Quality

An Unashamedly Mercenary Training Perspective

July 7, 2015

Information Sources

- College policy
- Cirriculum
- Examination Questions

Introduction

- For examination purposes, overlap between quality per se, "Administration", and "EBM" among others
- In interests of time a narrower definition of quality improvement will be taken in this talk

Donabedian Model

- Described in 1966, developed by a doctor for the heathcare setting
- Structure, process, outcome
- Not the only well known framework, WHO has one

http://www.who.int/management/quality/assurance/QualityCare_

From WHO Document

Every initiative taken to improve quality and outcomes in health systems has as its starting point some understanding of what is meant by 'quality'.

Dimensions of Quality

- effective
- efficient
- accessible
- acceptable/patient-centred
- equitable
- safe

Personal Perspective

- Outcomes are the most important aspect of quality, but the most difficult to interpret
- Structure is easy to measure but does not entail good processes or outcomes
- Process is an attractive, easy to interpret surrogate for real outcomes, but does not guarantee good outcomes and often relies on shaky evidence

CICM Policy

- Guidelines on Quality Improvement-CICM Revised 2013
- Defines "Clinical Quality Improvement", the ***Donabedian model as it applies to intensive care***, an ***outline of the structure of the quality improvement process***, and gives ***examples in each Donabedian category***

What's in the Cirriculum (Intro and Novice)?

- Introduction to quality section borrows heavily from WHO dimensions of quality above
- "Audit" of deaths and complications: i.e. ***Mortality and Morbidity (aka complications) Meetings***
- Describe ***sources of medical error***
- Describe the purpose and process of other quality improvement activities such as ***evidence based practice***, ***best practice guidelines***, ***bench marking*** and ***critical pathways***
- Assist with ***data collection*** and ***clinical audit***

Cirriculum-Expert

- Recognise the need for clinical audit and quality improvement activities not to be threatening or punitive to individuals
- Undertake clinical audit and lead effective quality improvement activities
- Describe how ***medical error may be reduced*** and an ***effective culture engendered***
- Encourage others to participate in clinical audit and quality improvement activities
- Comply with CICM recommendations for quality improvement activities (see Policy Document IC-8 Quality Assurance)

M and M Meetings

- Ideal format of such meetings not known
- NSW Clinical Excellence Committee gives useful guidance

http://www.cec.health.nsw.gov.au/__data/assets/pdf_file/0006/review-m-and-m-mar-2014.pdf

All clinical departments are expected to adhere to the following principles:

- Regular, scheduled
- Multidisciplinary, including clinicians from nursing, medical and allied health
- Analyse critically the circumstances surrounding outcomes of care, including selected deaths, serious morbidity and significant aspects of regular clinical practice

M and M Meetings cont'd

- Focus should be on the systems and processes of care and not on individual performance
- Recommendations arising from individual cases should focus on measures that can prevent similar outcomes or adverse incidents, or that will improve the processes of care provided to this group of patients
- Actions to implement the recommendations should be initiated
- Outcomes and decisions of these meetings should be documented in a brief report

M and M Meetings-further points

- Confidentiality, protection
- How to involve other departments
- Quantitative aspects such as risk of death-maybe discuss cases in increasing risk of death so low-risk deaths discussed first
- Maybe examine deaths in top quartile of los to examine appropriateness
- Organ donation opportunities
- Role as a debriefing mechanism

What is Clinical Audit?

- Quality improvement process that seeks to improve patient care and outcomes through systematic review of care ***against explicit measures*** and the ***implementation of changes*** in practice if needed
- Implies we have explicit measure of good practice-not merely a description of outcomes
- Implies an "Audit Cycle" exists which involves effective resultant strategy and confirmation of success and its maintenance

The Clinical Audit Process

A clinical team works through these steps:

- agrees on an important subject
- carefully designs audit
- formulate precise measures of quality which may include standards or evidence of good practice
- use audit measures as basis of data collection
- evaluates data
- feed back good performance or if bad performance, evaluates root causes, takes action to eliminates and re-measures practice

Medical Error

- Difficult to define satisfactorily
- Differs from adverse event where disability does occur where as it may not with medical error
- Causes either deviation from planned course or failure to complete planned course of action
- Preventable-difficult to define-does this mean potentially preventable (a relative term) or should not have happened (an absolute term)
- Failure to diagnose is often included in definitions and yet failure to make a definitive diagnosis is very common

Sources of Medical Error

- High complexity
- Busyness, fatigue
- Knowledge lack including lack of standard operating procedures
- Large, unfamiliar teams
- Inadequate communication
- Inadequate information flow-e.g failure to follow up tests because unavailability
- Technological failure
- Poor leadership-clinical and management

Prevention of Medical Error

1. Technological solutions-e.g. electronic prescribing, electronic medical records
2. Human factors engineering-e.g. change packaging of medication to prevent mix-up
3. Teamwork-e.g CRM
4. Policies, procedures, guidelines
5. Checklists-e.g. surgical time-out
6. Structured communication tools-e.g SBARR
7. Enhanced patient/relative involvement

Creation of high-reliability systems.

Open Disclosure Healthcare Errors

https://www.mcnz.org.nz/assets/News-and-Publications/Statements/Disclosure-of-harm.pdf

- Should disclosure to patient occur if harm has not occurred?
- Often very difficult to be sure whether harm has occurred or not early on after an occurrence
- Borderline between poor practice and what is now seen as a no-blame process

Guidelines-what are they good for?

http://oto.sagepub.com/content/148/1_suppl/S1.full.pdf+html

- Good guidelines help clinicians translate evidence into practice
- Especially useful where clinician unfamiliar with subject matter
- Reduces unnecessary practice variation which may be beneficial
- Enhances team expectation of what appropriate action may be
- Existence allows demonstration of mature care processes within Unit
- Gives de facto standard to audit against if none other exists

Guideline Development

AGREE and AGREE II are recognised standards for guideline development:

- Explicit scope and purpose
- Stakeholder involvement
- Rigour of development
- Clarity of presentation
- Applicability
- Editorial independence

Steps in Guideline Development

1. Identifying and refining subject area
2. Convening and running guideline development groups
3. Assessing evidence identified by systematic evidence review
4. Translating evidence into recommenations
5. Subjecting the guideline to external review

SMR

- Simple concept of observed/expected deaths
- Easy endpoint to measure
- Interpretability hinges on adequacy of risk adjustment model
- ANZICS ROD model recently introduced to supplement APACHE 3
- Selection of peer units/hospitals-Health Roundtable
- Only reflects some aspects of care

Interpreting the SMR

ICU factors

- Environment (set up, isolation)
- Staff (number, quality, roster, morale)
- Medical expertise/guidelines/ departmental policy, education
- Inappropriate admission
- Work load
- Critical incidences
- Unit culture Performance and availability of extra ICU services

Non ICU factors

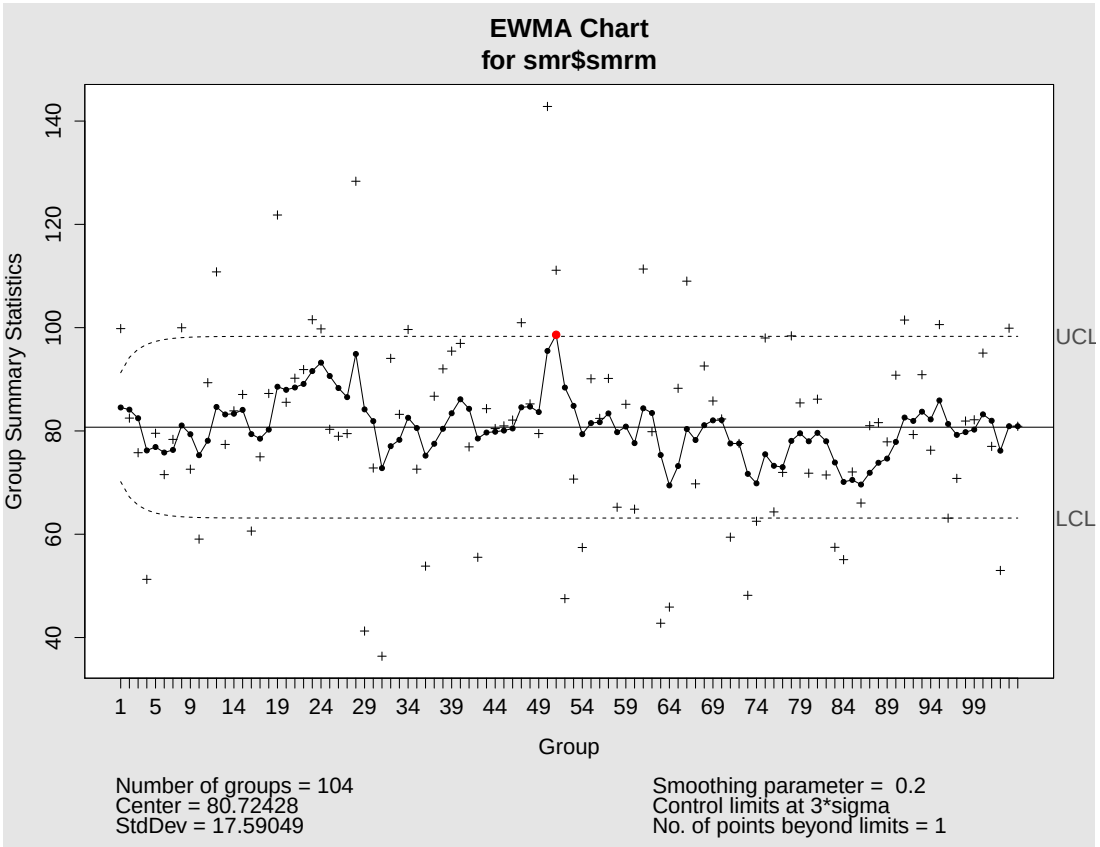
- Surgical team
- OT availability
- Pre /post ICU care
- Radiology
- Laboratory service

How to respond to poor unit performance

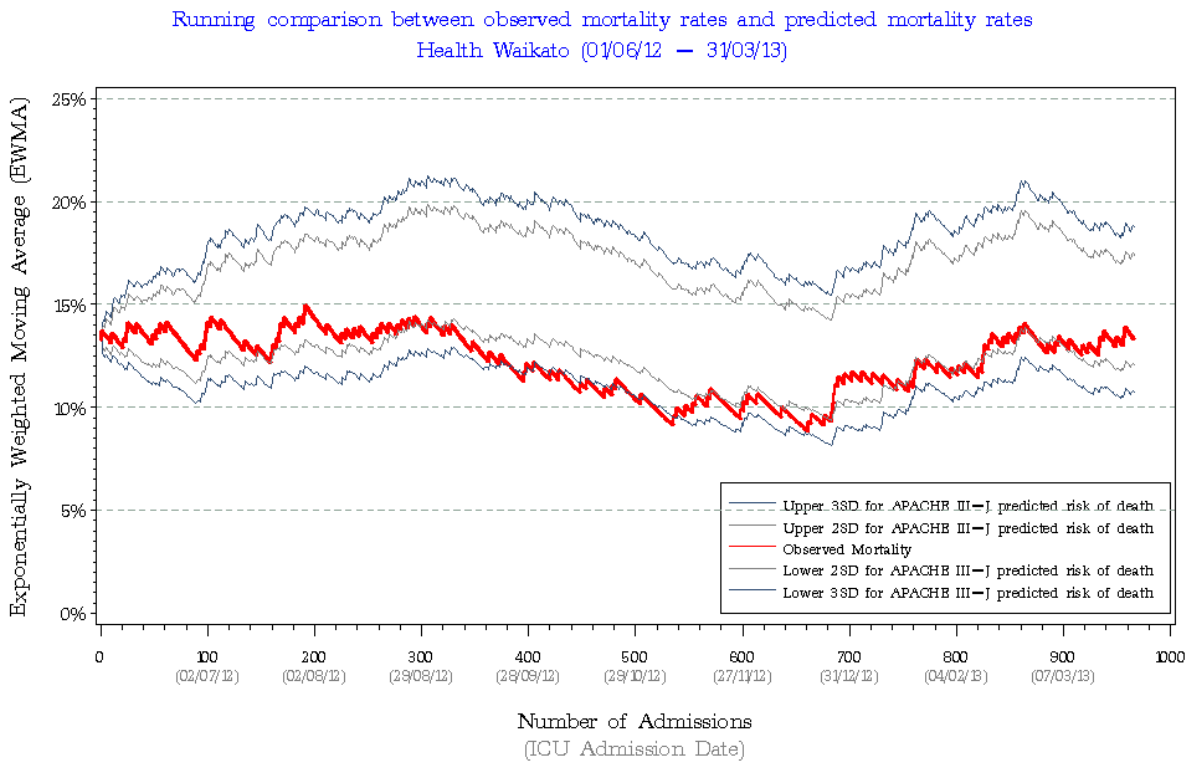
- Begin data check, especially big ticket items like GCS
- M&M meetings
- Review and update of evidence based practice
- Peer review
- Adhere to FAST HUG
- Critical incident meeting
- Monitoring and auditing KPIs
- Ongoing support and education of staff
- Optimise ICU structure and processes
- Foster good working relationships with non ICU teams

Control Charts

- simple concept arising from post-WW II USA/Japan
- with risk adjustment graphically represents performance against usual performance and against other units

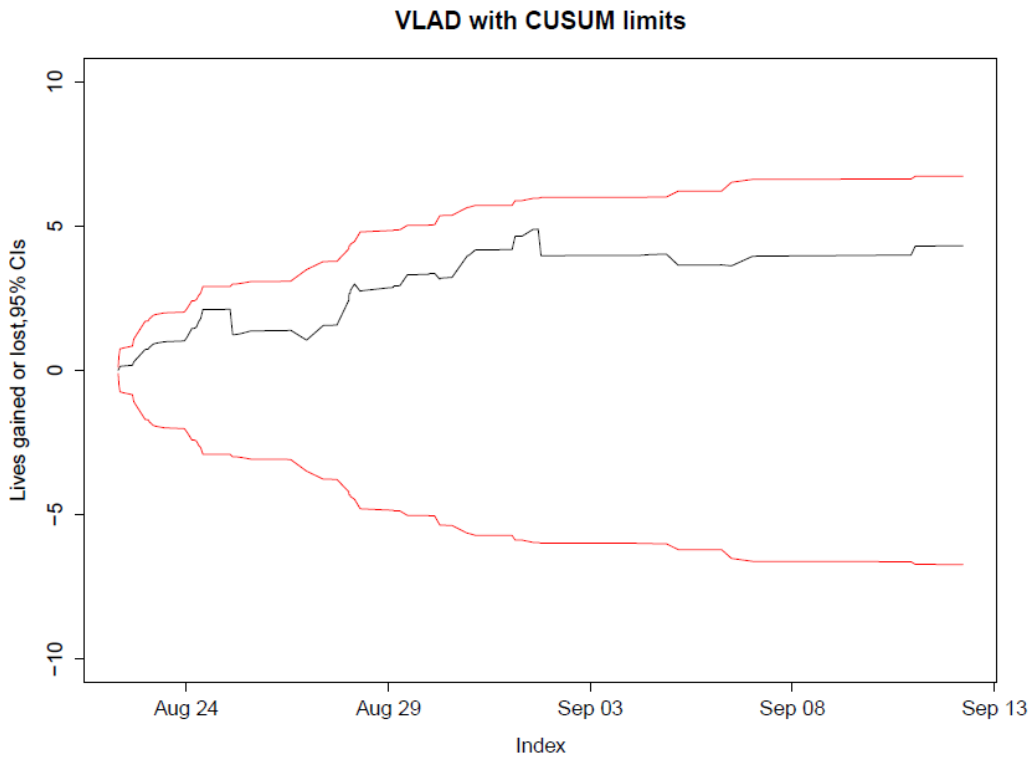


Compare to own and other ICU's performance

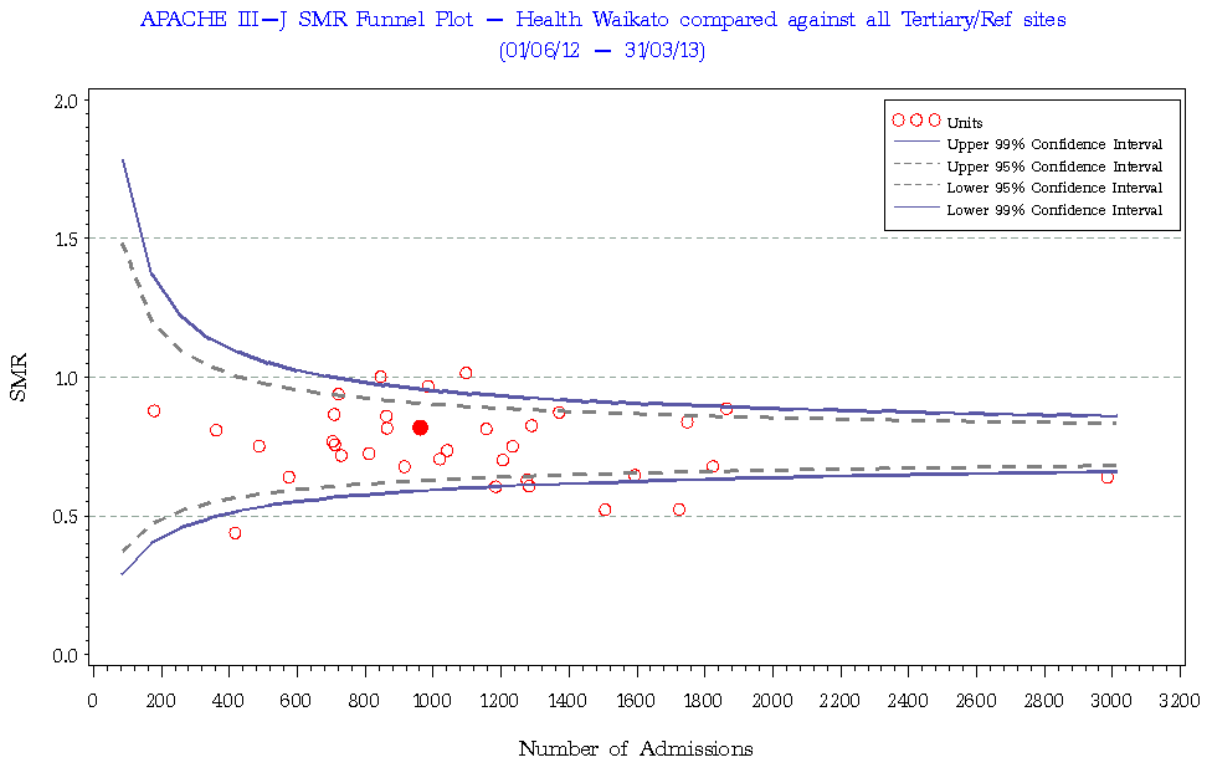


NOTE: Control limits for predicted mortality rates are derived using APACHE III−J; Lines shown are calculated using an exponentially weighted moving average with a weighting of 0.005.
Report provided by ANZICS Centre for Outcome and Resource Evaluation (www.anzics.com.au). Data Source:Data submitted to ANZICS CORE Adult Patient Database as at May 9, 2013.

Variable life adjusted display (VLAD)

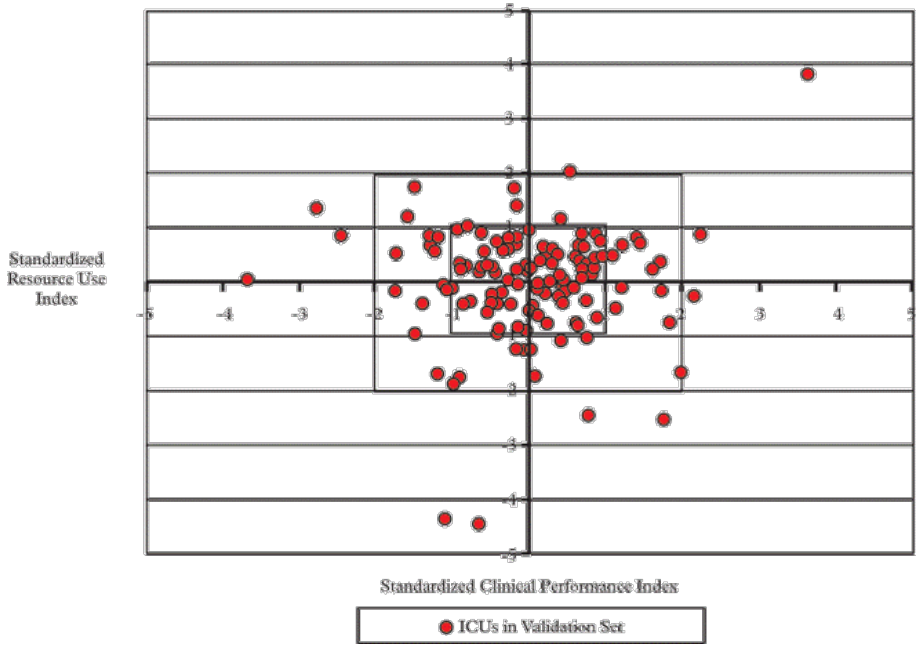


Funnel Plots



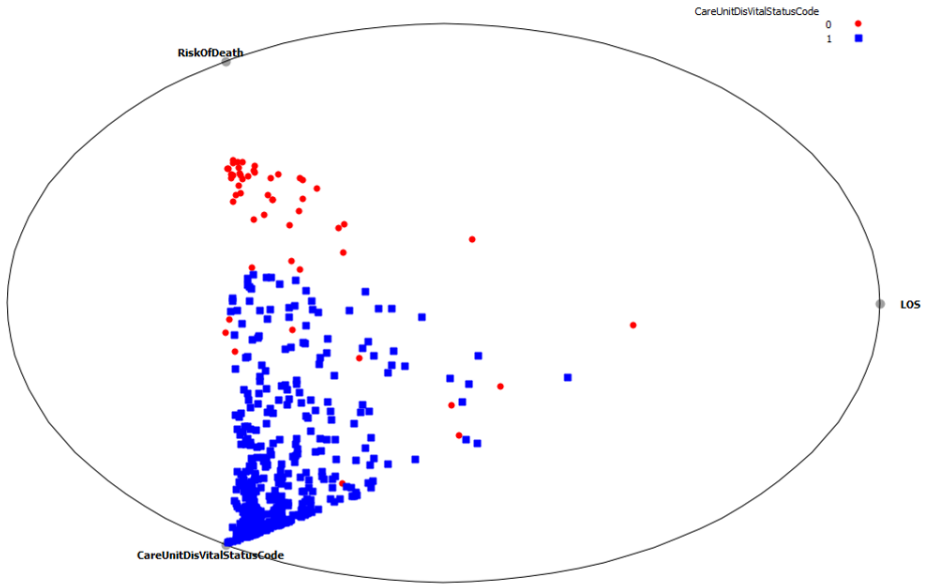
NOTE: Your unit has been specified by a solid dot. Confidence Intervals for the funnel plot are derived using 95% and 99% F distribution values around the mean SMR of hospitals in the group. The SMR is derived from the APACHE III–j predicted risk of death.
Report provided by ANZICS Centre for Outcome and Resource Evaluation (www.anzics.com.au). Data Source:Data submitted to ANZICS CORE Adult Patient Database as at May 9, 2013.

Cost Effectiveness



- Resource utilisation to achieve given SMR is important
- High SMR despite high resource utilisation is obviously undesirable
- Can divide units into one of 4 quadrants with Rappaport-Teres diagram

Further thoughts on Quantitative performance



- We want to have some sense that people who were "destined to die" aren't dying after long lengths of stay-of course there is no standard for this