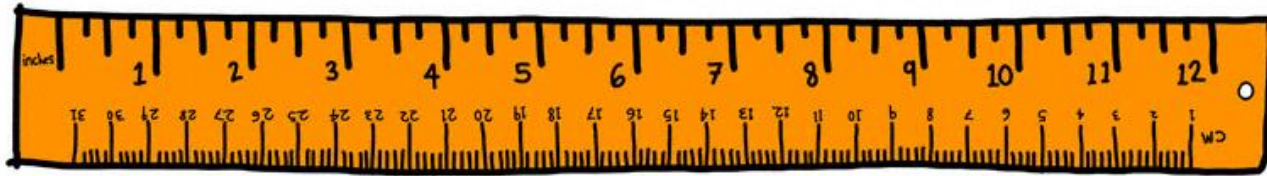
Pre-work: Have completed data collection plan on your storyboards



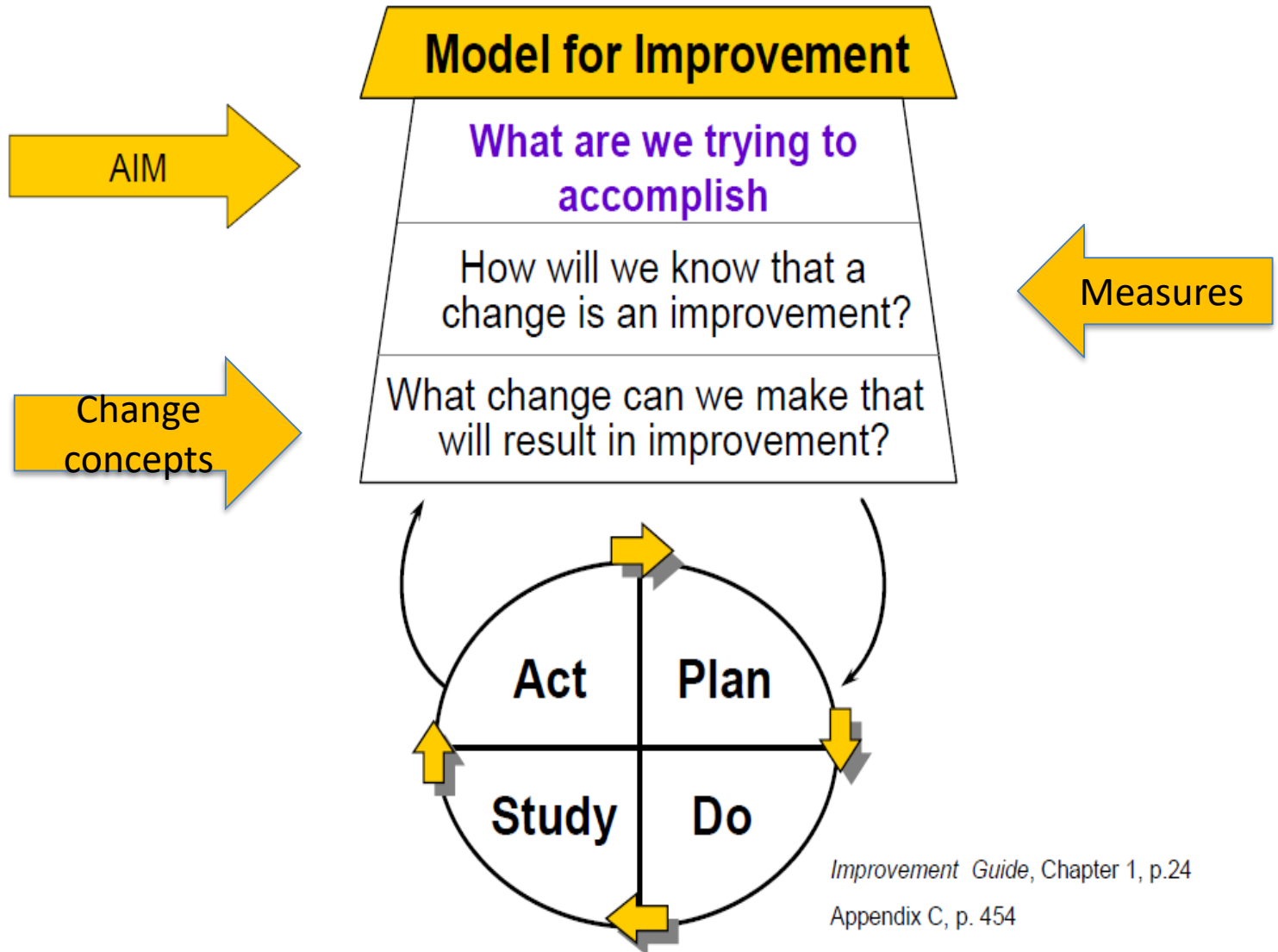
Recap from learning session 1 and Zoom tutorial



If you can't measure it,



you can't improve it.



Measurement for improvement – a family of measures

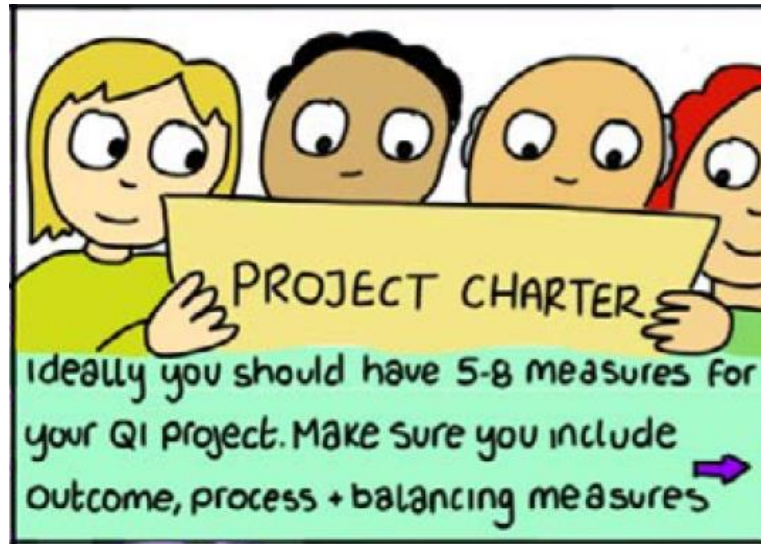
To answer “how will we know that a change is an improvement?”

Requires a range of measures to capture system complexity.

In quality improvement language, we refer to a **family of measures**, which includes:

- Outcome (progress towards goals);
- Process (how are changes we are working on going); and
- Balancing measures (unintended consequences).

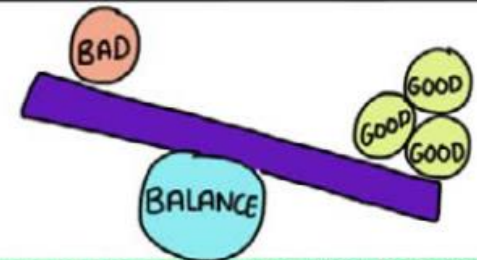




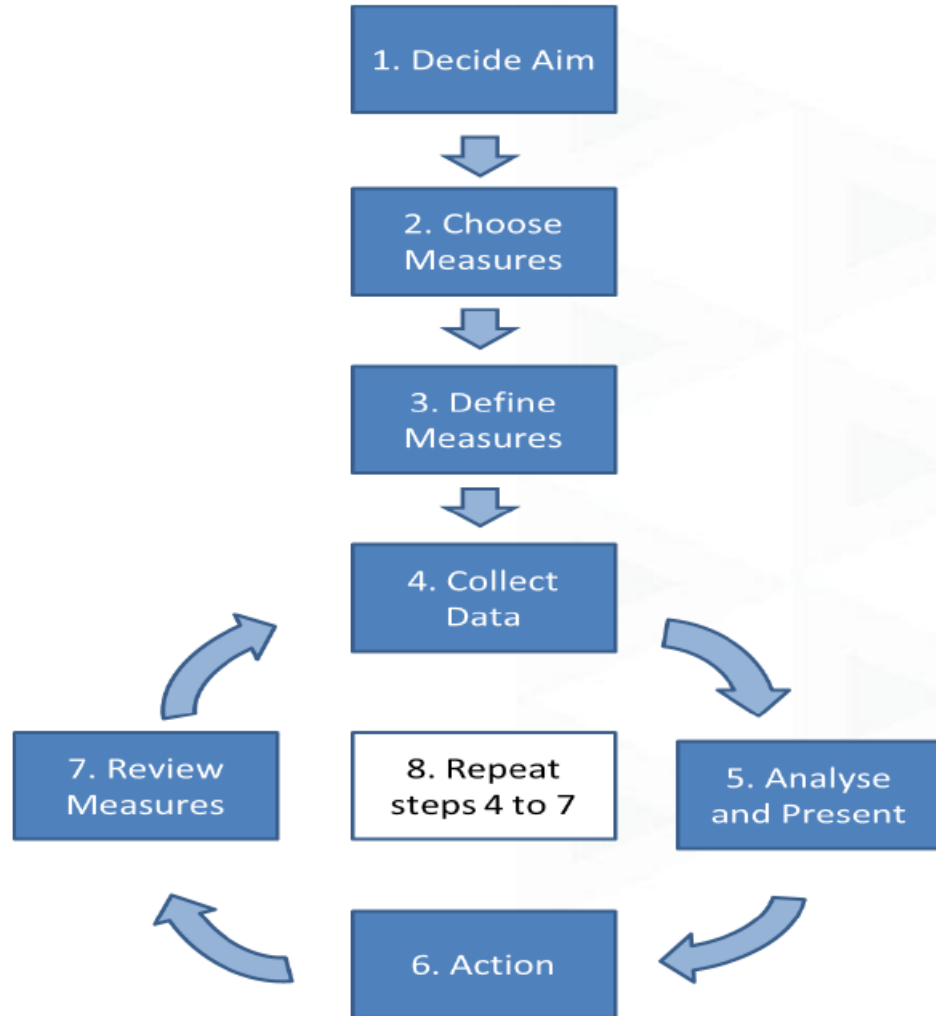
OUTCOME MEASURES: This is data that will show if you have achieved your aim, how successful it was (1-2 of these measures per project)

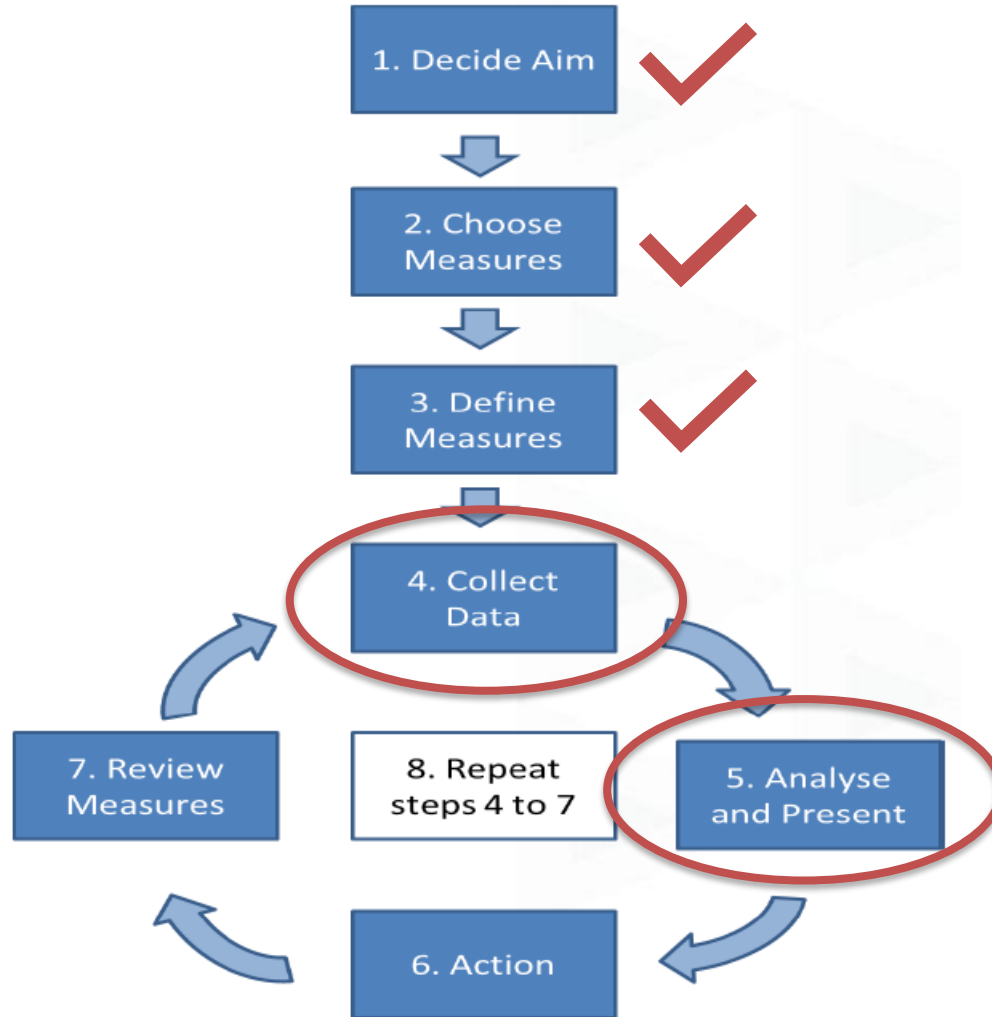


PROCESS MEASURES: The things you are working on to achieve the overall aim, as they will impact on the desired outcome



BALANCING MEASURES: This is data that makes sure the change ideas you are testing aren't having an unintended impact elsewhere





Operational definitions



Linking measurement to your theory for improvement

Link measures to theory

- Outcome measures:
 - Linked to the aim of the project
- Process measures:
 - Linked to the things you are going to work on to achieve the aim
- Balancing measures:
 - To spot unintended negative consequences

Driver Diagram Template

Primary Drivers

Secondary Drivers

Change Ideas

Priority Change Ideas



The Problem:

XXXX

SMART Aim:

Outcome Measure:

- How much:
- By when:

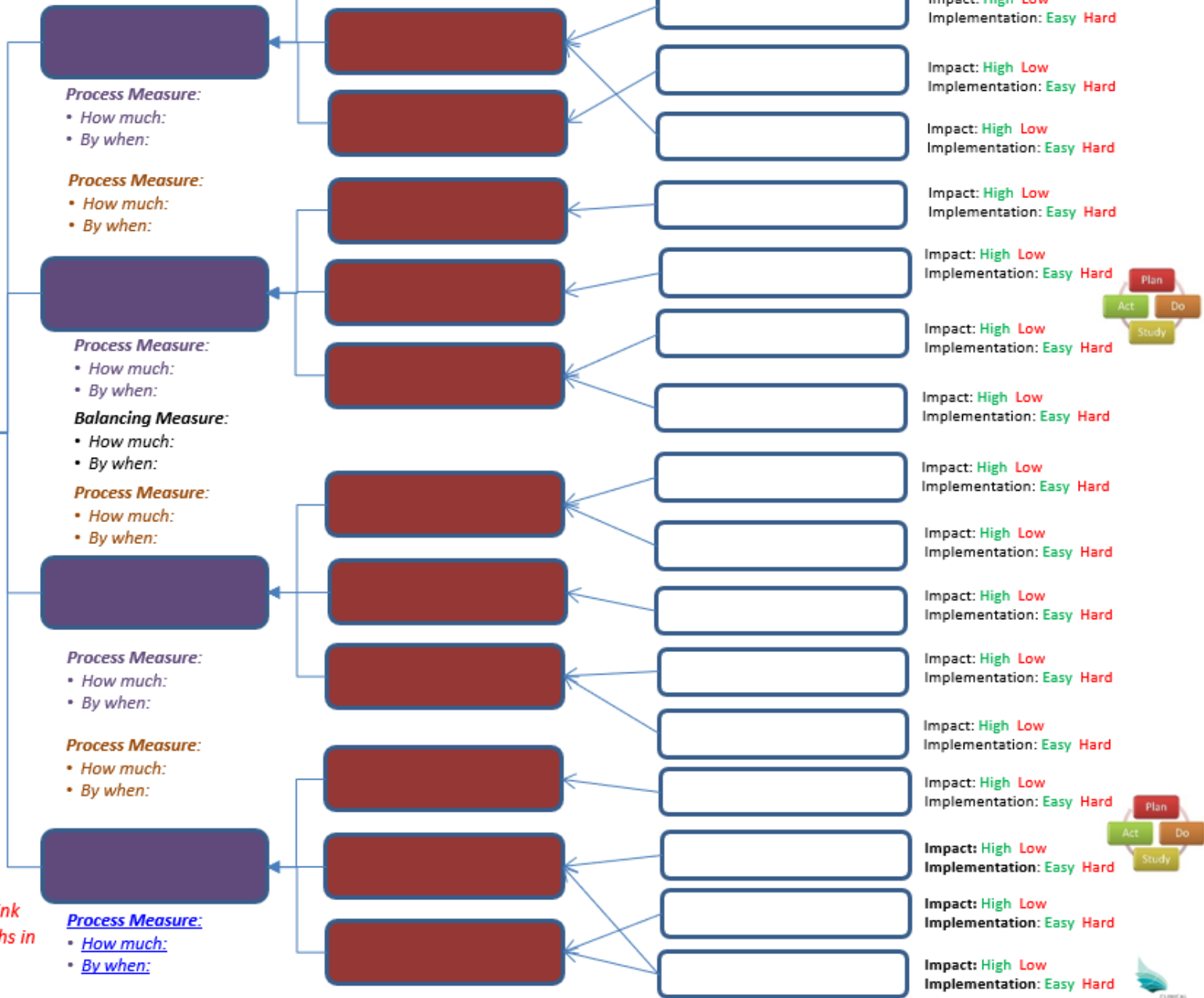
Outcome Measure:

- How much:
- By when:

Team Members:

- Project Sponsor/s -
- Team Leader -
- Consumer -
- QI Advisor -
- Xx
- Xx
- xx
- Xx
- xx

NB: Can Hyperlink measures to Graphs in Spread sheets



Zero Seclusion driver diagram

Aim (primary outcome):

To reduce seclusion events in the first 24 hours of admission by 50% by December 1st 2019

Measures:

Outcomes:

% of admission secluded in the first 24 hours

Process:

% of those secluded who have an advance plan

Balancing:

- Personal restraint
- Assaults
- Sedatives supplied for acute agitation and/or anxiety (further technical def)

Primary (key) drivers:

System components which will contribute to moving the aim

Promote a welcoming and whānau friendly environment

Percentage of Maori offered cultural support

Early interventions and timely access to care

Percentage of smoker offered NRT

Recovery / support plans for those at risk

Percentage with a plan

Safe care environments

Percentage of staff with trauma informed competency

Secondary drivers:

Elements of the associated primary driver. Used to create project / changes that will affect the primary driver

- Welcome information
- Cultural welcome and support
- Peer/ whānau support
- Minimise restrictions and rules

- Increased family whānau health literacy
- Support person through admission
- Police liaison
- Pre-hospital care
- Nicotine withdrawal care

- Identify high risk consumers
- Advance care plans

- Workforce competency
- Quiet retreat areas
- Sensory modulation rooms / kits
- Therapeutic observations
- Trauma informed care

Process measures tips

- Suggest not to overdo process measures
 - just enough data to learn
- Focuses on processes that directly contribute to outcome
- Choose easy to collect measures (seek usefulness not perfection)
- Measure frequently
- Crude measures of the right things is better than precise measures of the wrong things

Leading and lagging measures

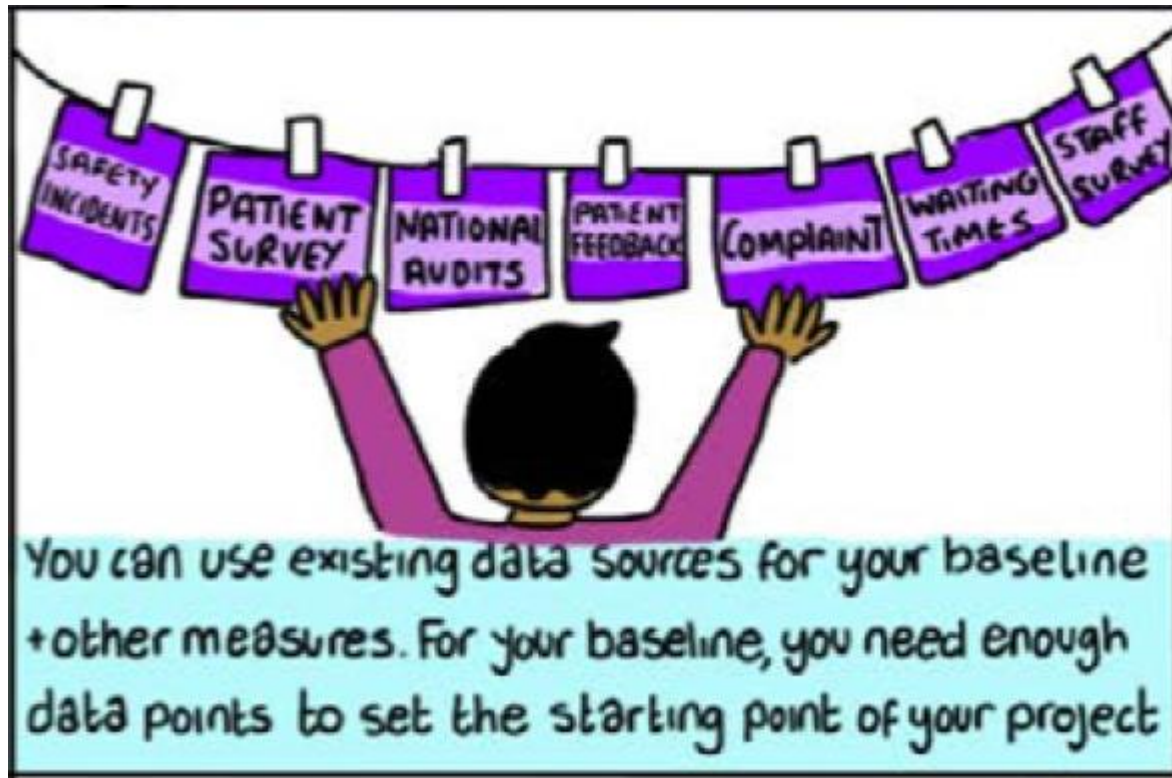
- Process measures are usually 'leading'
- Outcome measures are usually 'lagging'

- Usually see change earlier in process measures, than outcome measures

Collecting data

Data collection - baseline

- Understand where we are now
- Start collecting baseline data (if haven't already)
 - Essential to understand where we are at now, we can look back later and see what we have achieved.
 - It also helps us understand our current system
- Collect baseline for process and balancing measures (assuming outcome uses existing data)
- This may sound like common sense, but is often overlooked by project teams in their rush to try out all of their ideas for improvement



Data collection: new or existing

- Is data already available? Or is new data collection required?
- For example:

Existing data	New data collection
Length of stay	Audits – clinical record review
Follow up times	Audits - observations
Wait times	Survey and questionnaires
Readmission data	Focus groups
Service delivery data (eg. frequency of contact)	Other qualitative data
Clinical indicators	Additions to existing collections



**DATA
TIP:**

Talk to data managers or health information services before you start to establish what data already exists within your service.

Collecting ethnicity

- Important to capture whether inequities exist across the outcome, process and balancing measures
- We suggest collecting ethnicity in all your data collection
- Regularly analyse data to see if outcome, process and balancing measures differ by ethnicity, particularly for Māori



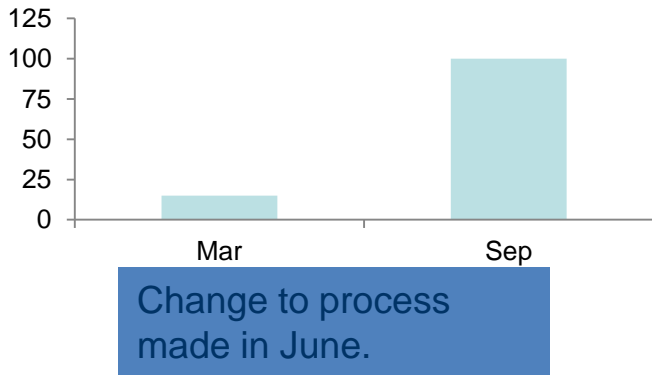
Run charts

Run charts

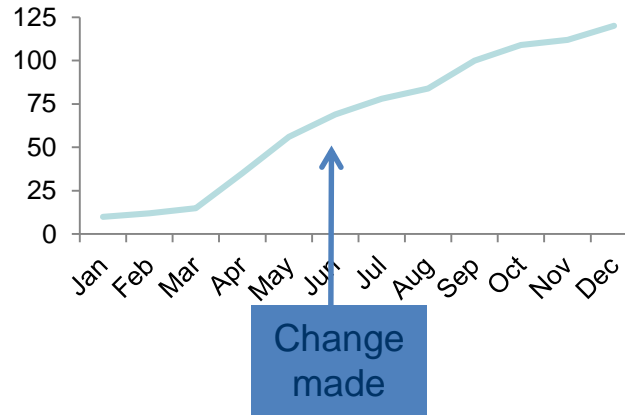
- A run chart is a graphical display of data plotted over time (also called trend charts or time series charts).
- Run charts are a fundamental tool in every improvement project.
- Easy to construct and simple to interpret.
- They help understand variation, and determine whether changes result in improvements

Why we look at data graphed over time

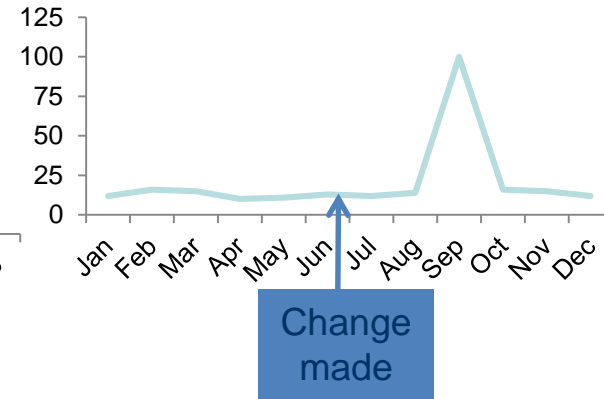
immunizations to children



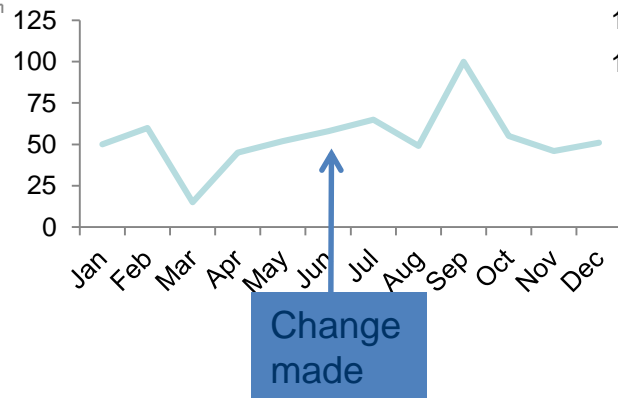
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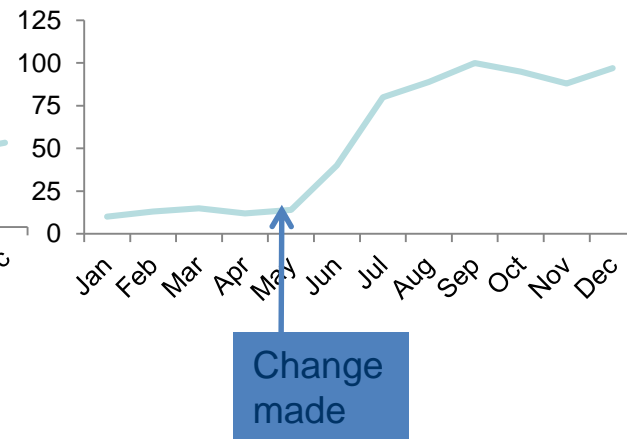
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immunizations to children

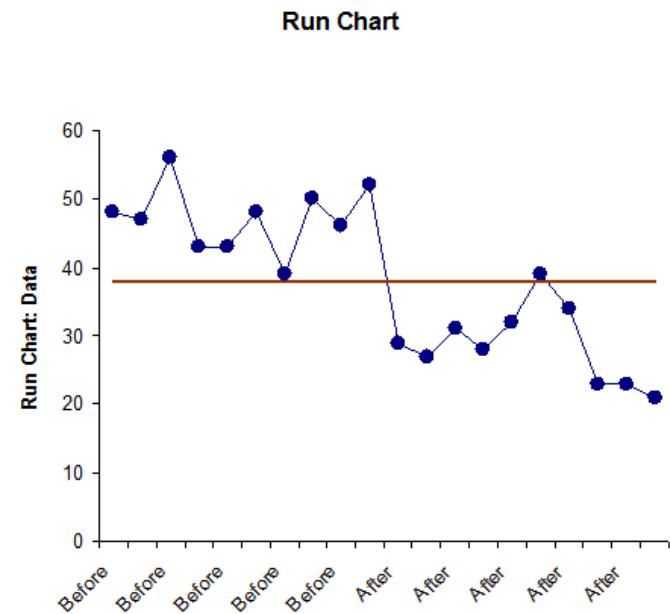


immunizations to children



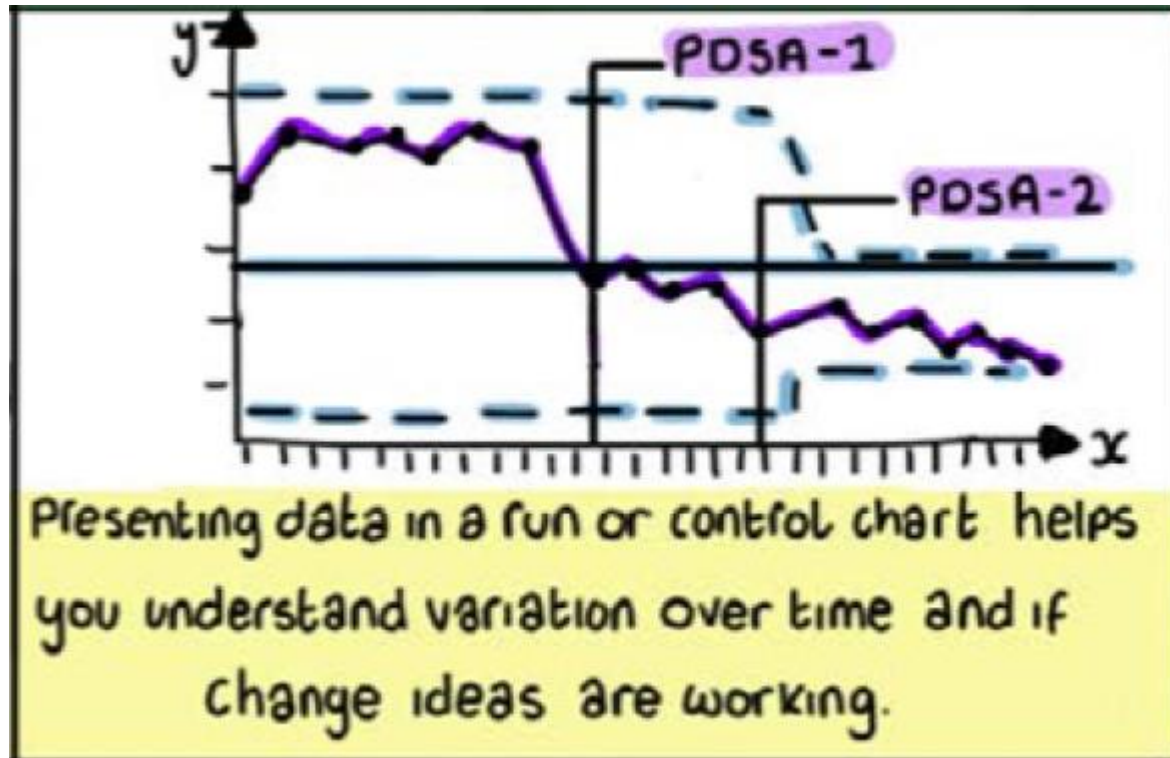
Run charts

- Display data over time
- Have embedded statistical processes so can confidently identify a statistically significant change in the process
- Can be done by hand
- No complicated maths



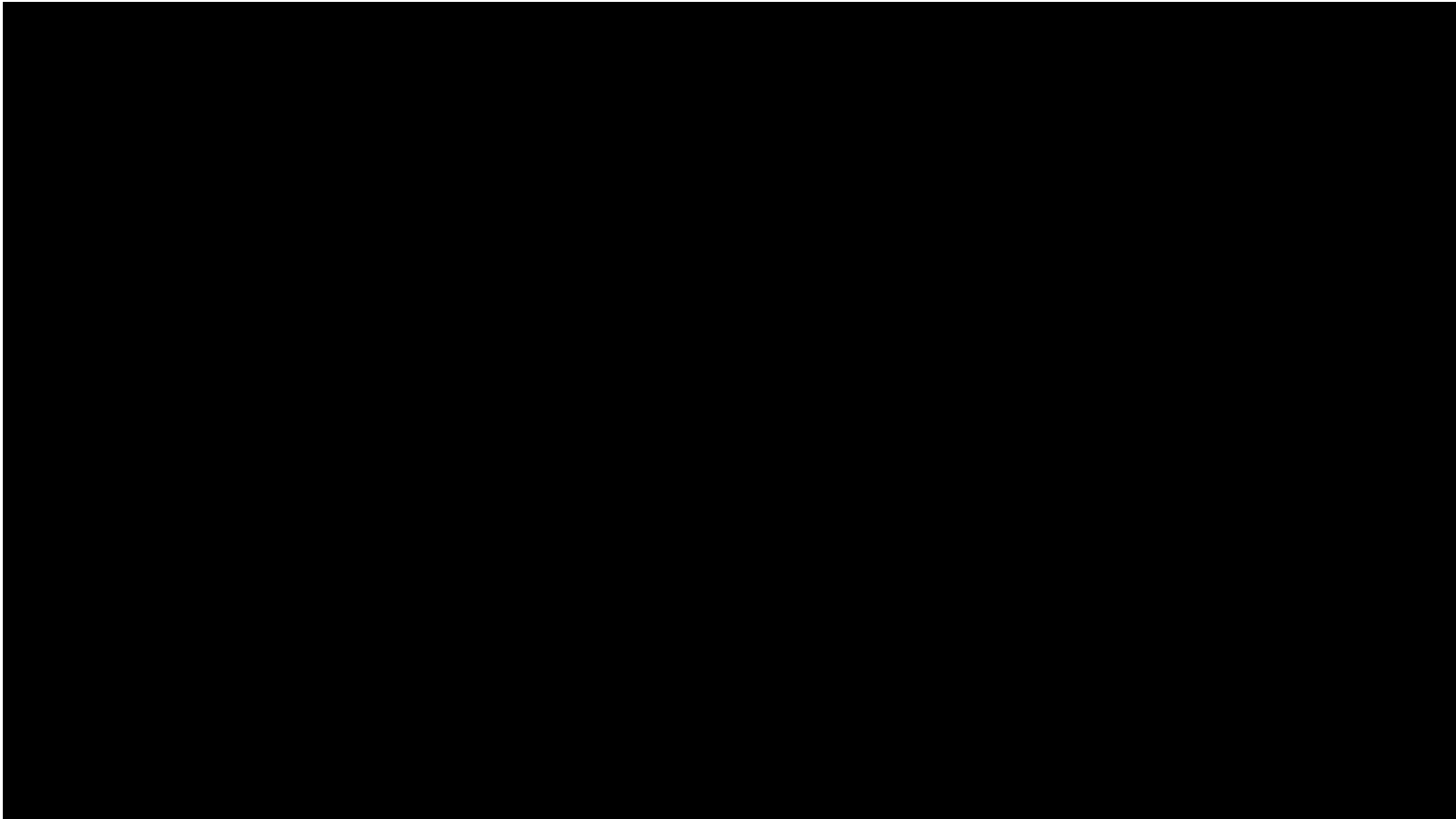
Variation

- In the real world, everything varies
- In quality improvement, we talk about 2 different types of variation:
 1. Common cause (random)
 2. Special cause (non-random / assignable)
- Run charts are one tool to help distinguish between random and non-random variation



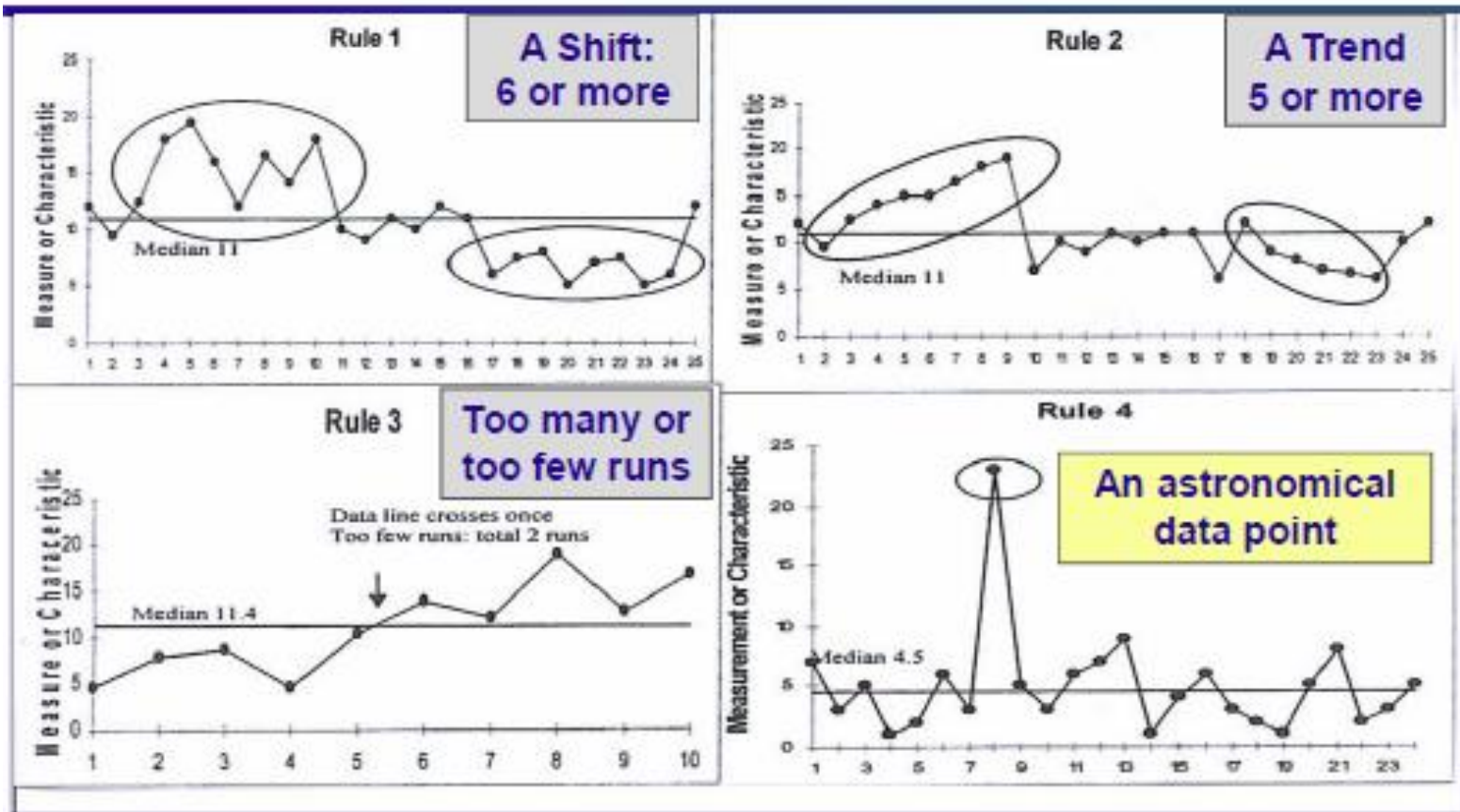


Run charts



<https://www.youtube.com/watch?v=2yBhdKX7JsY&feature=youtu.be>

Run charts

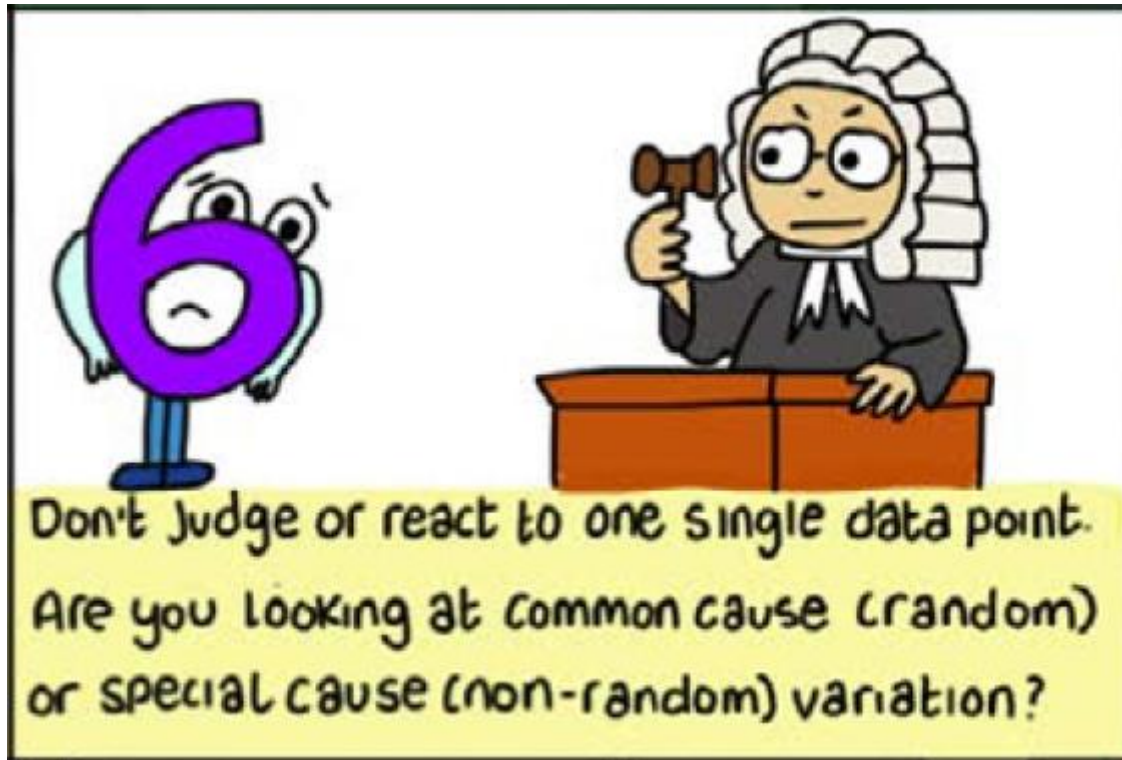


Source: The Data Guide by L. Provost and S. Murray, Austin, Texas, February, 2007: p3-10.

Run charts for Connecting care

- Run charts sent out to project teams a few weeks ago
- National data could not be used for all DHBs (due to PRIMHD incompleteness; Data coding errors; and/or very small numbers)
 - > use of local data
- Designed for DHBs to add future data, annotate and supplement with other measures
- [Example run chart](#)

Connecting care	
Run charts: Auckland DHB	
Transition focus: DHB adult inpatient services to DHB adult community services	
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	This spreadsheet contains run charts of the outcome measures for Connecting care as part of the mental health and addiction quality improvement programme.
11	
12	What are run charts?
13	A run chart is a graphical display of data plotted over time. They are also called trend charts or time series charts. Run charts are a fundamental tool in every improvement project. They are easy to construct and simple to interpret. They help understand variation, and determine whether a change has resulted in an improvement - that is, whether your DHB is improving the quality of service transitions.
14	
15	What is contained in this spreadsheet?
16	This spreadsheet has provided run charts to every DHB for the outcome measures for Connecting care for your DHB selected transition. The data is presented quarterly for the period 2016 to 2018 (3 years) to provide baseline rates to analyse future improvement against in the Connecting care initiative.
17	Note the quarters are based on calendar year quarters so for example 'Q1_2017' is January - March 2017.
18	What are the Connecting care outcome measures?
19	The outcome measures for Connecting care are:
20	Within 28 days after discharge (date of transition), if the consumer had one or more of the following criteria:
21	- Referred from Police to MHA services; and/or (Run Chart_Police)
22	- Referral ended due to lack of consumer engagement / falling in relationship; and/or (Run Chart_LackEngage)
23	- Emergency Department presentation MHA related (Run Chart_ED)
24	The combined outcome measure is whether one or more of the above three criteria (Run Chart_Overall)
25	Indicator is presented as a percentage of discharges that meet the above criteria.
26	Plus option for locally defined outcome measures.
27	
28	What are the 3 focus transitions for Connecting care?
29	The three transitions for Connecting Care are:



Next steps

- Collect and regularly analyse data
- Learning session 3 (4th December) – each project team presents their data (across outcome, process and balancing measures)
- Zoom tutorial upcoming – equity data for Connecting Care
- Further coaching and support available

Break out in groups

- Discuss next steps for measurement for your project e.g.
 - Have you completed your data collection plan? If not, this is a good place to start.
 - Have you started collecting baseline data? If not, how will you start to do this?
 - Are you familiar with run charts for your DHB?
 - If you have data, what is the data showing?
 - How will measurement be part of the daily routine?
 - What difficulties are you having?