

Torturing large data sets

What you really need to know!

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Auroch





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“If you don't reveal some insights soon, I'm going to be forced to slice, dice, and drill!”



2,500,000

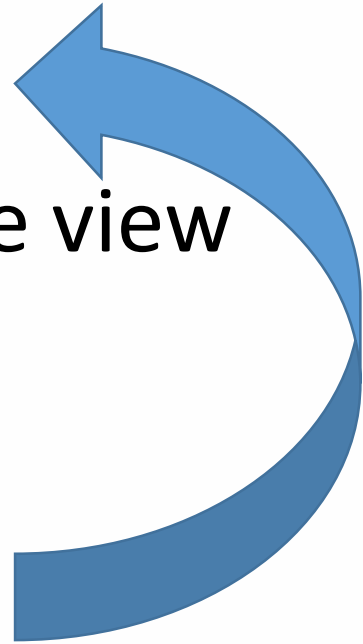
Number of full vital signs observations sets that contain the mandated NZEWS parameters in the CDHB database

Increasing by 100,000 per month



What do you need?

- Clinical governance
- Audit
- A question
- A 360 degree view
- Analytics
- Review
- and repeat





Clinical governance



- NZEWS working group.
- TOR – to monitor, maintain and sustain the NZEWS RRS at CDHB
- Made up of Drs and nurses from all disciplines in the CDHB that use the NZEWS.
- Meet at least 3 monthly or more often as required.
- Meet to discuss work undertaken outside of meetings.



Audit



- Standard HQSC QSM.

Percentage of audited patients that triggered an escalation of care and received the appropriate response to that escalation as per the DHB's agreed escalation pathway

= 55%



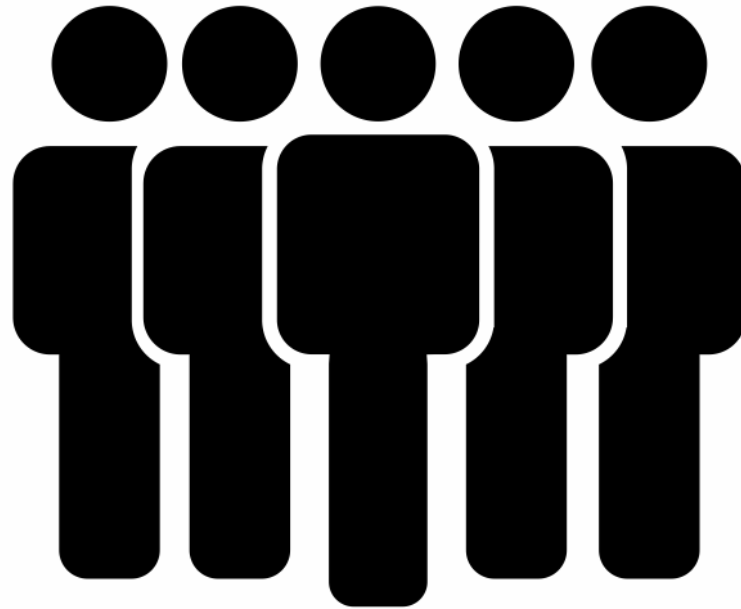
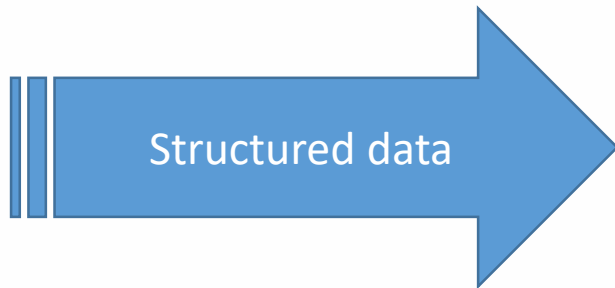
Question



Why?



360 degree review





Anecdote and opinion

- Just too many calls not enough time
- This is normal for the person and then the machine says we have to phone someone up
- Too sensitive

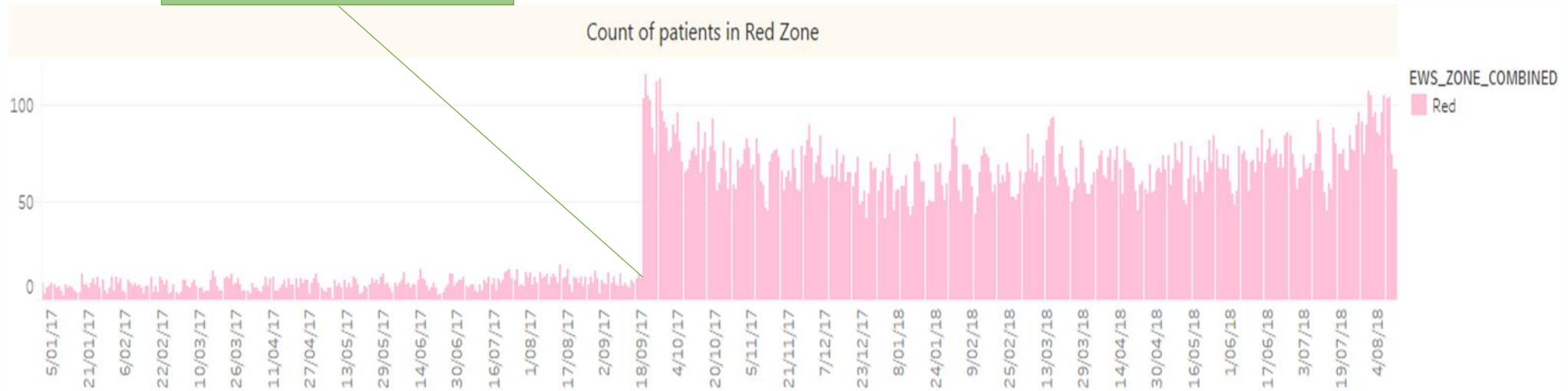


CDHB New Zealand Early Warning Score (NZEWS)	
In the case of staff, patient or family/whānau concern arrange for clinical review	
Total Early Warning Score (EWS)	Actions
EWS 1-5 YELLOW ZONE	<ul style="list-style-type: none"> • Manage pain, fever or distress • Discuss with Nurse in Charge (NIC) • Consider *medical review • Increase frequency of obs if required
EWS 6-7 ORANGE ZONE Acute illness or unstable chronic disease	<ul style="list-style-type: none"> • Manage pain, fever or distress • Inform NIC • Consider Clinical Team Coordinator (CTC) or medical review • Increase frequency of obs to Q30 – 60mins • Document treatment plan, if not improving *medical review
EWS 8-9 or any vital sign in RED ZONE Likely to deteriorate rapidly	<ul style="list-style-type: none"> • *Registrar bedside review within 20mins • Document treatment plan • Discuss with Senior/Specialist • Inform NIC and CTC after hours • Increase frequency of obs to minimum Q30mins • CHRISTCHURCH CAMPUS: Contact ICU Outreach if not improving • NON CHRISTCHURCH HOSPITAL SITES: →
EWS 10+ or any vital sign in BLUE ZONE Immediately life threatening critical illness	<ul style="list-style-type: none"> • Immediate *Registrar and ICU Outreach review • Inform NIC and/or CTC after hours • Stay with patient • CHRISTCHURCH CAMPUS: Consider clinical emergency activation • NON CHRISTCHURCH HOSPITAL SITES: → <div style="border: 1px solid black; padding: 5px; width: fit-content; margin-left: 20px;"> NON CHRISTCHURCH HOSPITAL SITES: <ul style="list-style-type: none"> • Activate clinical emergency • Consider transfer to Christchurch Hospital or AAU (Ashburton Hospital) </div>
IF PATIENT NOT SEEN or NOT RESPONDING TO TREATMENT, CONTACT ICU OUTREACH	



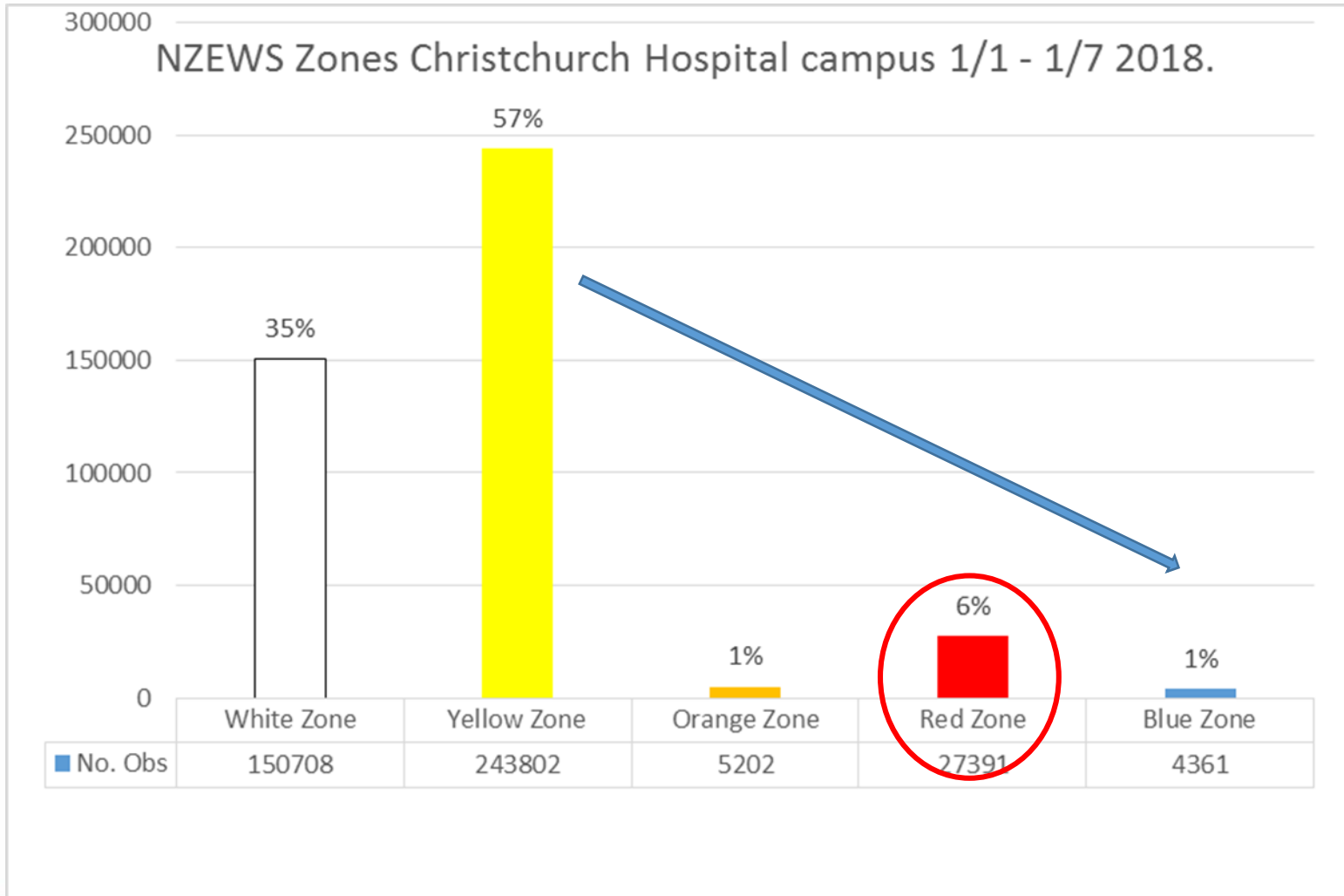
Analytics

NZEWS
implementation

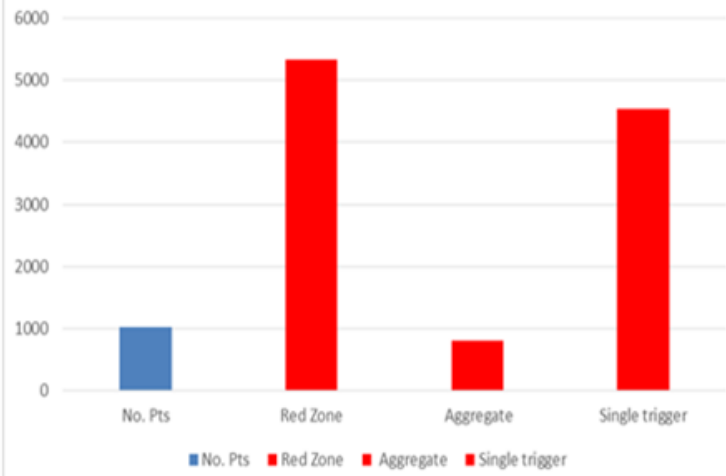




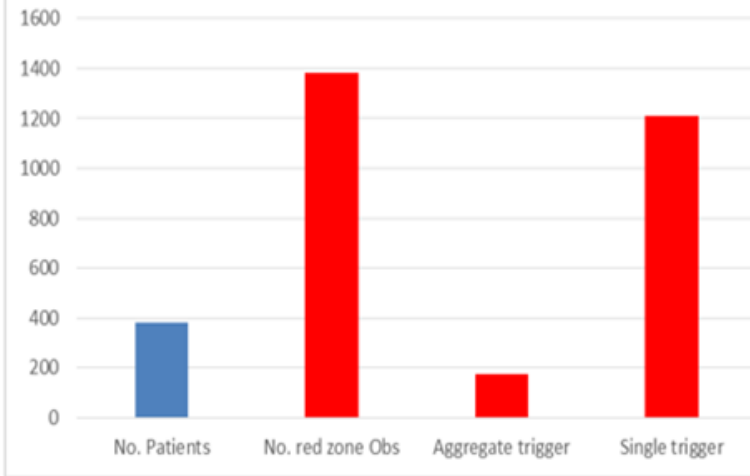
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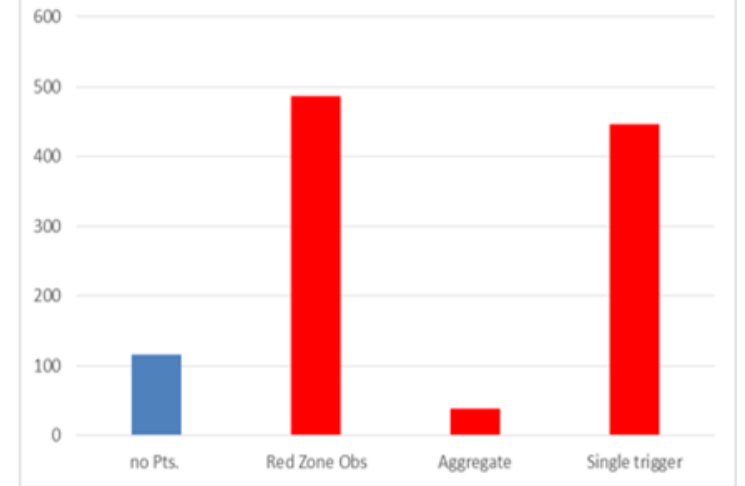
Gen Med Wards 23, 24, 27, Red Zone breakdown



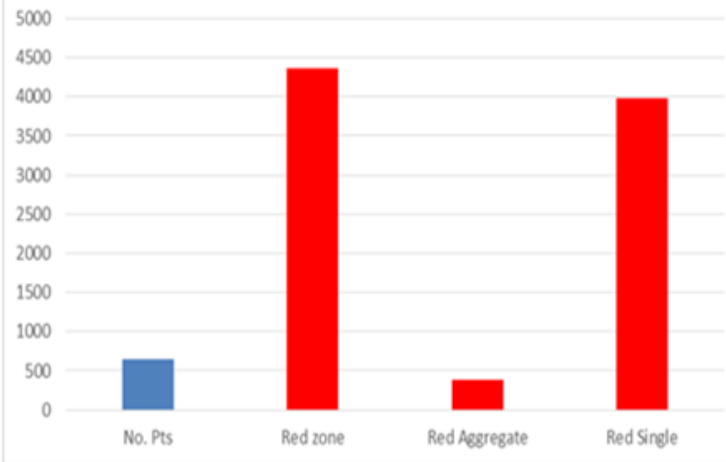
Ortho wards 18, 19 Red Zone breakdown



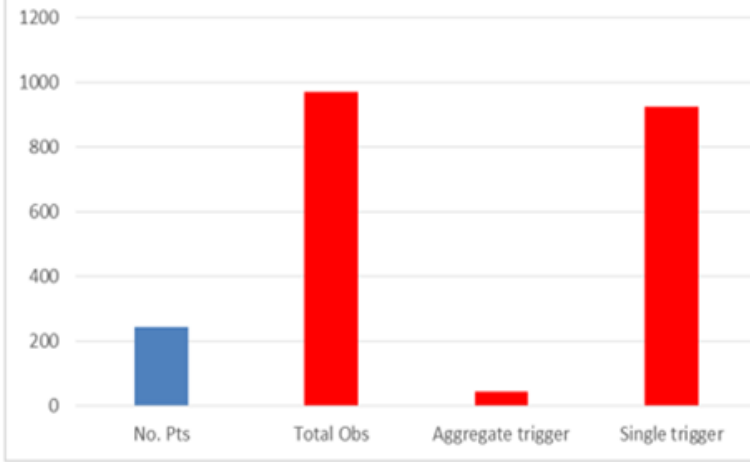
Neuro ward 28 Red Zone breakdown



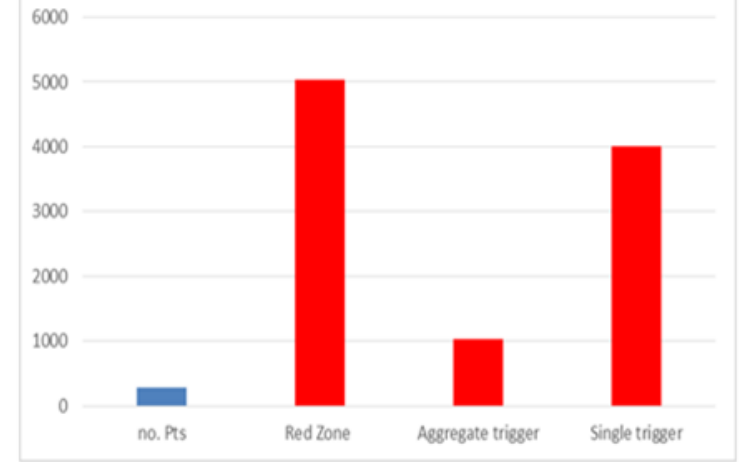
Surgical wards 15, 16, 17 Red Zone breakdown



cardiology ward 12 Red Zone breakdown



Respiratory ward 25 Red Zone breakdown





Analytics



- LTR = NZEWS score of less than 8 with no single trigger
- STR = NZEWS score of less than 8 with including a single trigger of 3
- RBT = NZEWS score of 8 or more



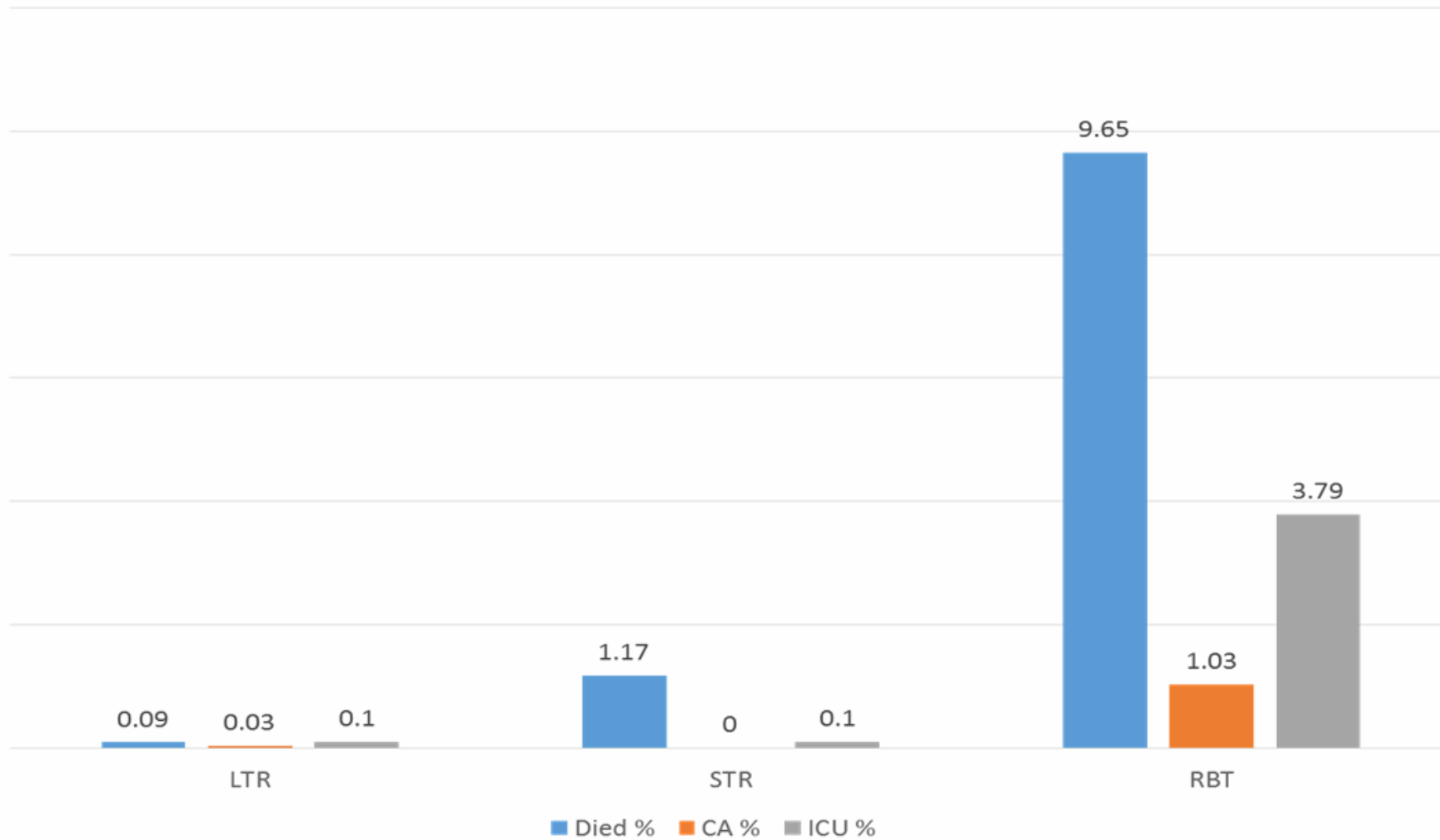
Analytics



- Outcomes?
- Death
- Cardiac arrest
- ICU
- Sounds easy but data needs a human touch



Analytics





Review



Clinical governance
group recommendations



CDHB 'Chiefs and Chairs'
review



Change



Thank you



“Information is the oil of the 21st century, and analytics is the combustion engine.”

Peter Sondergaard, Gartner Group.