

# core *data set*

## An introduction

Safe Staffing & Healthy Workplaces Unit  
March 2018

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# Session outline

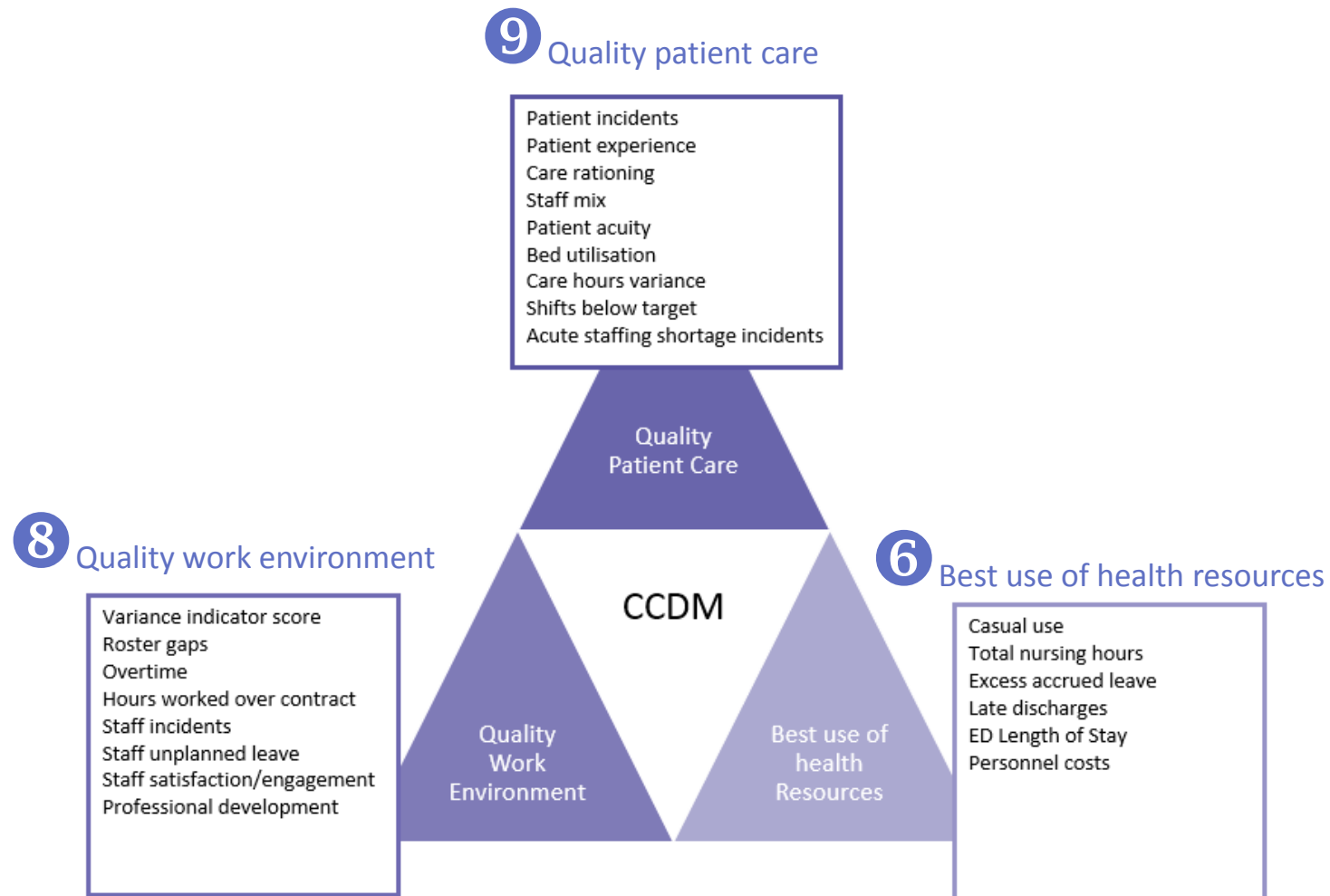
- What is a core data set?
- What does a core data set look like?
- Why do we need a core data set?
- How does the core data set work in practice?
- Who needs to be involved?
- How do we interpret the measures?
- What are the current challenges?
- Where to from here?

# What is a core data set?

- A total of 23 measures defined and supported by research
- The core data set
  - Monitors care capacity demand management
  - Reflects progress over time
  - Demonstrates relationships between measures
  - Integrates with existing DHB reporting e.g. casual use, sick leave i.e. exception reporting
  - Places equal priority on each side of the CCDM triangle
  - Provides structure and discipline to improvement activities

# What is the core data set?

This diagram shows how the 23 measures are balanced around the CCDM triangle.



# What is a core data set?

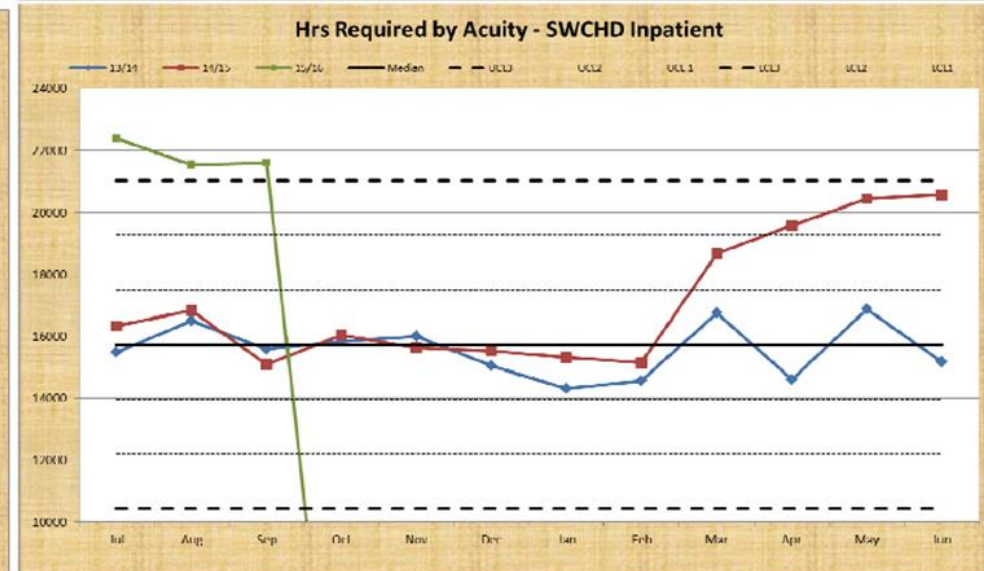
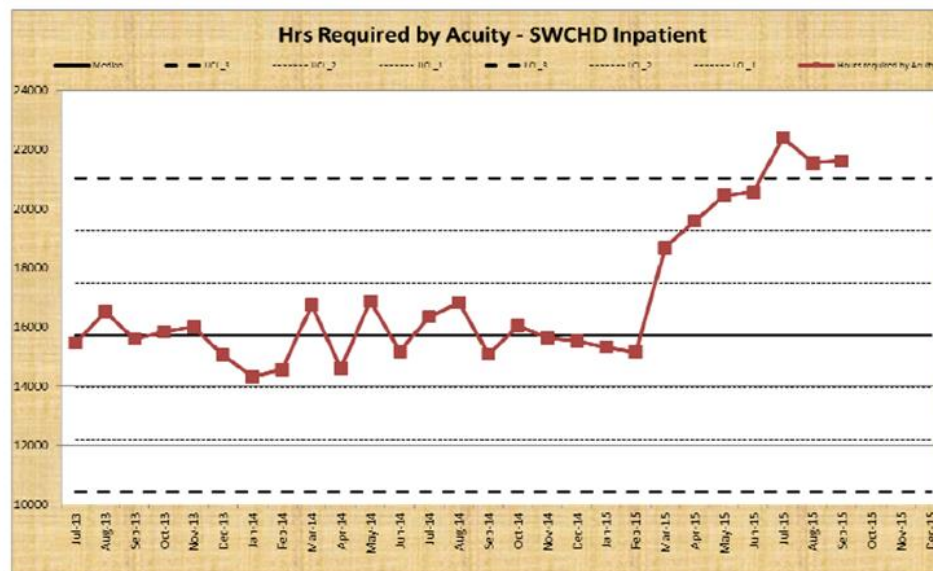
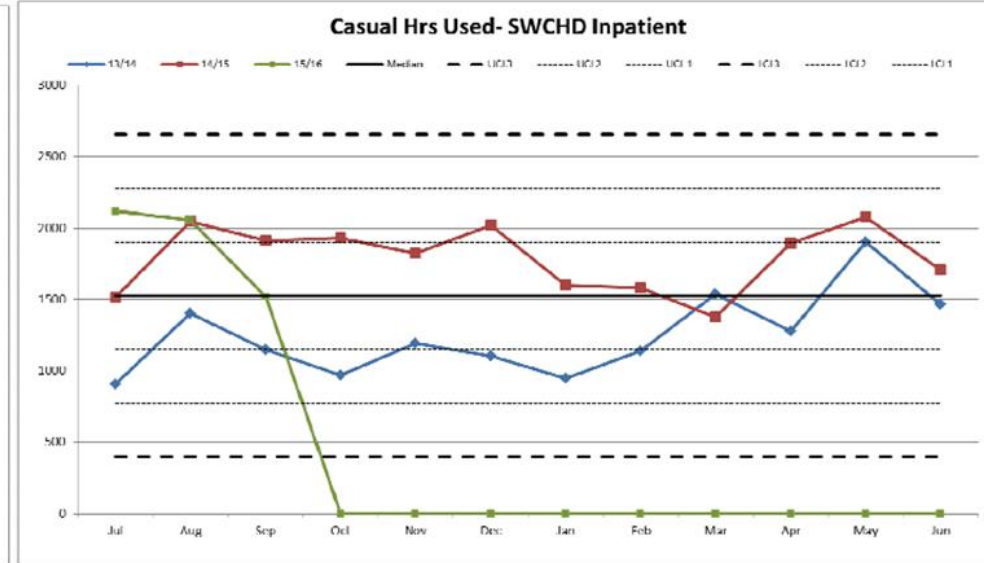
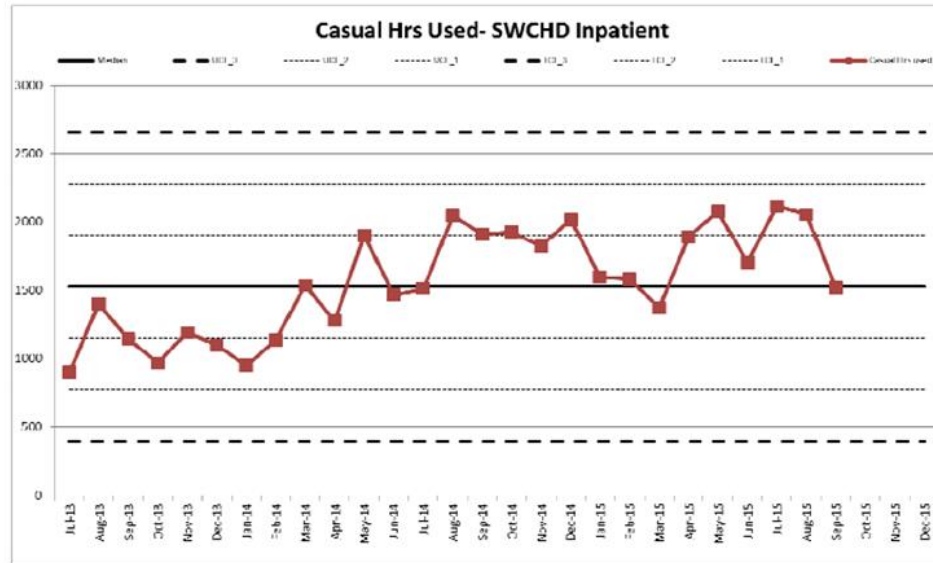
A table of information:

- Measure
- Description
- Rationale
- Interpretation
- Calculation
- Unit of measure
- Frequency
- Data sources
- References

Programme	Measure	Description	Rationale	Interpretation	Calculation	Unit of measure	Frequency	Data Source
QUALITY PATIENT CARE	Patient incidents	A patient incident is any event that could have or did cause harm to a patient (adverse event, near miss, reportable event). <b>Source:</b> <a href="https://www.hqsc.govt.nz/assets/Reportable-Events/Publications/Reportable-Events-Policy-Final-Jan-2013.pdf">https://www.hqsc.govt.nz/assets/Reportable-Events/Publications/Reportable-Events-Policy-Final-Jan-2013.pdf</a> <b>Examples include:</b> falls, pressure injury, hospital acquired infection, patient self-harm, medication errors etc.	Patient incidents are an indicator of the quality of care provided to patients, the quality of the work environment and staffing (37, 38). Lower nursing staff levels are associated with increased patient mortality (4, 5, 39), failure to rescue (6, 7, 40), medication errors (8, 9, 10), falls (10, 11) and missed care (12, 13).	Trending ↑ = Negative/ Flag Higher patient incidents may be caused by inadequate staffing levels, poor skill mix or poor staff mix (2) negative care hours variance and shifts below target. Higher patient incidents have a negative impact on patient experience, length of stay and increase costs of care.	The sum of all inpatient incidents reported.	Number for the date period, by ward, directorate and hospital.	Monthly	DHB incident reporting system
QUALITY PATIENT CARE	Patient experience	Results from the patient experience survey as defined by the Health Quality Safety Commission. Reported as a total score ( /10) from each of the four domains. <b>Source:</b> <a href="http://www.hqsc.govt.nz/four-programmes/health-quality-evaluation/publications-and-resources/publication/2812/">http://www.hqsc.govt.nz/four-programmes/health-quality-evaluation/publications-and-resources/publication/2812/</a> . <b>Note:</b> This can not be drilled down to a ward level - reported by DHB only.	Patient experience is an indicator of the quality of care provided to patients. There is evidence that quality work environments and higher levels of registered nurses are associated with higher patient satisfaction (14, 37, 38). There is a significant association between positive nursing leadership styles, behaviours and practices and increased patient satisfaction (18).	Trending ↑ = Positive/ Improving Review with caution against other core data set measures as patient experience domains are not specific to nursing care. This data is not available by ward or directorate/service level.	As per Health Quality Safety Commission.	Number for each of the four domains, by DHB	Quarterly	Health Quality Safety Commission
QUALITY PATIENT CARE	Care rationing	All care that was missed, delayed, sub optimally delivered or inappropriately delegated as reported by staff. Also defined as care left undone due to lack of time, material resource, poor communication or teamwork.	Care rationing impacts on the quality of care provided to patients, patient experience and staff satisfaction/ engagement. Lower levels of staffing are associated with missed care and failure to rescue (5,12,13). Care rationing impacts on nurse satisfaction and causes moral distress (36).	Trending ↑ = Negative/ Flag Review along side care hours variance, shifts below target, staff mix, acute staffing shortage incidents, variance indicator score, patient incidents, patient experience and staff satisfaction/ engagement.	Number of staff reporting care rationing / number of staff returning a survey x 100.	Percentage for the date period, by shift for the ward, directorate and hospital.	Quarterly	Work Analysis 'End of shift survey' or equivalent
QUALITY PATIENT CARE	Staff mix	The number of regulated staff (RN, RM and EN) that worked compared with all staff that worked expressed as a percentage for AM, PM and N shift.	Higher levels of RNs have been associated with better patient outcomes (2). Higher RN levels are associated with lower mortality rates (31, 35, 39) and failure to rescue (5). The majority of patient care requires RNs (2). RNs also contribute to the provision of coherent, quality nursing services through supervision, patient flow, team organisation and delegation (2). Monitoring the percentage of regulated nurses (RN, RM and EN) is a logical step towards ensuring the delivery of quality patient care.	Trending ↑ = Positive/ improving. Poor staff mix may be caused by increased patient acuity, unplanned leave or roster gaps. Poor staff mix should be reviewed with acute staffing shortages incidents, variance indicator scores, care rationing, patients/staff incidents, patient experience and staff satisfaction/ engagement.	The number regulated staff / total number of staff x 100.	Percentage by AM, PM, N for the date period by ward, directorate and hospital.	Monthly	Validated Patient Acuity System or DHB pay roll or human resources system
QUALITY PATIENT CARE	Patient acuity	Patient Acuity is the patient's level of dependence on nursing staff due to their care requirements. This is described as nursing hours required by patient acuity. <b>Source:</b> TrendCare Glossary of Terms (2016).	There is a strong association between patient acuity and dependency and nursing requirements (8, 10, 11, 28, 30, 31 & 32).	Trending ↑ = indicates increased patient acuity and/or volumes. Useful to chart with bed utilisation and total nursing hours or personnel costs. Review with staff mix, care hours variance and shifts below target, acute staffing shortage incidents, variance indicator scores, care rationing, casual use, overtime, hours worked over contact, and cancelled professional development.	The sum of hours required by patient acuity (clinical hours only).	Hours for the date period for the ward, directorate and hospital.	Monthly	Validated Patient Acuity System
QUALITY PATIENT CARE	Bed utilisation	Bed utilisation reflects the throughput of patients during a calendar day – accounting for all discharges, deceased.	Bed utilisation is more sensitive to nursing workload than occupancy because it counts all admissions, discharges and transfers. The	Trending ↑ = Positive or negative (depends on starting point) Bed utilisation is best interpreted with	The total throughput of all patients on a shift, divided by the	Percentage by AM, PM and N for the date period by	Monthly	Validated Patient Acuity System



# What does a core data set look like?



# Why do we need a core data set?

- Human history has shown improvement is based on measurement
- For example, blood-letting occurred for 2000 years!
- This practice only changed once Louis (circa 1850) proved it didn't work – by measuring!
- Even once known, it took quite some time to change practice



# Simply put.....



What you don't measure,  
you don't know.  
If you don't know, you  
can't improve.  
Without measurement  
there is no improvement  
(except by chance).



# Benefits of a core data set

- Common language
- Targeted communication
- Staff activities aligned to DHB priorities
- Staff engagement
- Solidarity for shared goals
- Monitoring of care capacity demand management
- Discipline and structure for improvement activities & resourcing
- Early warning for decision-making
- Evidence for Health and Disability Sector Standards
- Single voice to lead

# How does the core data set work in practice?

The measures are

- Collected, collated and formatted for different audiences
- Reviewed a minimum of monthly (or quarterly)
- Discussed at different forums including:
  - Ward staff meetings
  - One on one meeting with line manager
  - Directorate/service meetings
  - Quality improvement meetings
  - CCDM council meeting
- Guide decision-making and improvement planning

# Who needs to be involved?

## Ward staff

- Reviews measures at Local Data Council/ Ward staff meetings
- Measures displayed on ward's quality board
- Contribute to problem solving and improvements

## Ward/unit managers

- Reviews measures for the ward
- Makes opportunities to discuss with staff
- Links staff activities with DHB goals & priorities through the measures
- Maintains ward's quality board
- Develops local improvement plans with staff
- Reviews measures with line manager

## Service/nursing leaders

- Monitors measures for the directorate/service
- Discusses measures with direct reports
- Links ward performance to DHB goals & priorities
- Oversight of service's improvement plans
- Discusses measures with line manager

## Executive team

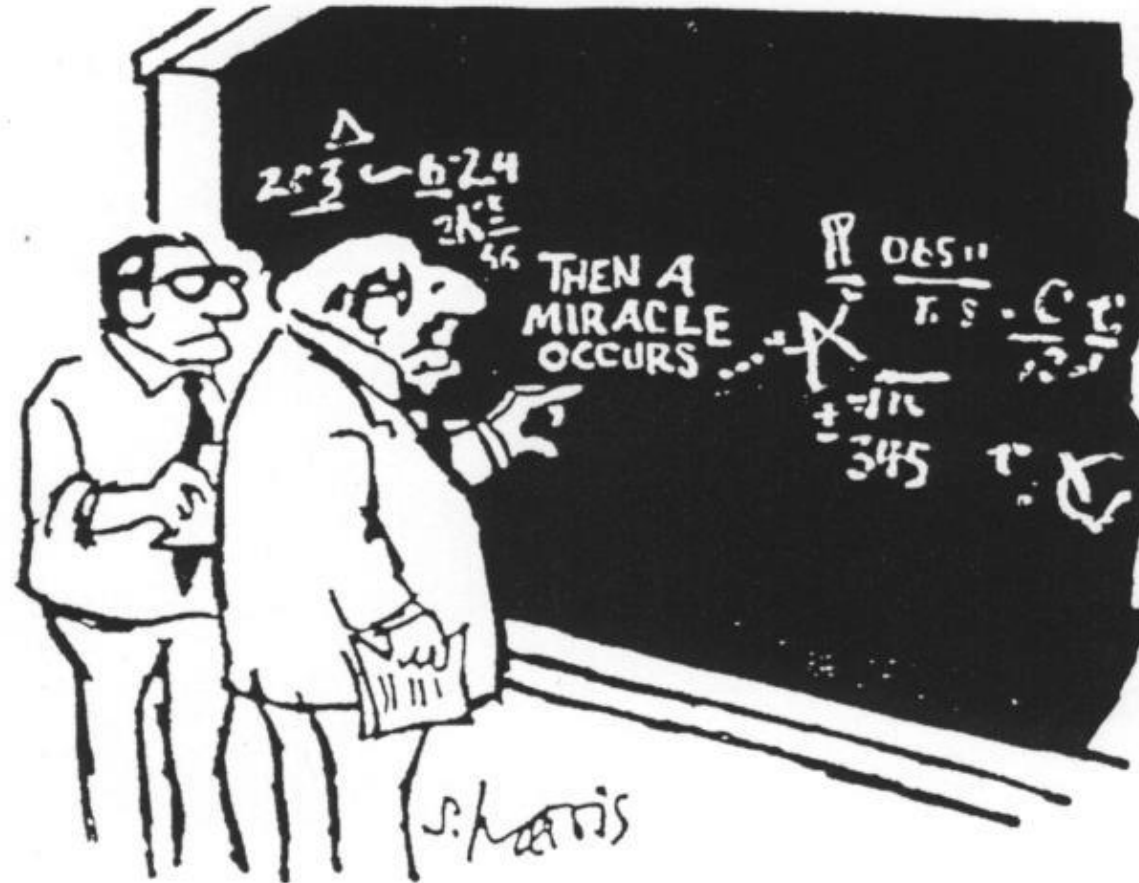
- Monitors measures for the hospital (and DHB)
- Reviews measures at CCDM Council
- Aligns activities with DHB goals and priorities
- Provides direction and guidance on improvement plans

Local data council

Working groups

CCDM council

# And then a miracle occurs?



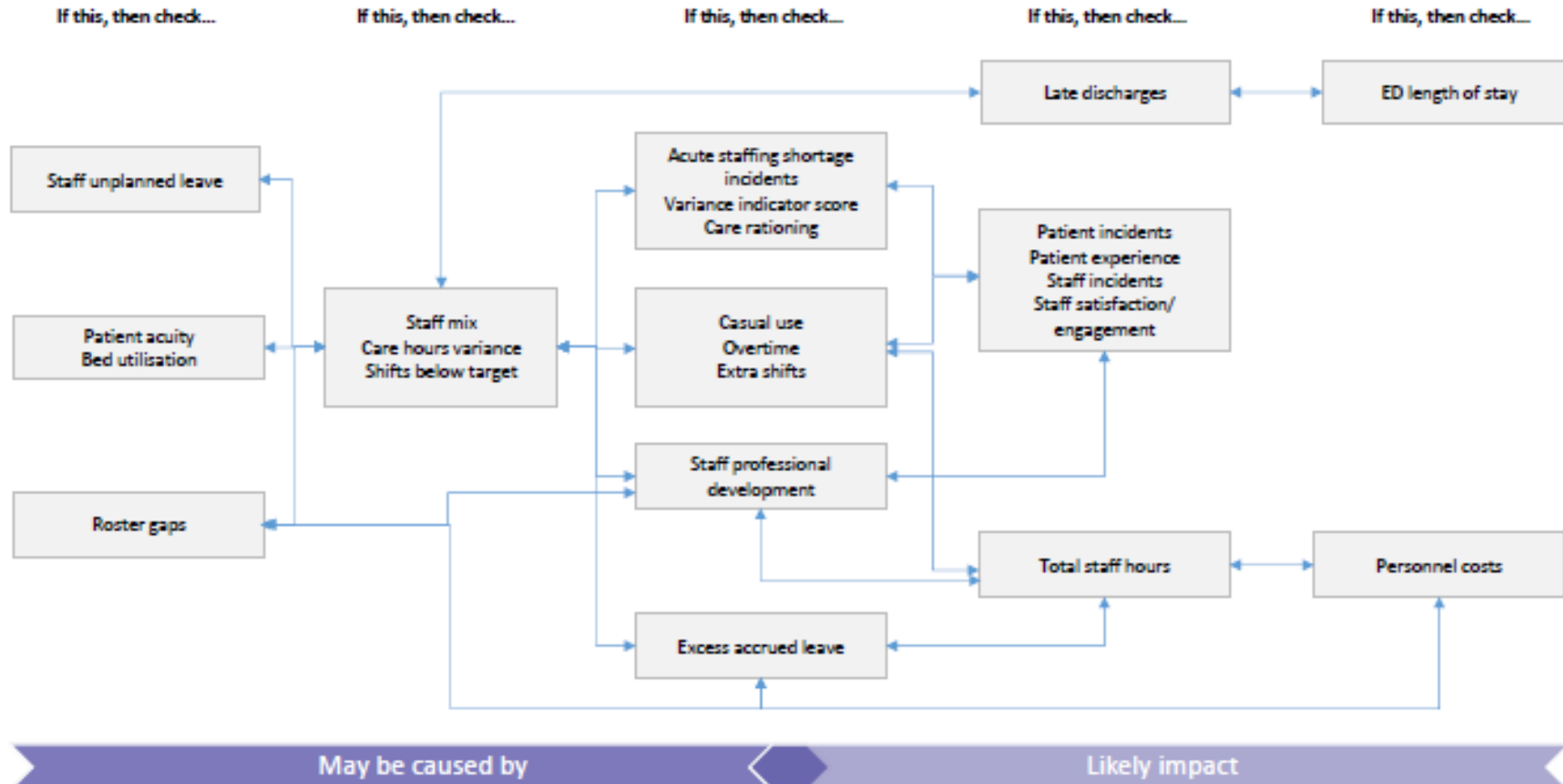
I think you should be a little more specific, here in Step 2



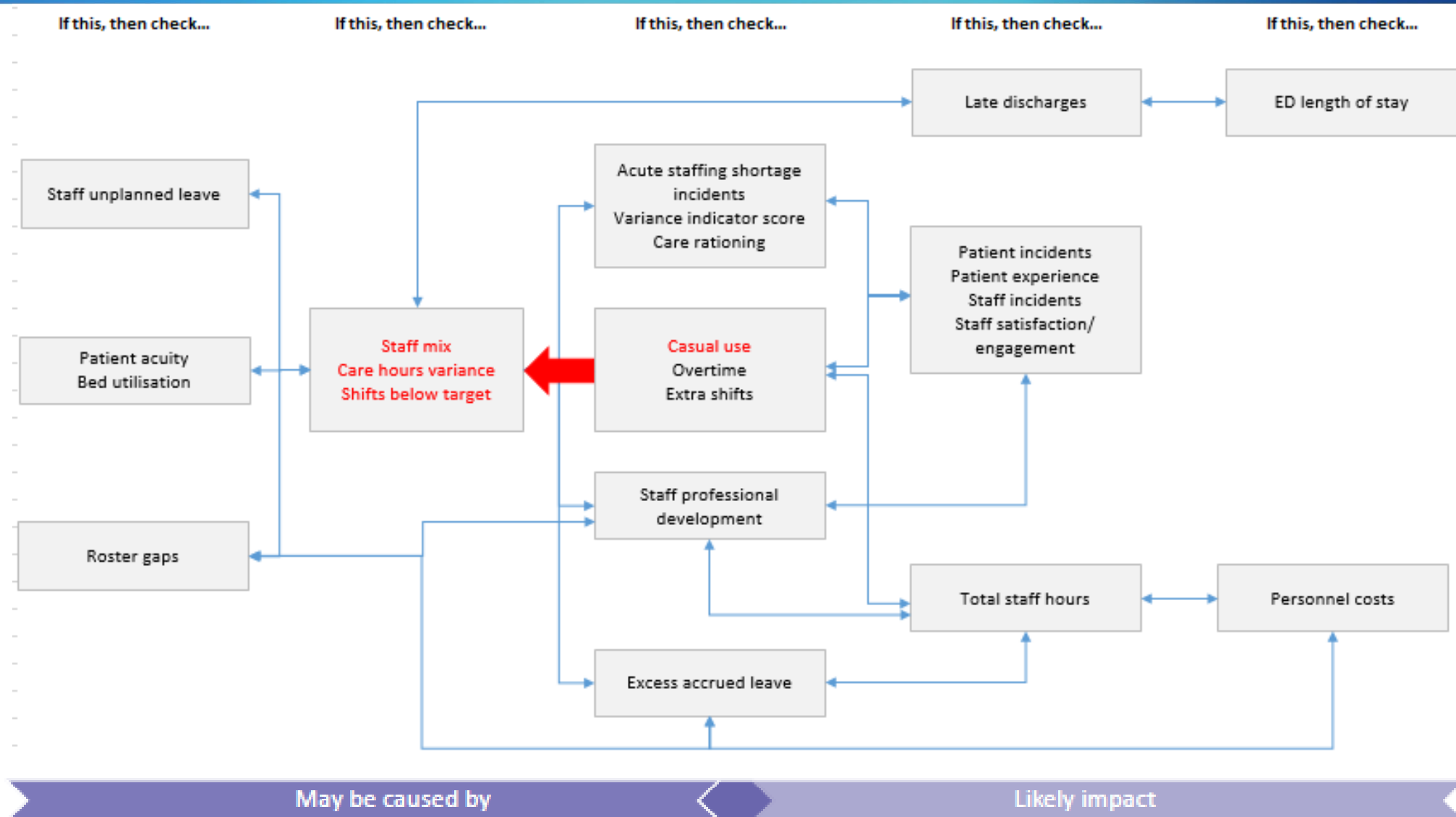
# How can we interpret the measures?

## Core data set directory - interpreting the core data set

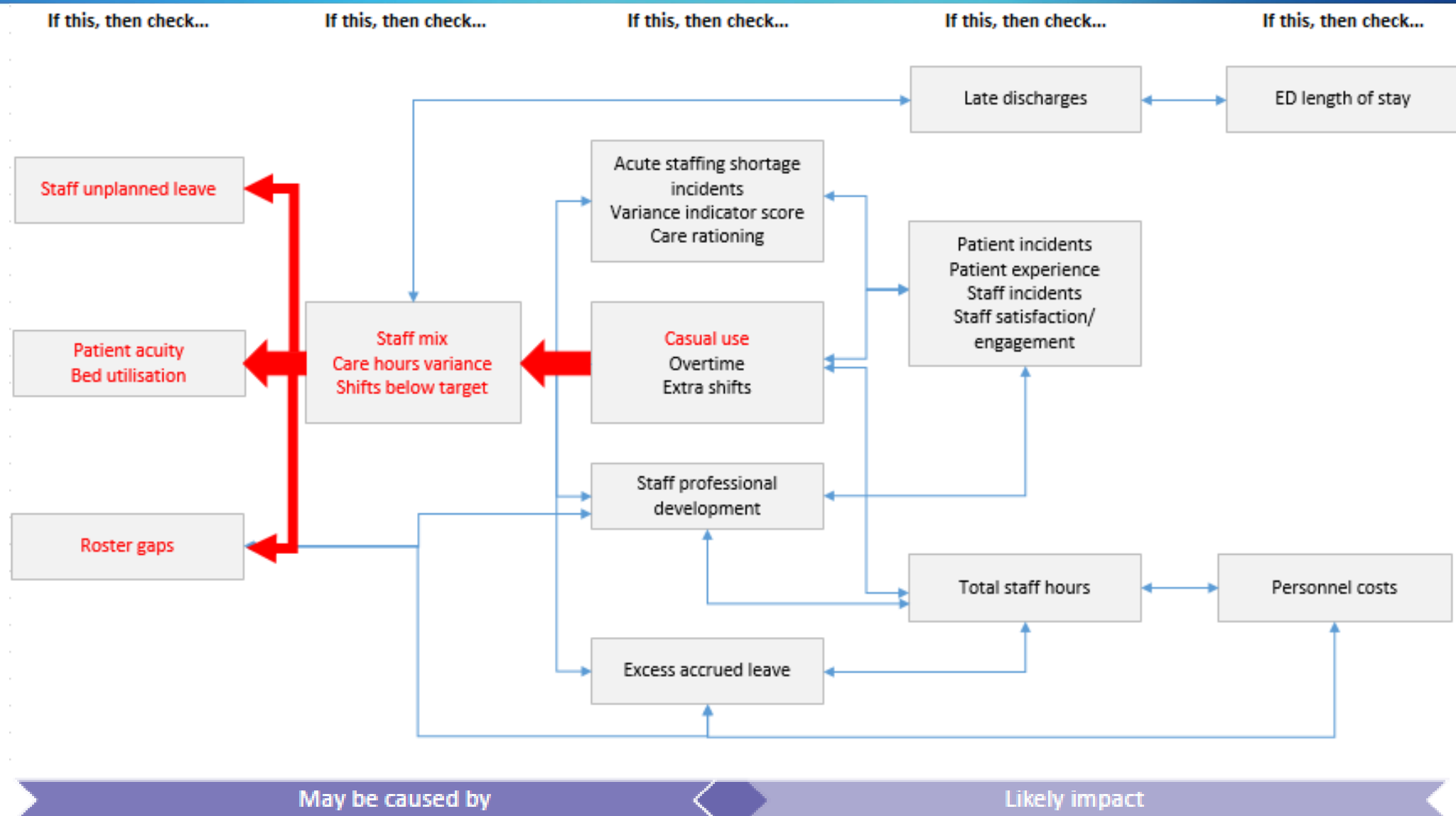
The following flow chart assists with interpreting the core data set. By working through 'if this, then check' each of the measures can be reviewed against the others. The flow chart can be read from left to right, or right to left, or you can start in the middle and work out. The arrow at the bottom shows the flow of 'may be caused by' and 'likely impact' from right to left.



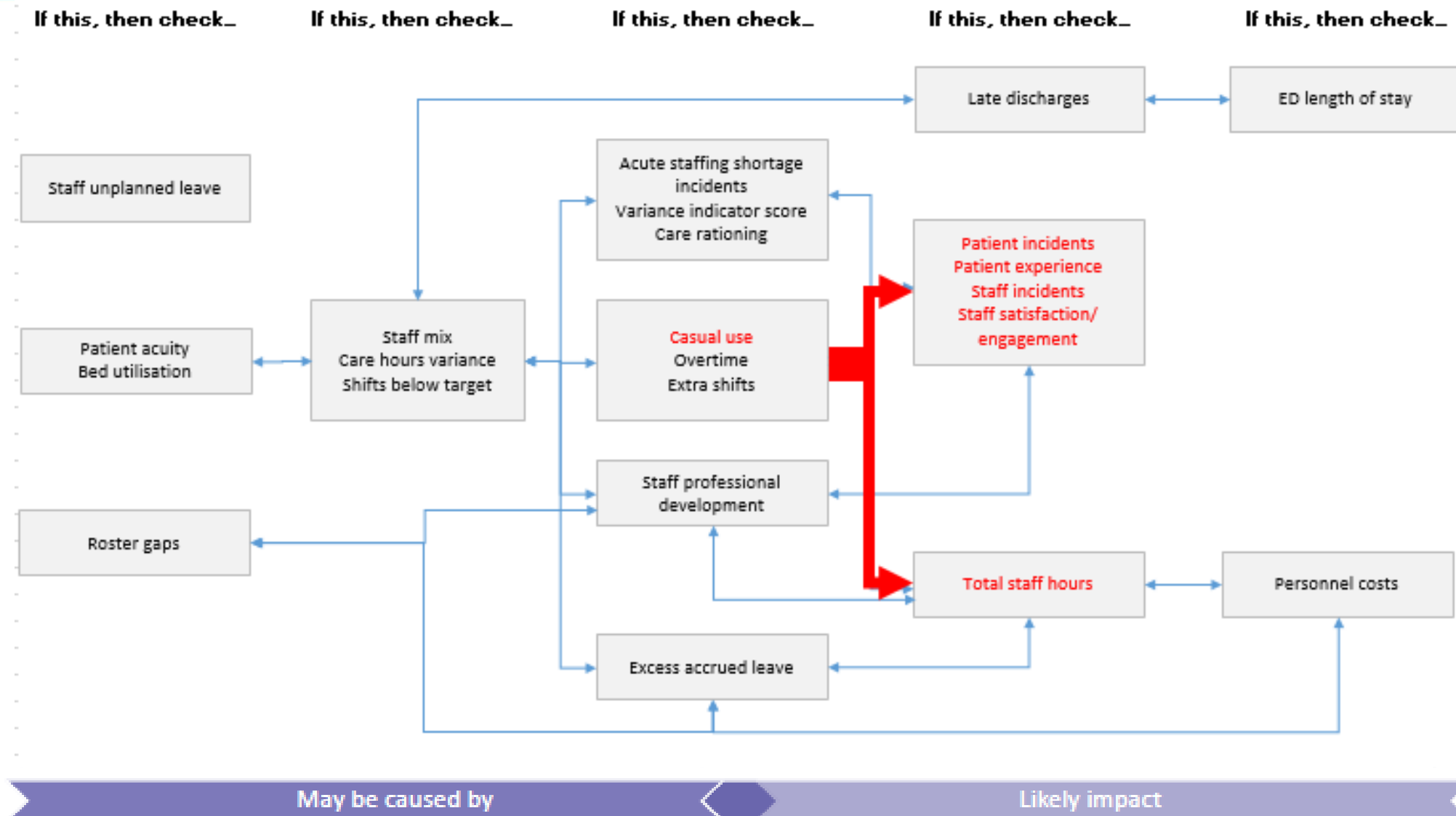
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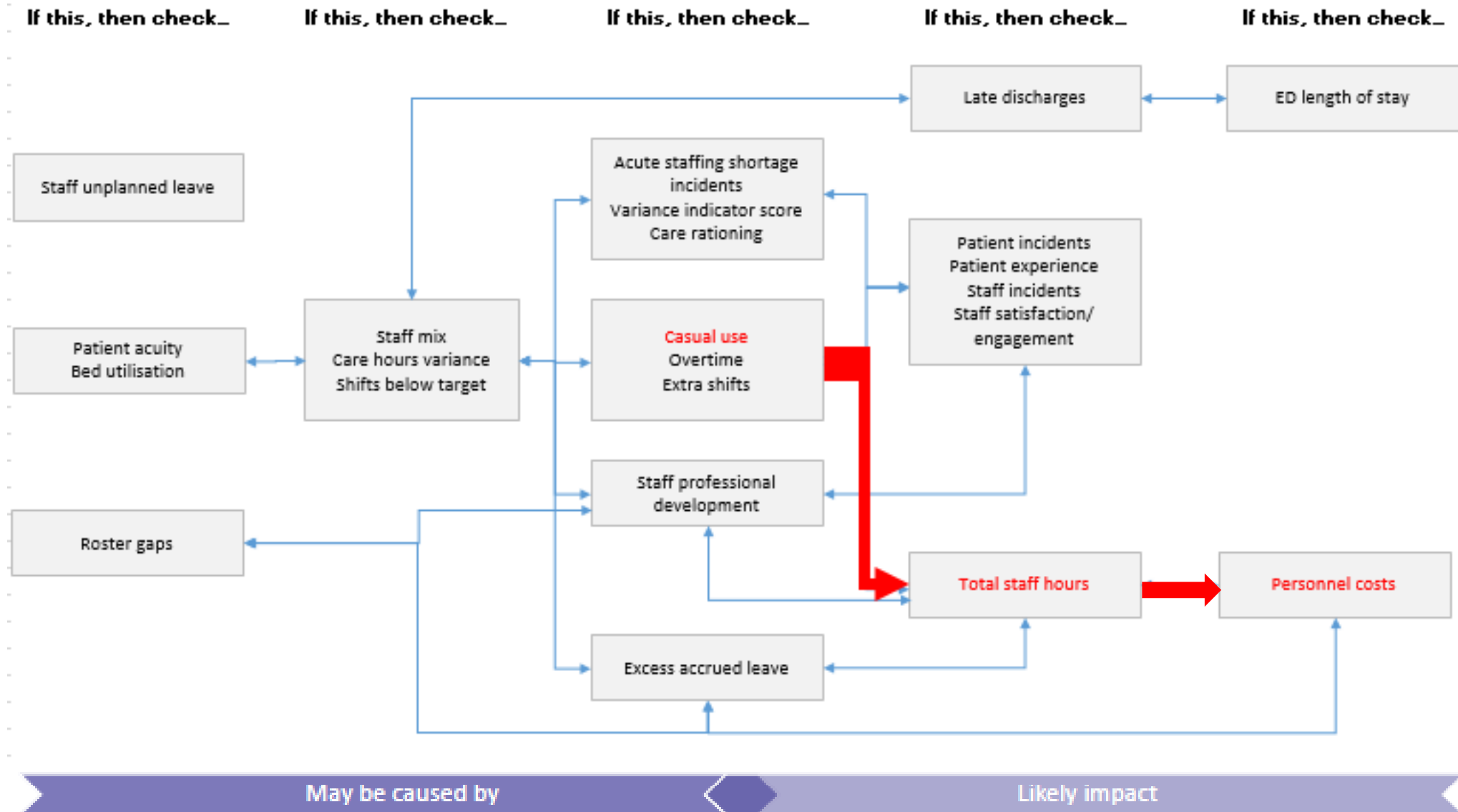


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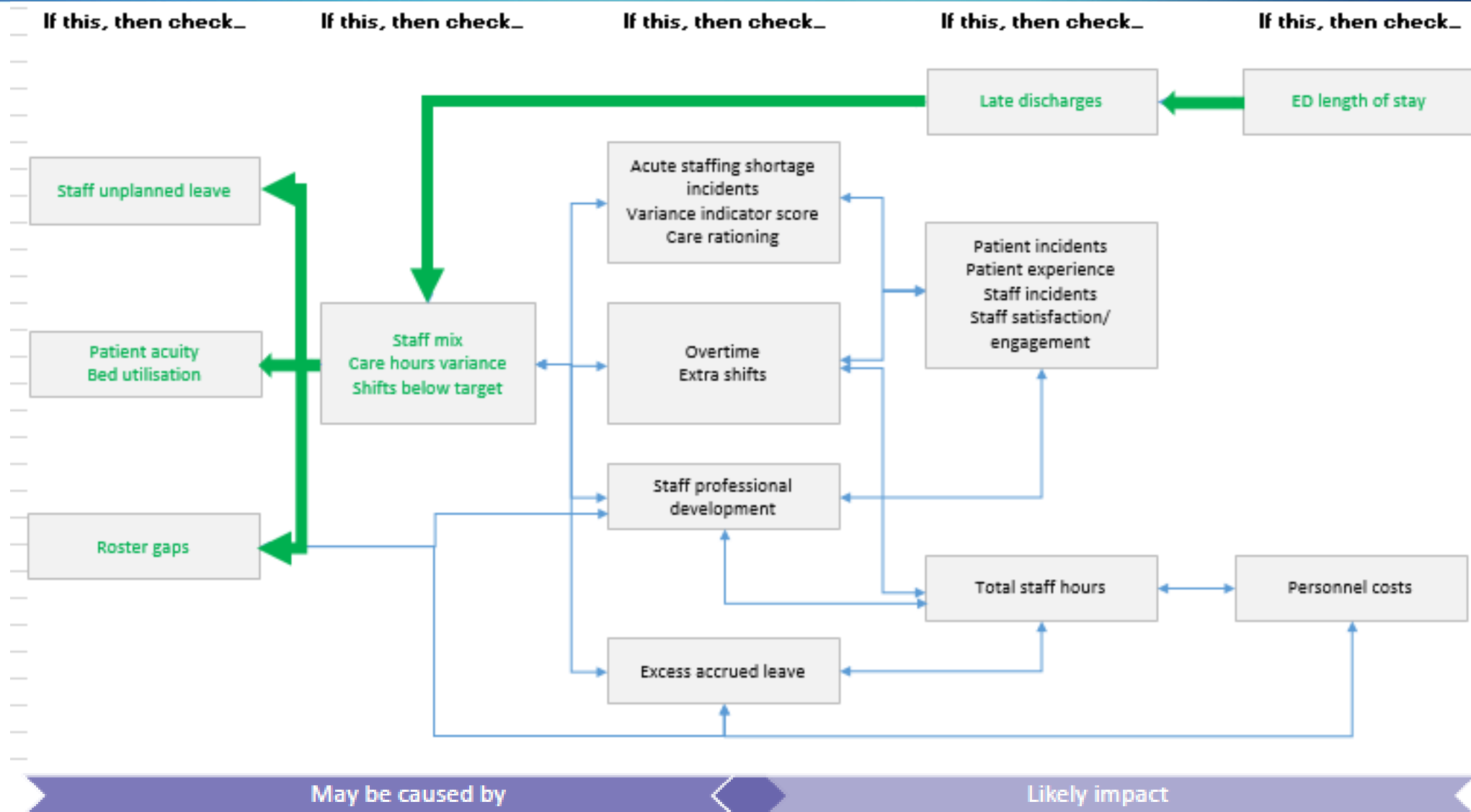




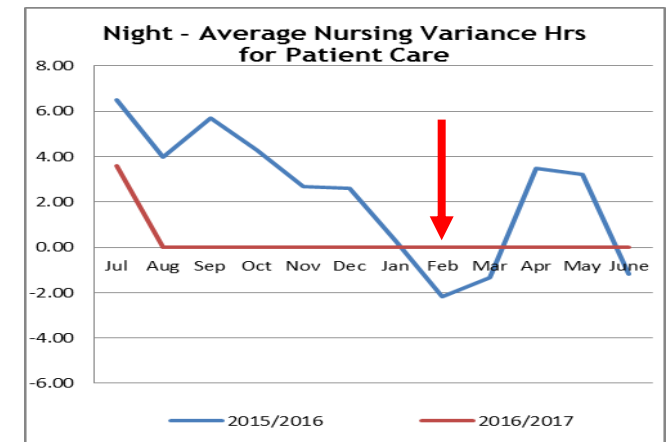
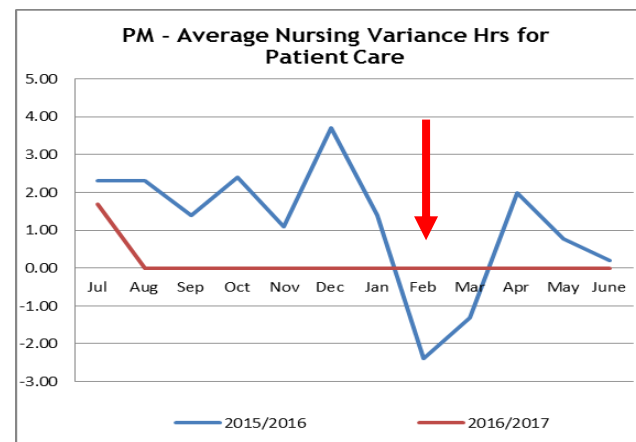
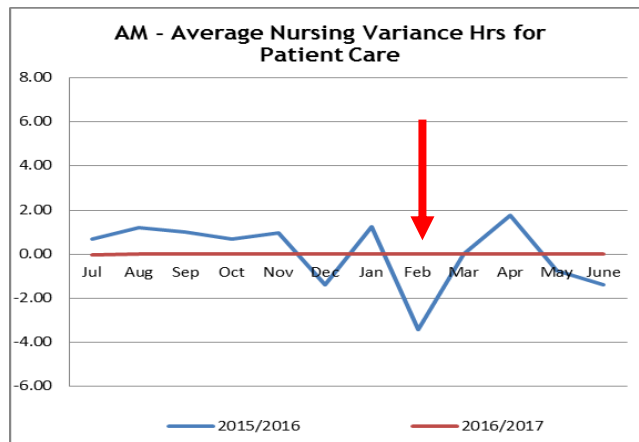
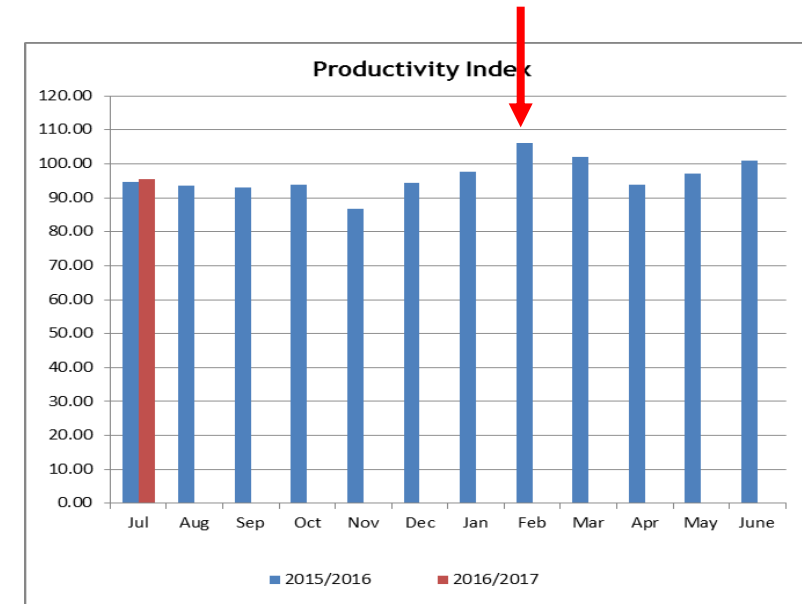
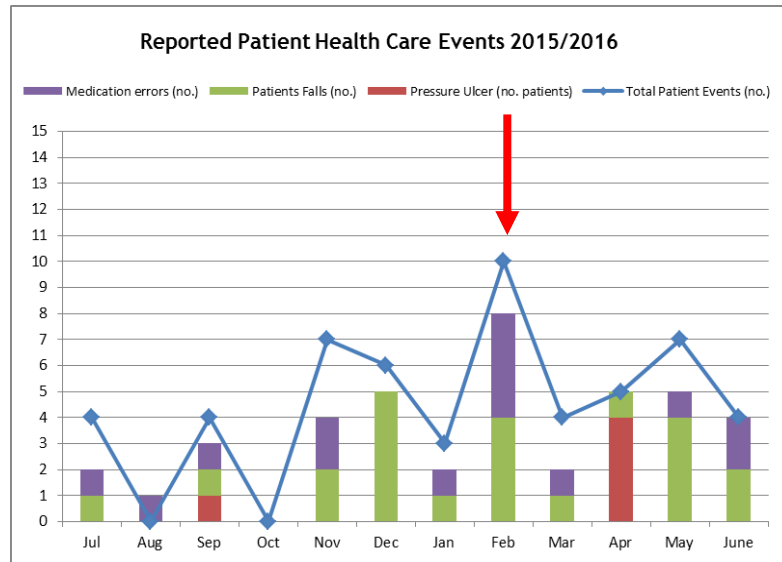
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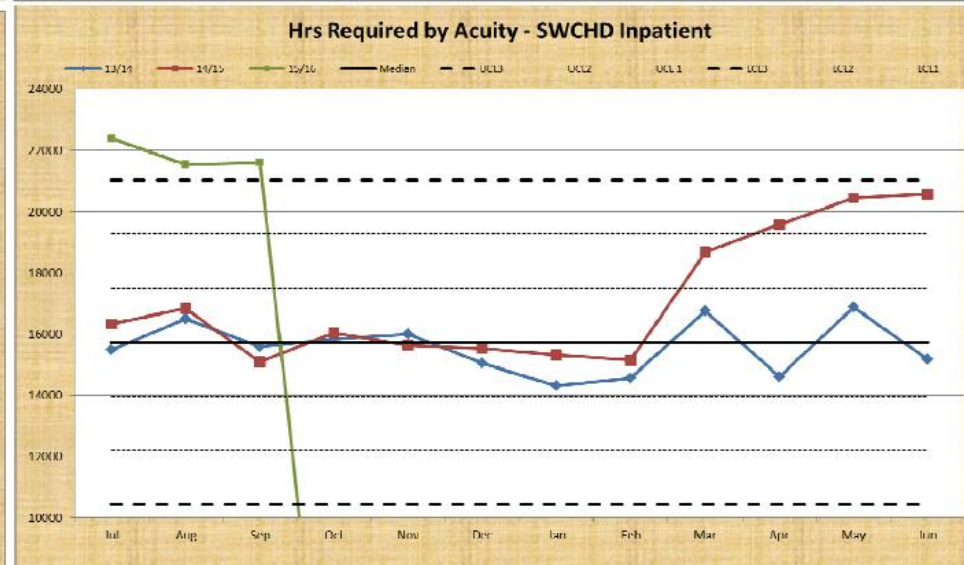
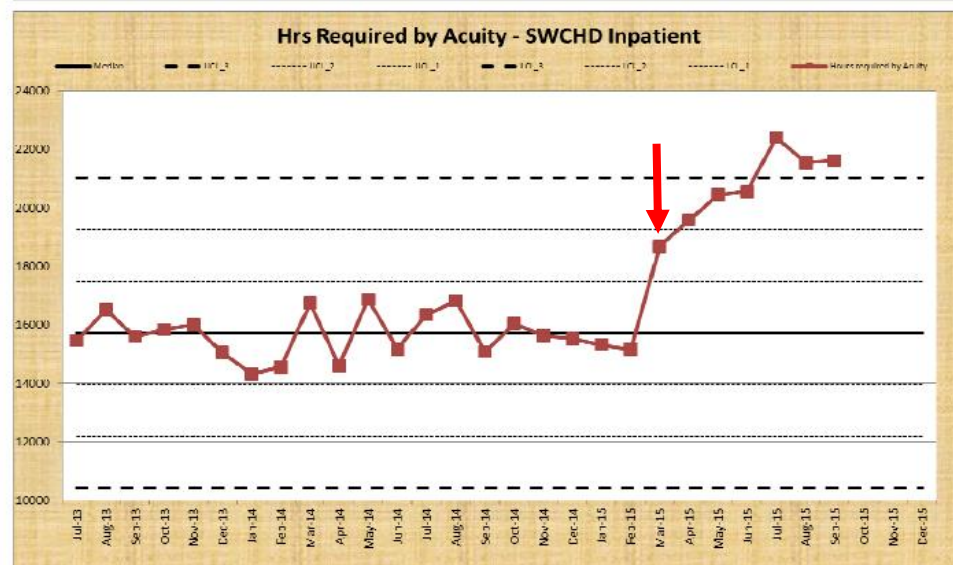
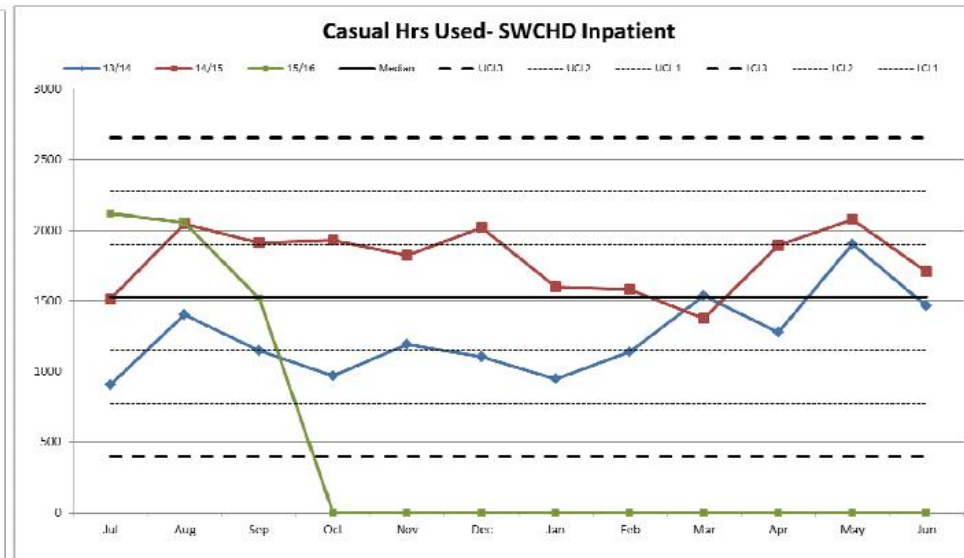
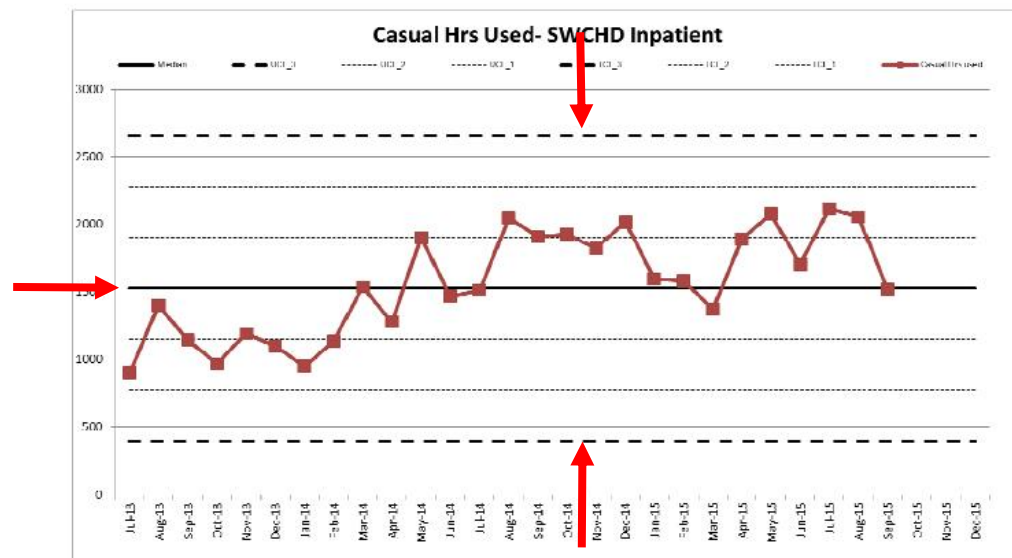
# How can we interpret the measures?



# For example: a ward



# For example: a directorate





# What are the current challenges?

- Time poor
- Limited investment in systems and processes
- Data overload, information poor
- Limited analytical skills and support
- Current measures may lack meaning to budget holders
- No nationally agreed measures, so
  - no national benchmarking
  - no national traction on safe staffing
- No single voice to lead

# Where to from here?

- It starts by measuring.....



Core Data  
Set



Common  
language



Professional  
solidarity



Shared goals



One voice to  
lead

