Striving for improvement - Data management, Plan-Do-Study-Act (PDSA) & Accreditation

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(Organizers: Infectious Disease Control Training Centre, Hospital Authority/Infection Control Branch, Centre for Health Protection and Chief Infection Control Officer's Office).

High-performance management system (HPMS)

- **"Doing the Work, Improving the Work"**
  - Quality Planning (QP)
  - Quality Control (QC)
  - Quality Improvement (QI)

Scoville R, Little K, Rakover J, Luther K, Mate K. Sustaining Improvement. IHI White Paper. Cambridge, Massachusetts: Institute for Healthcare Improvement; 2016. (Available at ihi.org)

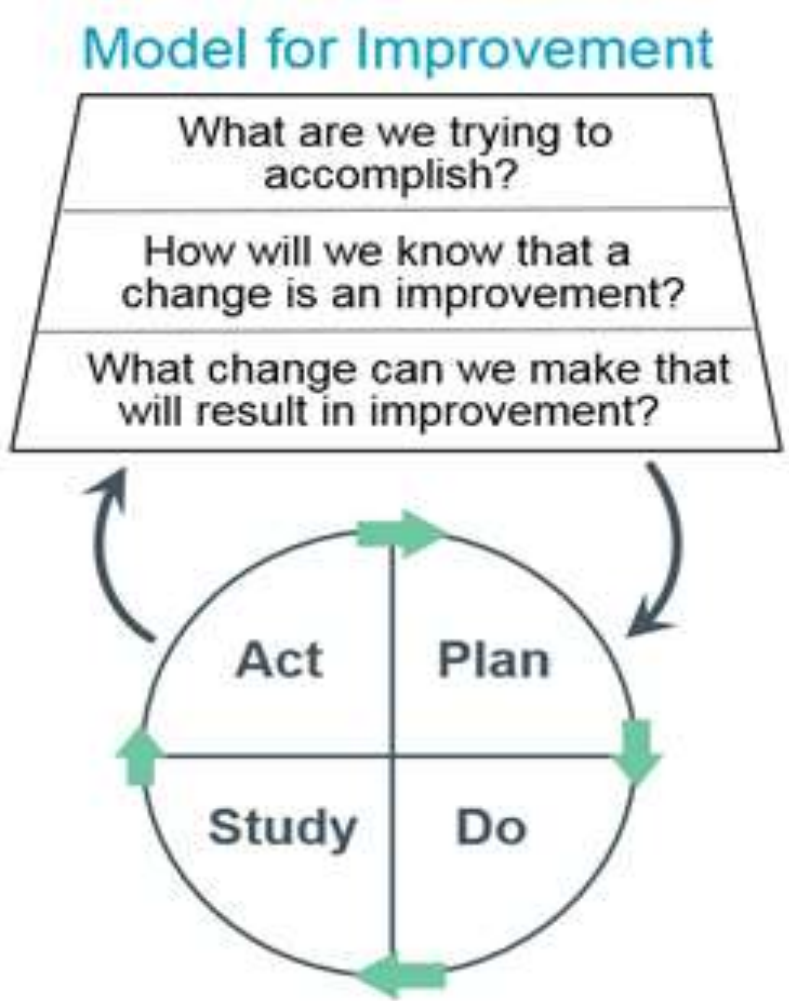
What is Quality Improvement and Quality Control?

- **Quality Improvement** is a formal approach to the analysis of performance and systematic efforts to improve it
  - **Quality initiative**
    - A designated team of managers and staff with relevant expertise & technical support from dedicated QI specialists
      - **Analyse** current processes, **identify** the symptoms and causes of poor quality, and frame a theory of what is required to improve the process
      - Uses a variety of methods and tools to develop, test, and implement changes, and if needed redesigns the relevant processes
  - Following successful improvement, **Quality Control** is used to **monitor the redesigned process to ensure it performs at a new level** (with new upper and lower control limits), with new work specifications, improved results, and reduced variation
    - Run charts, Control charts

Scoville R, Little K, Rakover J, Luther K, Mate K. Sustaining Improvement. IHI White Paper. Cambridge, Massachusetts: Institute for Healthcare Improvement; 2016. (Available at ihi.org)

Quality Improvement initiative?

- **Three questions**
- **The Plan-Do-Study-Act (PDSA) cycle** guides the test of a change to determine if the change is an improvement



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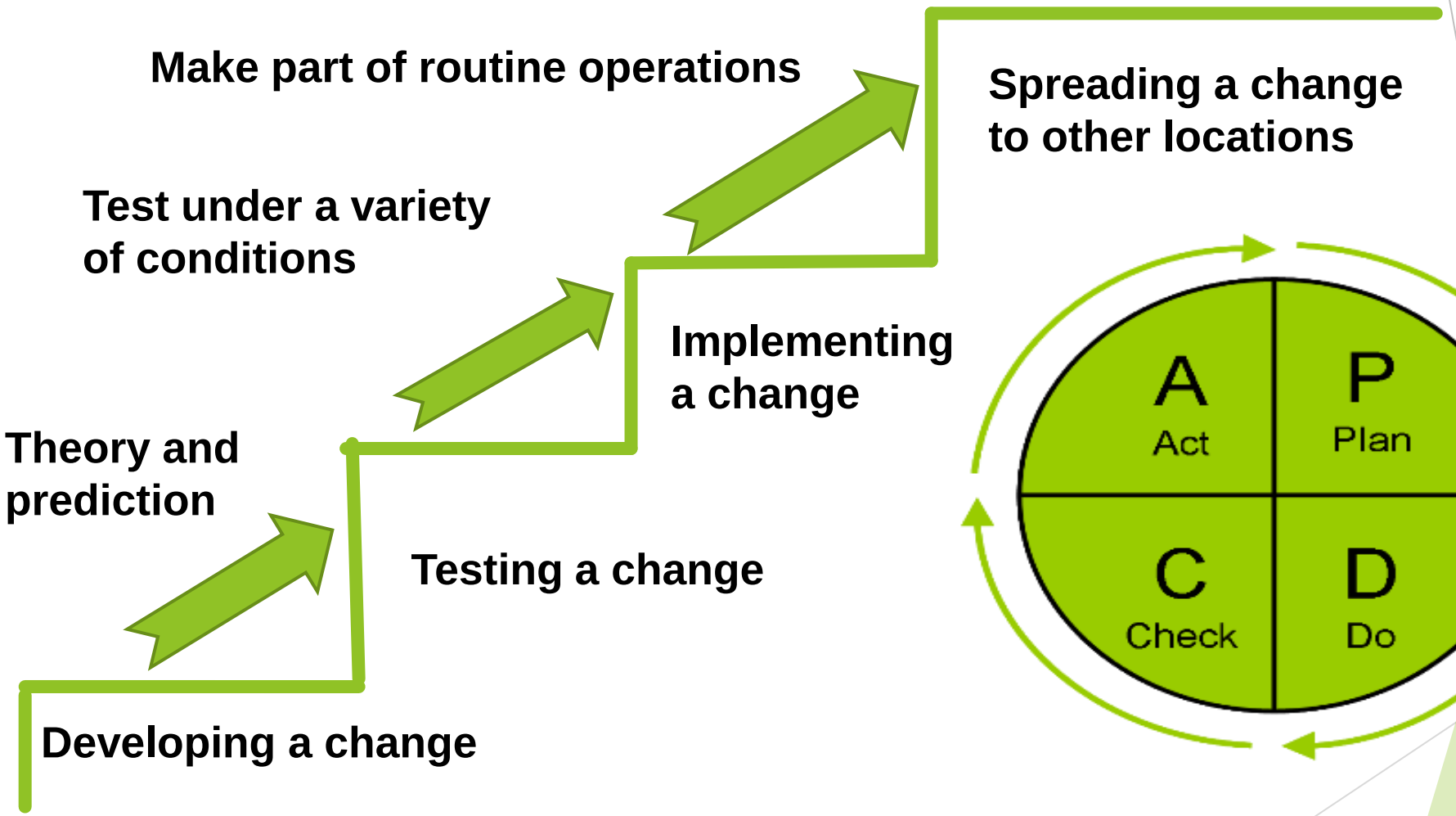
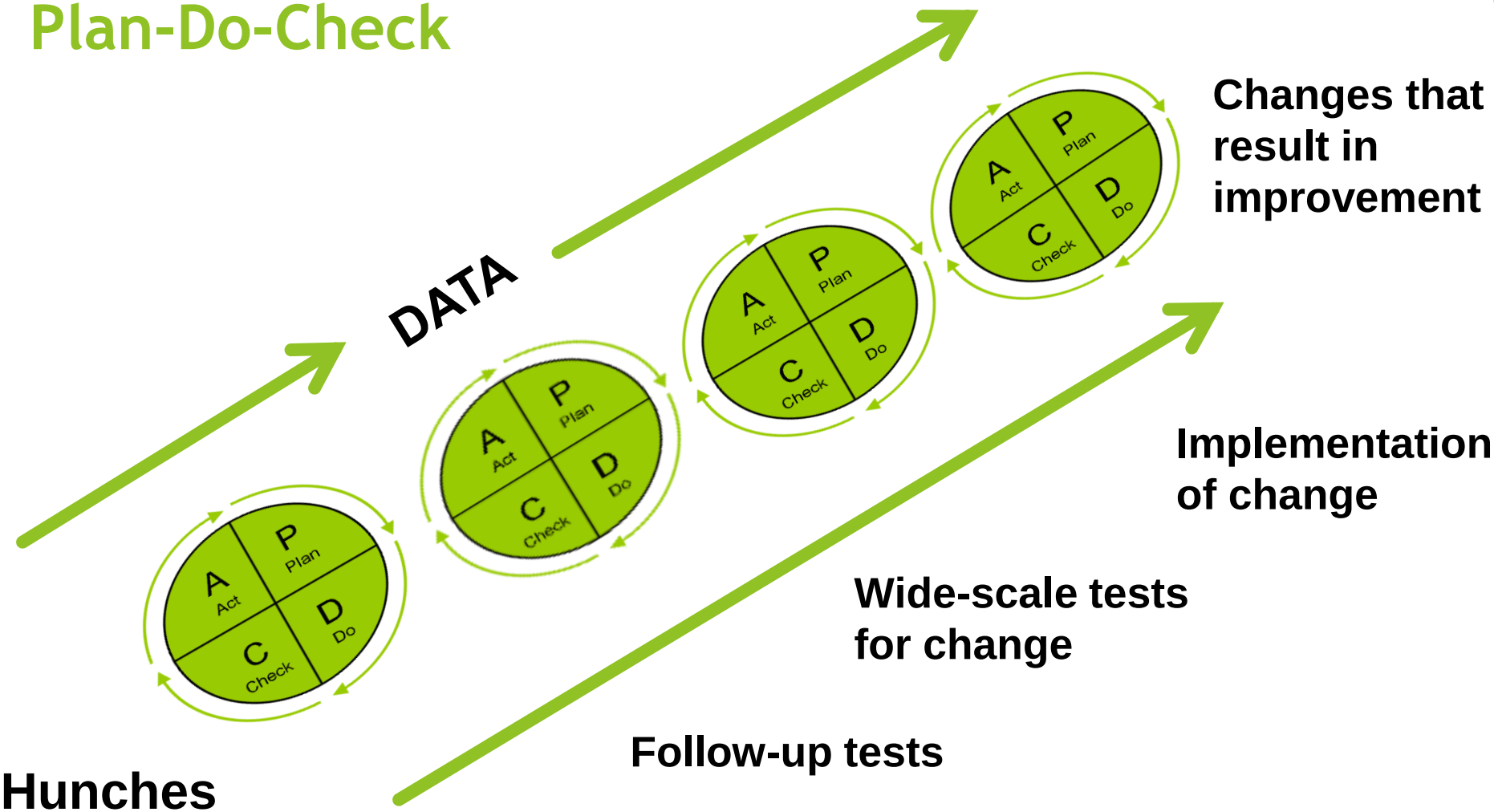
Sequence of Improvement



Lloyd B, Martin L, Nelson G, Stiefel M. What's on Your Dashboard? 18th Annual National Forum on Quality Improvement in Health Care. Dec 2006. IHI.org

Plan-Do-Check



Changes that result in improvement

Implementation of change

Wide-scale tests for change

Follow-up tests

Hunches theories ideas

Very small scale tests

Lloyd B, Martin L, Nelson G, Stiefel M. What's on Your Dashboard? 18th Annual National Forum on Quality Improvement in Health Care. Dec 2006. IHI.org

Quality Improvement Teams

- 1st - Review the aim
- 2nd - Consider the system/s that relate to that aim
- 3rd - Ensure the team includes members familiar with all the different parts of the process
  - Managers and administrators as well as those who work in the process, including physicians, pharmacists, nurses, and front-line workers
- 4th - Executive sponsor who takes responsibility for the success of the project

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Quality Improvement Teams

- **Clinical Leader**
  - Authority in the organization to test and implement a change that has been suggested and to deal with issues that arise
  - Understands both the clinical implications of proposed changes and the consequences
- **Technical Expertise**
  - Know the subject intimately and who understands the processes of care
  - Help the team determine what to measure, assisting in design of simple, effective measurement tools, and providing guidance on collection, interpretation, and display of data
- **Day-to-Day Leadership**
  - A day-to-day leader is the driver of the project, assuring that tests are implemented and overseeing data collection
  - Understands the details of the system & effects of making change/s in the system
  - Work effectively with the physician champion/s

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Quality Improvement Teams

- **Project Sponsor**
  - Someone with executive authority
    - Liaise with other areas of the organization
    - Serve as a link to senior management and the strategic aims of the organization
    - Provide resources and overcome barriers on behalf of the team, **minimise pushback**
    - Provide accountability for the team members.
      - Not a day-to-day participant in team meetings and testing, but should review the team's progress on a regular basis

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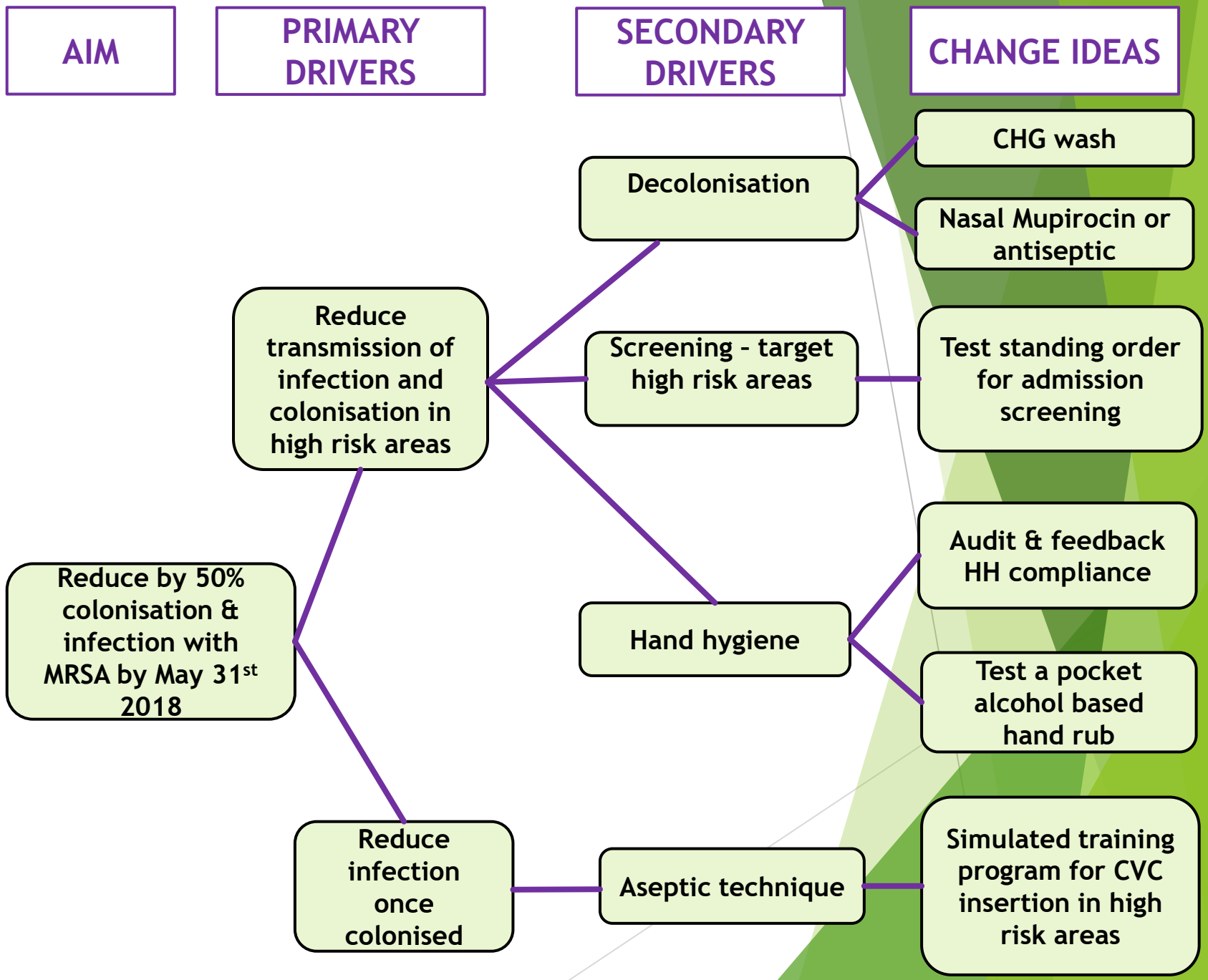
Useful tools
Driver Diagram

- **Aim** - outlining the project goal or vision - what will be improved, by how much, for whom, and by when
- **Primary Drivers** - high-level interventions to achieve the aim
- **Secondary Drivers** - secondary factors or interventions needed to achieve the primary drivers. List as many as you can think of
- **Change Ideas** - are well defined change concepts or interventions to address the secondary drivers

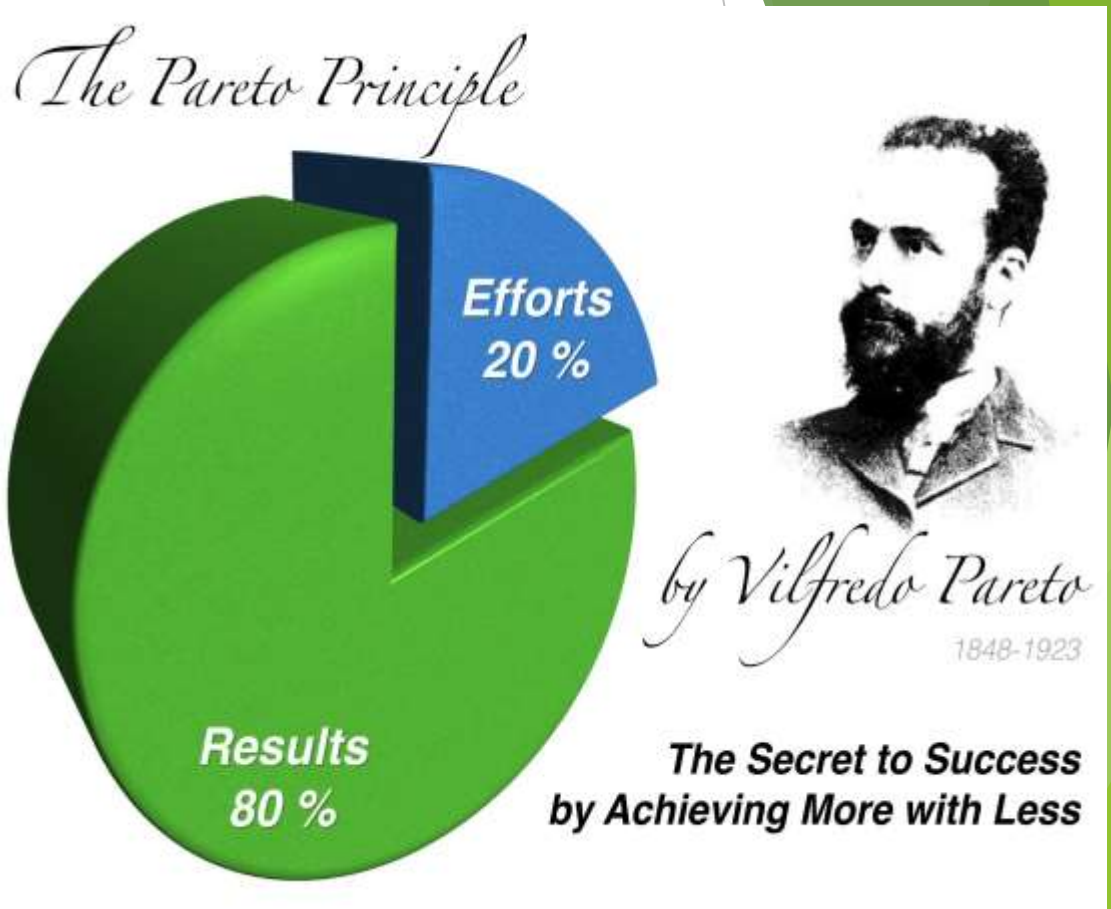


Useful tools - Pareto Chart

- The **Pareto principle** is a **principle**, named after economist **Vilfredo Pareto**, that specifies an unequal relationship between inputs and outputs
- The **principle** states that 20% of the invested input is responsible for 80% of the results obtained
- **Pareto Principle**
  - The observation (not law) that **most things in life are not distributed evenly**
  - A rough guide about **typical distributions**
- The key point:
  - **Most things in life (effort, reward, output) are not distributed evenly – some contribute more than others**

Useful tools - Pareto Chart

- **Type of bar chart**
  - Various factors that contribute to an overall effect are arranged in order from the largest to the smallest contribution to the effect
  - **This ordering helps identify:**
    - **The "vital few"**
      - Factors that have the largest contribution to the effect and therefore warrant the most attention
    - **As distinguished from the "useful many"**
      - Factors that while useful to know about have a relatively smaller contribution to the effect
- **Using a Pareto chart helps teams to concentrate their improvement efforts on:**
  - Factors that have the greatest impact and
  - Explain their rationale for focusing on certain areas and not other



Useful tools - Pareto Chart

- Order the factors - magnitude of contribution
- Calculate the % of the total that each factor contributes
- Largest to smallest - calculate the cumulative % for each category until you reach 100%
- Draw and label the left vertical axis (Y)
- Draw and label the horizontal axis (X)
- Draw and label the right vertical axis "Cumulative Percentage," from 0% to 100%
- Draw a bar chart to depict the magnitude of effect
- Draw a line graph of the cumulative %
- Annotate the diagram to indicate the cumulative %associated with the "vital few"
  - i.e. draw an arrow to the first three error types that account for 75% to 80% of all errors

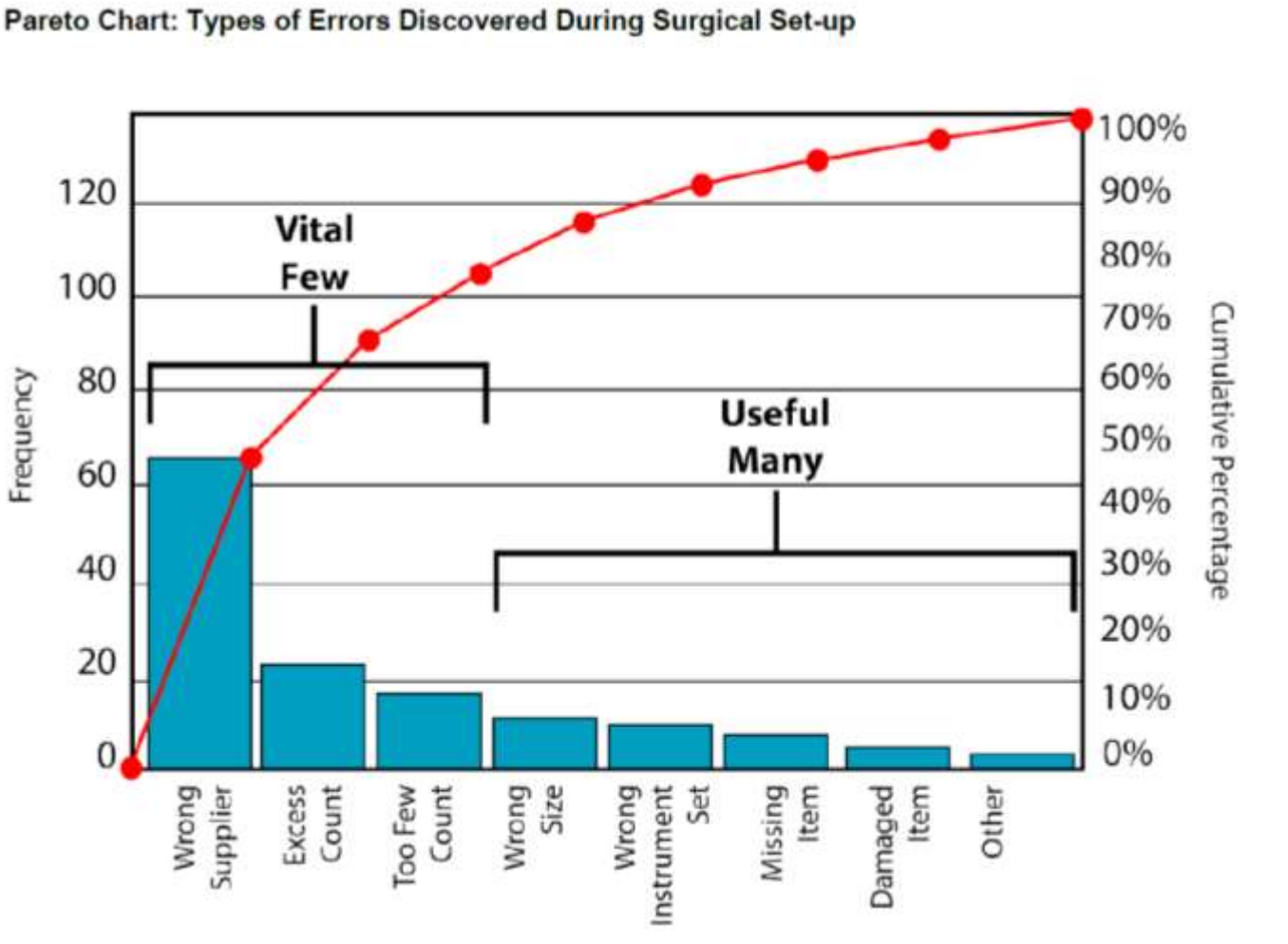
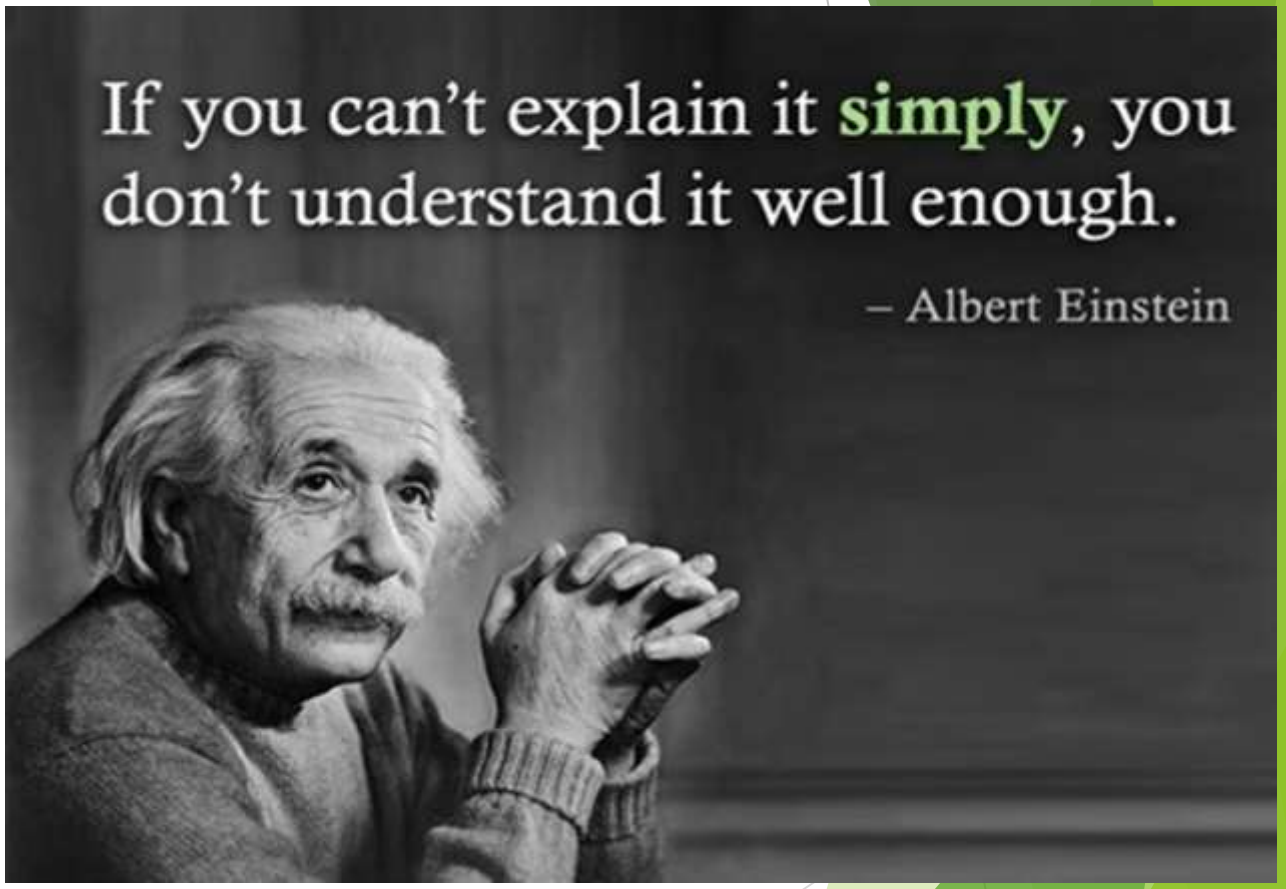


Image - QI Essentials Toolkit - Copyright Copyright © 2017 Institute for Healthcare Improvement

Useful tools -Statistical Process Control Charts (SPC)

- **Why use control charts?**
- **Valid**
  - Industry
  - Healthcare
- **Simple**
  - Application
    - Raw data - counts
    - Rates
  - **Easy to interpret**
    - Well understood at ward/unit level
      - Require little understanding of rates, risk adjustment & statistical analysis
  - **More timely for implementing action**
    - Ward/unit level
    - Infection control level



Useful tools -Statistical Process Control Charts (SPC)

- **Why use control charts?**
  - **Limited resources**
    - More cost effective use of infection control resources
- **Good understanding of the objectives and use of control charts at many levels**
  - Boards
  - Executive management
  - Quality Units
  - Government departments
  - Finance

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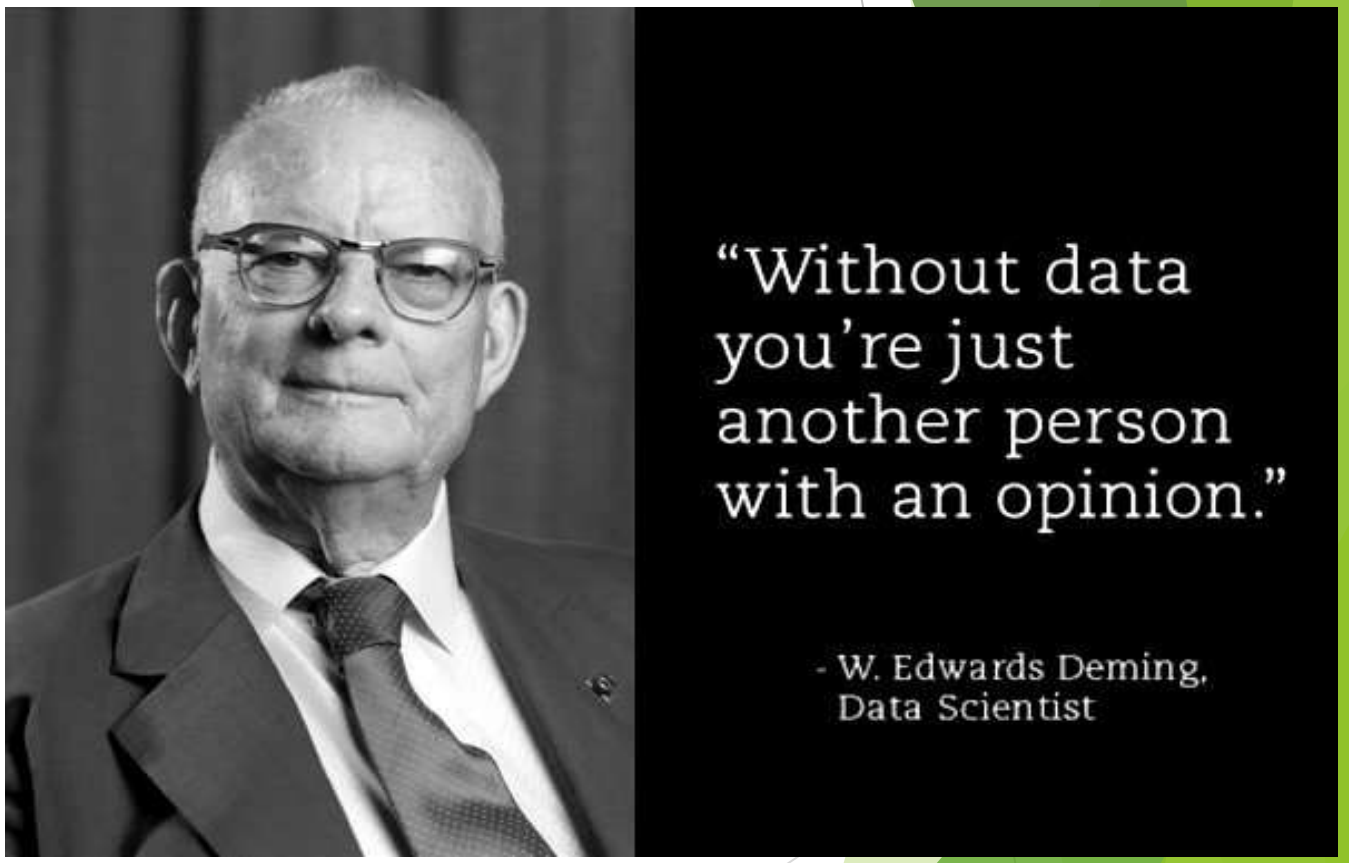
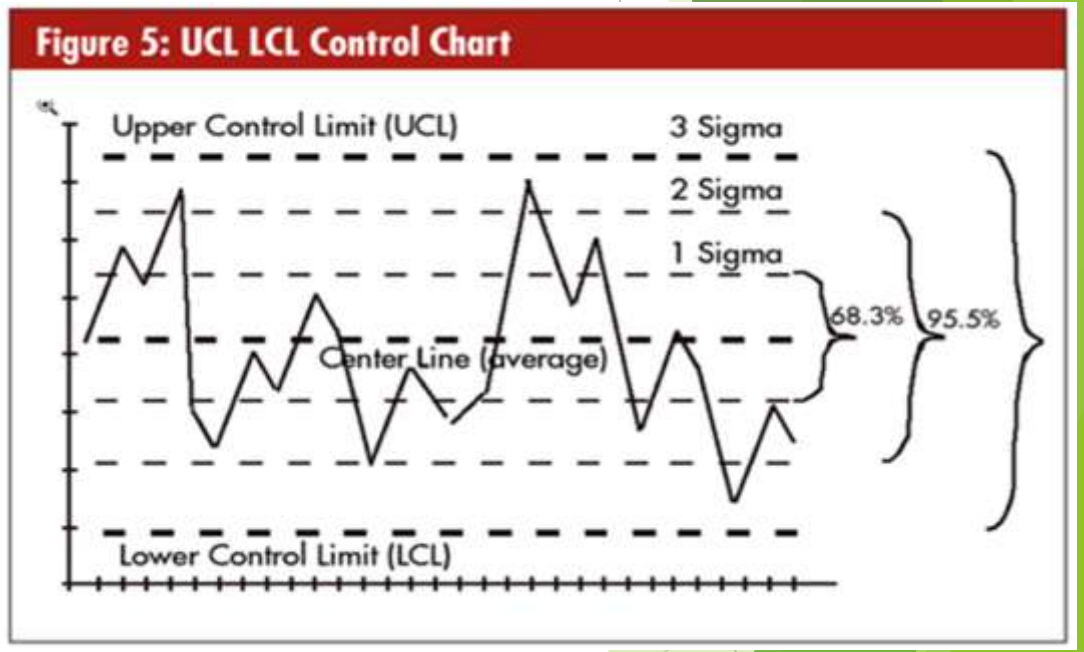
$$$$$$$$ FUNDING



Useful tools -Statistical Process Control Charts (SPC)

- A simple graphical method of discriminating between the 2 sources of variation
  - Special cause variation
  - Common cause variation
- A data point that falls outside the control limits
  - Suggests a special cause variation
- Random variation of data points within the limits
  - Suggests common cause variation
- Charts have 3 lines
  - Central line = mean
  - UCL = upper control limit - 3SD above the mean
  - LCL = lower control limit - 3SD below the mean
  - UWL = upper warning limit - 2SD above the mean



Useful tools -Statistical Process Control Charts (SPC)

- **Glasgow Royal Infirmary**
  - 1,116 beds
  - Tertiary referral centre
- **Hospital wide feedback program**
  - Prospective and historical monthly data on MRSA cases for 24 wards and units - control charts
  - IC team interpretation of every new MRSA
- **Feedback monthly**
    - Include information relating to practice/other changes
      - Hand hygiene
      - Cleaning
    - Ward staff
    - Medical unit staff

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Volume 23, Issue 1 January 2002 , pp. 13-18

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Controlling Methicillin-Resistant *Staphylococcus aureus:* A Feedback Approach Using Annotated Statistical Process Control Charts

Evonne T. Curran [a1], James C. Benneyan [a2] and John Hood [a1]

https://doi.org/10.1086/501961 Published online: 01 January 2015

Abstract

To investigate the benefit of a hospitalwide feedback program regarding methicillin-resistant *Staphylococcus aureus* (MRSA), using annotated statistical process control charts.
Retrospective and prospective analysis of MRSA rates using statistical process control charts.
Twenty-four medical, medical specialty, surgical, intensive care, and cardiothoracic care wards and units at four Glasgow Royal Infirmary hospitals.

Curran ET et al. Controlling Methicillin-Resistant Staphylococcus Aureus: A Feedback Approach Using Annotated Statistical Process Control Charts. ICHE 2002;23:13-18.

Useful tools -Statistical Process Control Charts (SPC)

- **Results**
  - 50% reduction in new MRSA acquisitions post the use of the charts
- **Benefits**
  - Faster response by IC team
  - Assigning responsibility
  - Informing decisions to close wards
- **Large multicentre study in the UK**
  - The CHART Project
  - Grant £320K

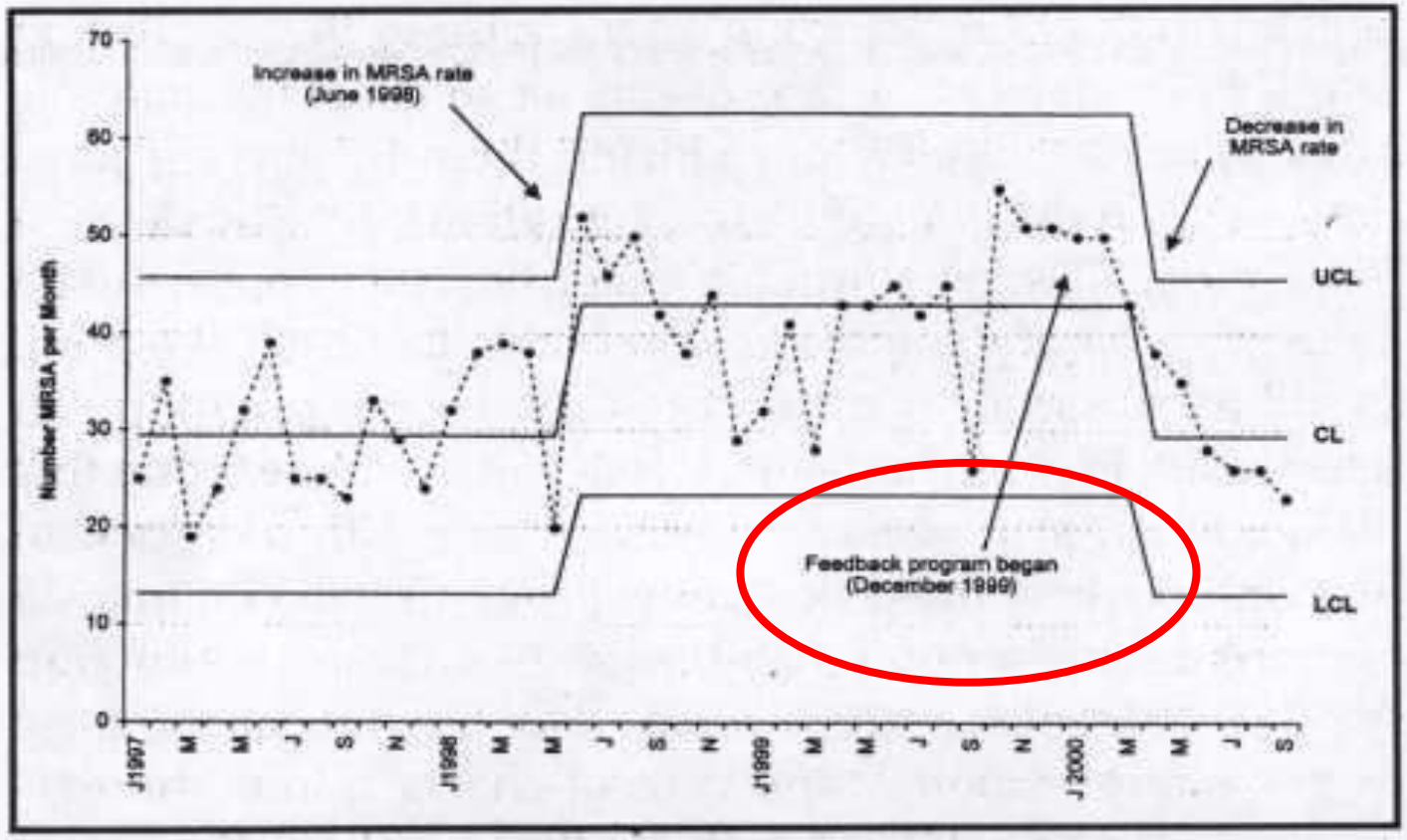

FIGURE 2. Monthly total acquisition of methicillin-resistant *Staphylococcus aureus* (MRSA) from 1997 to 2000, before and after the introduction of statistical process control feedback. UCL = upper control limit; CL = center line; LCL = lower control limit.

Useful tools – Statistical Process Control Charts (SPC)

- **Multicentre randomised controlled trial**
  - Whether monthly SPC feedback to staff of ward-acquired MRSA rates would produce a reduction in incidence
  - 75 wards in 24 hospitals in the UK
  - **Randomised into three arms**
    - Wards receiving SPC chart feedback
    - Wards receiving SPC chart feedback in conjunction with structured diagnostic tools
    - Control wards receiving neither type of feedback
  - 25mths of pre-intervention MRSA data were compared with 24mths of post-intervention data

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Journal of Hospital Infection

Volume 70, Issue 2, October 2008, Pages 127-135

Results of a multicentre randomised controlled trial of statistical process control charts and structured diagnostic tools to reduce ward-acquired meticillin-resistant *Staphylococcus aureus*: the CHART Project

E. Curran [a], P. Harper [b], H. Loveday [b], H. Gilmour [c], S. Jones [b], J. Benneyan [d], J. Hood [e], R. Pratt [b]

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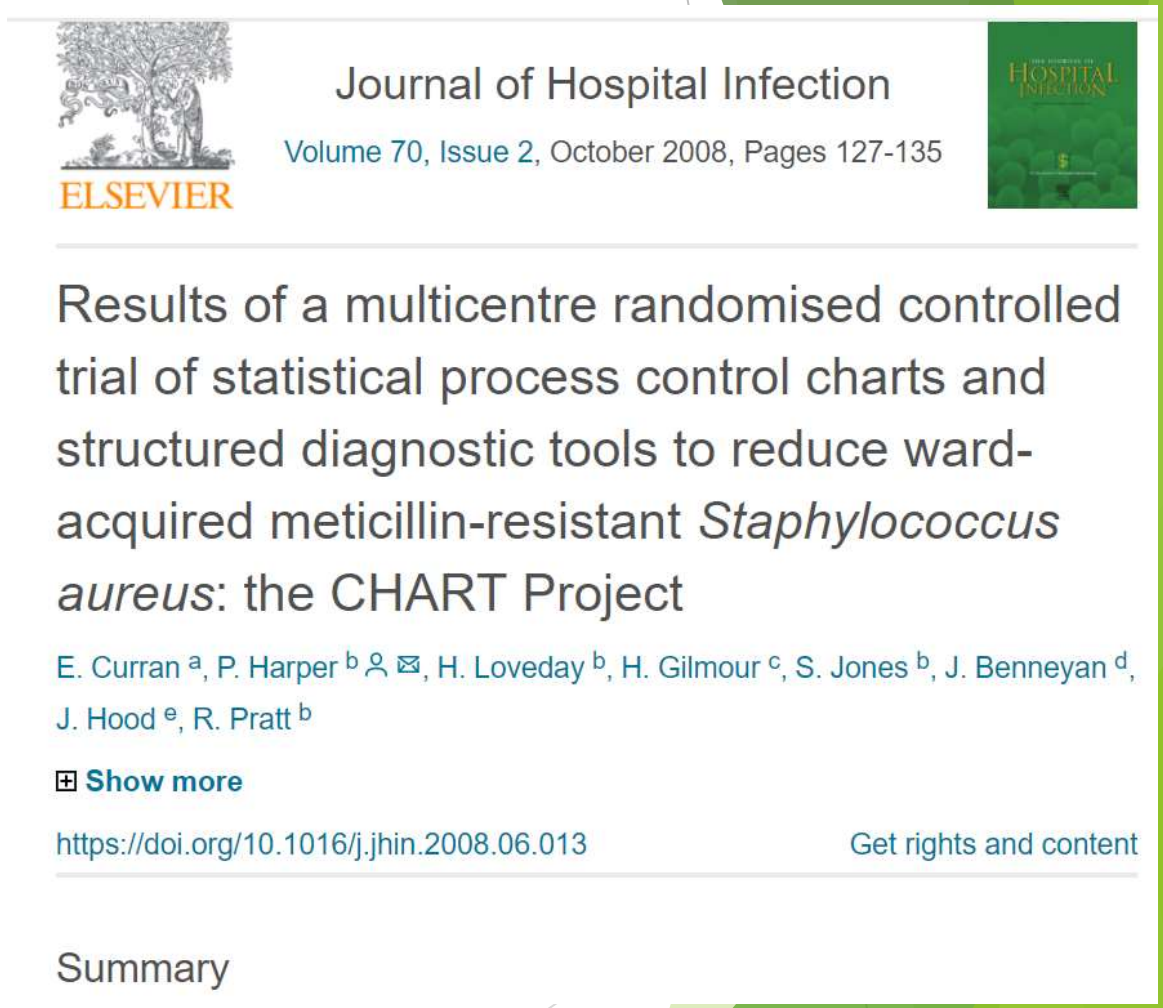
Curran E et al. Results of a multicentre randomised controlled trial of statistical process control charts and structured diagnostic tools to reduce ward acquired meticillin-resistant Staphylococcus aureus: the CHART Project. Journal of Hospital Infection (2008) 70, 127-135

Useful tools -Statistical Process Control Charts (SPC)

- **Results**
  - Statistically significant and sustained decreases in MRSA rates were identified in all three arms (P < 0.001; P ¼ 0.015; P < 0.001)
  - The mean percentage reduction was 32.3% for wards receiving SPC feedback, 19.6% for wards receiving SPC and diagnostic feedback, and 23.1% for control wards
  - There was no significant difference between the control and intervention arms (P ¼ 0.23)
  - There were significantly more post-intervention 'out-of-control' episodes (P=0.021) in the control arm (averages of 0.60, 0.28, and 0.28 for Control, SPC and SPC+Tools wards, respectively)
  - Participants identified SPC charts as an effective communication tool and valuable for disseminating WA-MRSA data



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Summary

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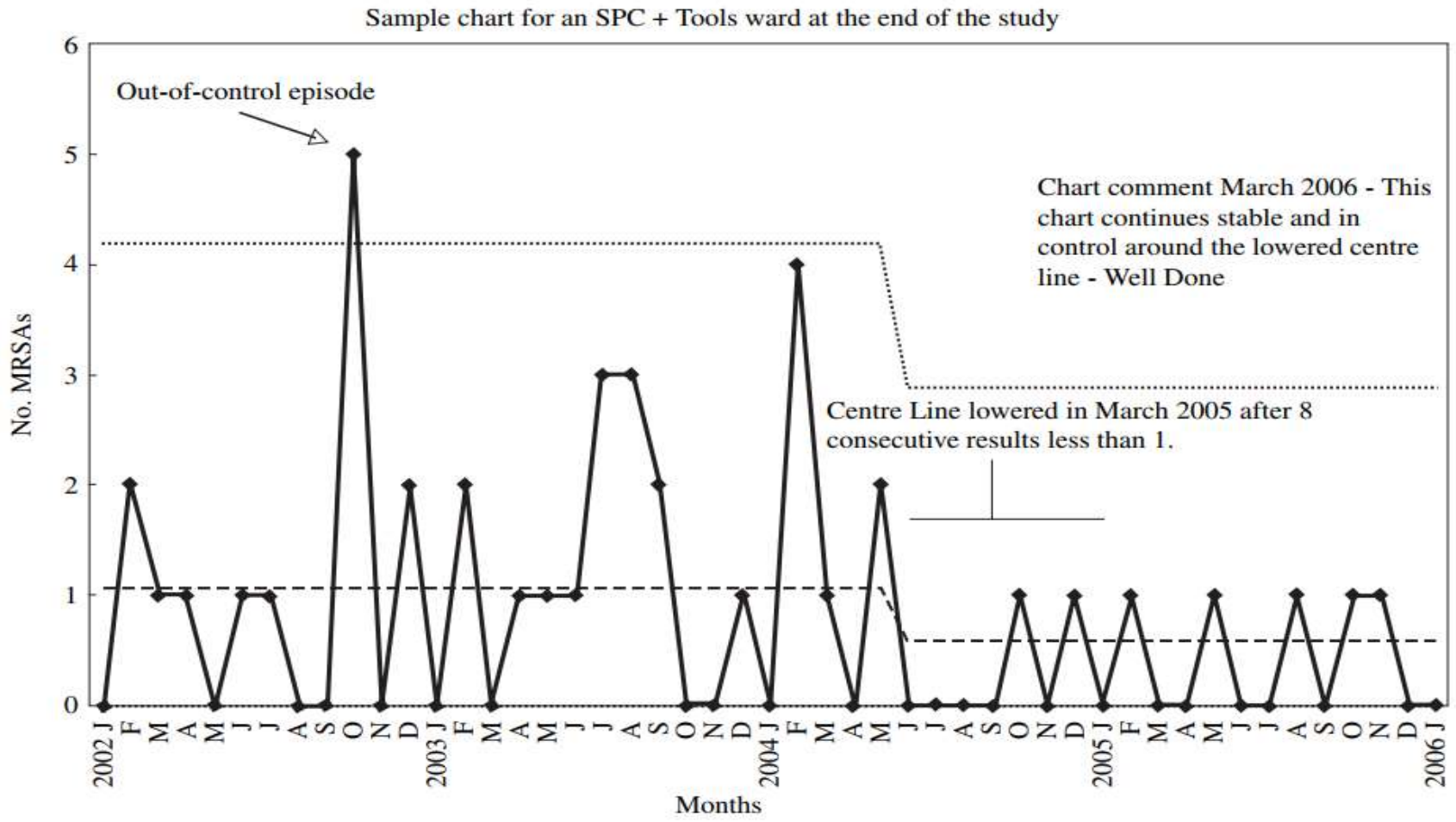
Useful tools -Statistical Process Control Charts (SPC)



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Useful tools -Statistical Process Control Charts (SPC)

- **To evaluate the impact of serial interventions on the incidence of methicillin-resistant *Staphylococcus aureus* (MRSA)**
  - Longitudinal observational study before and after interventions
  - The Alfred Hospital is a 350-bed tertiary referral hospital with a 35-bed intensive care unit (ICU)
  - **A series of interventions**
    - Introduction of an antimicrobial hand-hygiene gel to the intensive care unit and a hospitalwide
    - MRSA surveillance feedback program that used statistical process control charts but not active surveillance cultures
- Interventions introduced between January 2003 - May 2006
- Incidence and rates of new patients colonized or infected with MRSA and episodes of MRSA bacteremia in the intensive care unit and hospital wide were compared between the pre-intervention and intervention periods

Harrington G et al. Reduction in Hospitalwide Incidence of Infection or Colonization with Methicillin-Resistant Staphylococcus aureus With Use of Antimicrobial Hand-Hygiene Gel and Statistical Process Control Charts. ICHE 2007; 27: 837-844

Useful tools -Statistical Process Control Charts (SPC)

- **Results**
- **Intervention period**
  - Rate of new patients with MRSA in the ICU was 6.7 cases per 100 patient admissions
  - The hospitalwide rate of new patients with MRSA was 1.7 cases per 100 patient admissions
- **Pre-intervention period**
  - Rate of new patients with MRSA in the ICU was 9.3 cases per 100 patient admissions in the (P = .047)
  - 3.0 cases per 100 patient admissions in the pre-intervention period (P < .001)


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Volume 28, Issue 7 July 2007 , pp. 837-844

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Reduction in Hospitalwide Incidence of Infection or Colonization with Methicillin-Resistant *Staphylococcus aureus* With Use of Antimicrobial Hand-Hygiene Gel and Statistical Process Control Charts

Glenys Harrington [a1], Kerrie Watson [a1], Michael Bailey [a2], Gillian Land [a1] ...

https://doi.org/10.1086/518844 Published online: 01 January 2015

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Useful tools -Statistical Process Control Charts (SPC)

- **Results…….**
- **Segmented regression analysis**
  - Maximum and conservative estimates for percentage reduction in the rate of new patients with MRSA were 79.5% and 42.0%, respectively
  - Maximum and conservative estimates for percentage reduction in the rate of episodes of MRSA bacteremia were 87.4% and 39.0%, respectively
- **A sustained reduction in the number of new patients with MRSA colonization or infection has been demonstrated using minimal resources and a limited number of interventions**

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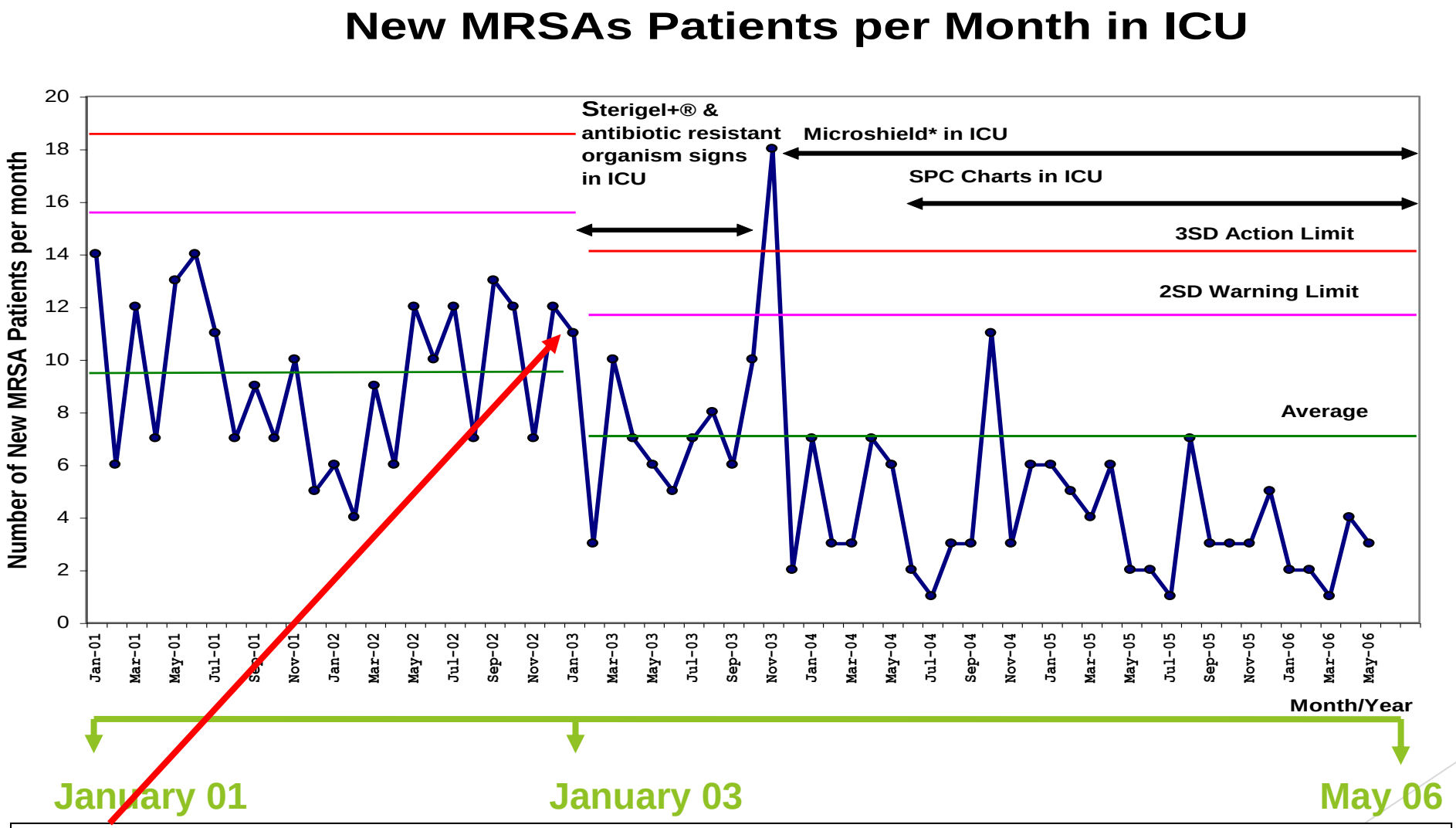

8 or more consecutive data points on the same side of the mean indicating a shift in the process

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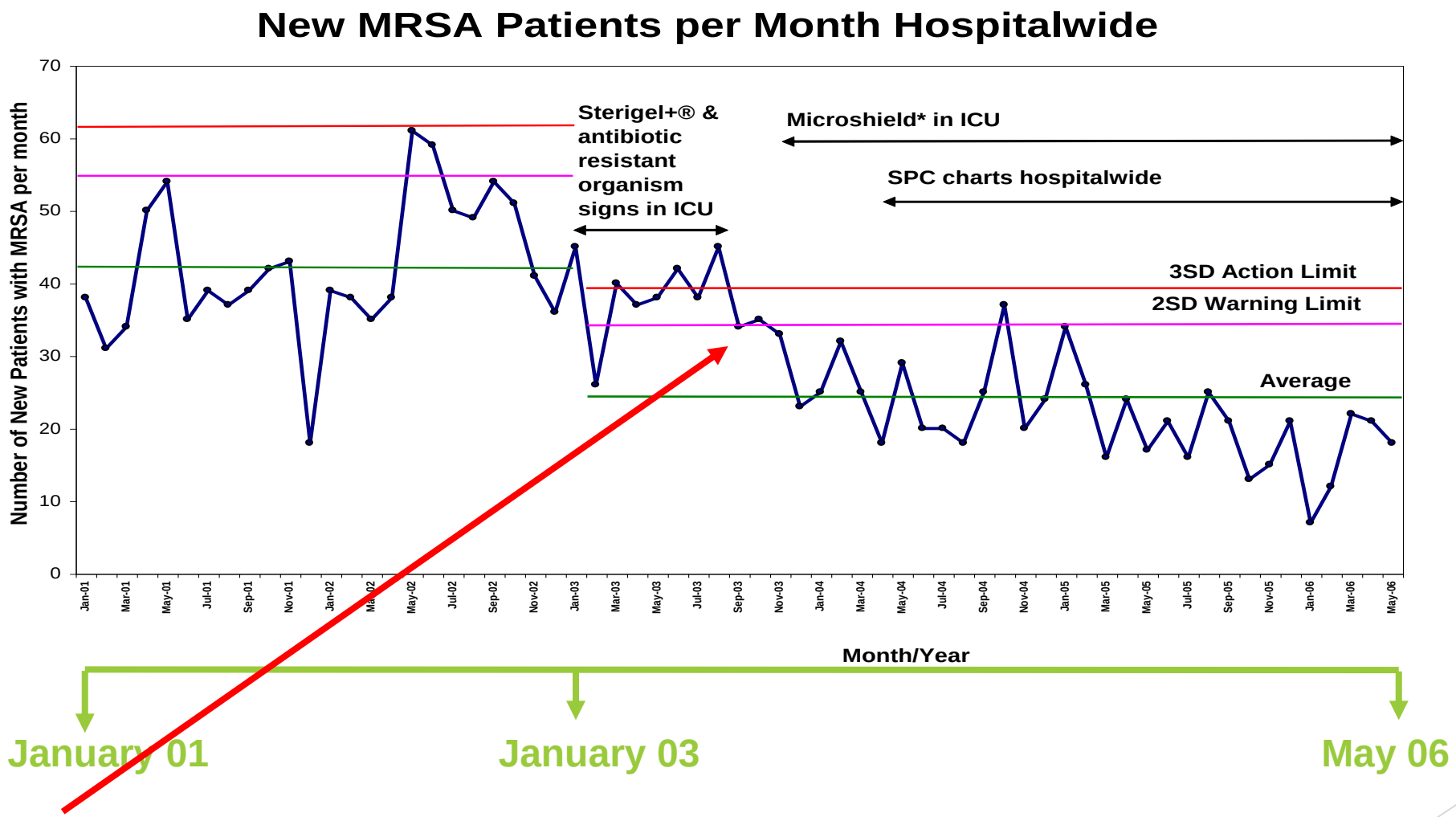

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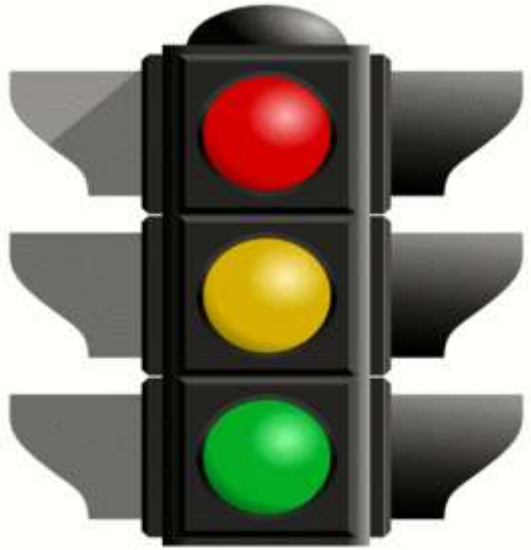
Useful tools - Performance dashboards/cockpit reports

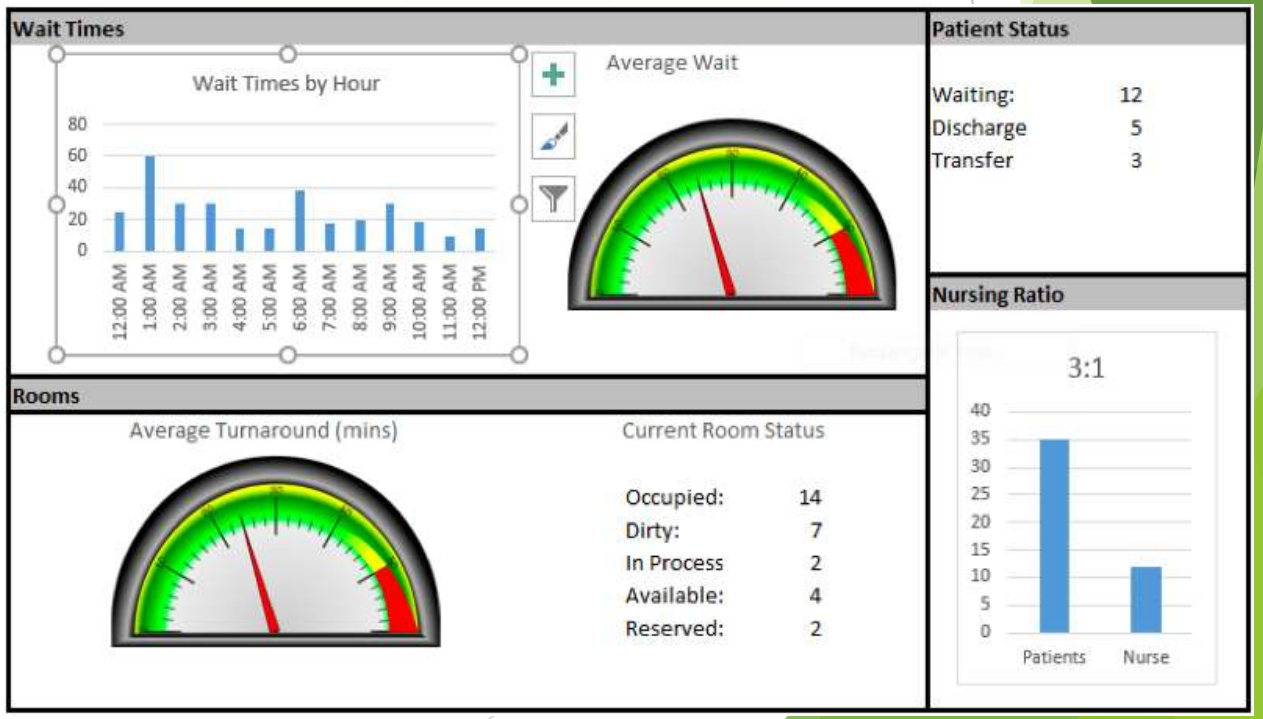
- **Leadership decision support tools**
  - Based on an understanding of interrelationships between functions
    - Not individual or unit performance
  - Opportunity for organisational learning at the executive level
- **Plot selected quality and safety performance metrics**
  - **The vital few....**
    - Targeted at what you what to improve
    - Trending capability/track internal progress
    - Able to benchmark against other organisations/national comparisons

Denham C. J Patient Saf Volume 2, Number 1, March 2006

Useful tools - Performance dashboards/cockpit reports

- **Focused on the overarching requirements**
  - Areas that are critically important
- **Reflects the culture and the aims of the organisation**
  - Corporate culture
  - Organisations vision
- **Dashboard/cockpit reports**
  - How we were, where we are and how we are progressing
    - Working in teams
    - Clinical process re-design
  - Identify from other where you are in the scheme of transformation
  - Learn from others best practice
- **Reduces information overload**, by focusing on the "vital few" indicators





Denham C. J Patient Saf Volume 2, Number 1, March 2006

Strategies to initiate a Quality Improvement Infection Control Project

- **Planning your quality improvement project**
  - Identify opportunities for improvement
    - Listening to staff and patients
    - Conducting a needs assessment
    - Surveys/audits
    - Infection Control Surveillance data
    - Observation
- **Once an opportunity for improvement has been identified**
  - **Organise a Team…..**
    - Multidisciplinary
      - Nursing, Medical, Infection Control, Infectious Diseases, Microbiology, Pharmacy
    - Enlist support from managers
    - Define who is going to be responsible for what
    - Divide up the work to be done
    - Do you need a team facilitator?
      - The outside view
        - Is the team on the right track
    - How often will you meet?

Strategies to initiate a Quality Improvement Infection Control Project

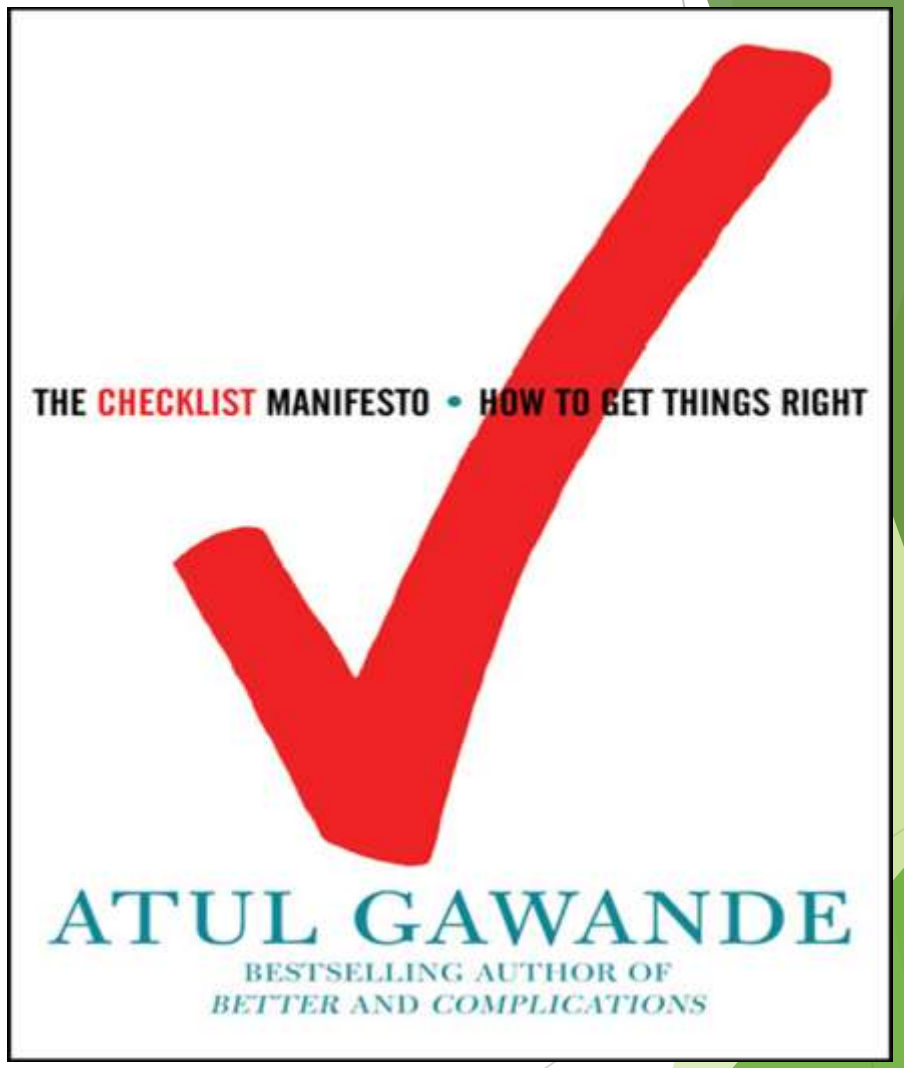
- Organise a Team…….
  - Give those at a local level ownership of the project
    - Buy in from team members
      - Academic reward
        - Presentation at a conference
        - Poster
      - Showcase the project
        - Hospital newsletter
        - Presentations in peer forums
        - Awards

Strategies to initiate a Quality Improvement Infection Control Project

- **Clarify the current process**
  - Is the process standardised?
  - What is needed to standardise the process?
  - Use quality improvement tools
    - Flow charts
- **Develop a data collection plan**
  - **What are you trying to do?**
    - Obtain an objective view of the process and understand how it is working
      - Determine what you are trying to measure
      - Determine how often, how long and for what time
        - **Must be manageable** – regularly review

Strategies to initiate a Quality Improvement Infection Control Project

- **Develop a data collection plan…….**
  - Develop a data collection tool and pilot test
  - Determine who will assemble the data
  - Determine who will verify and analyse the data
  - Participation by all members of the team
- **Allow time to get your project up and running well**
- **Identify variations in the process**
  - Target those that will provide the best return for your effort
  - "Separating the vital few from the trivial many"

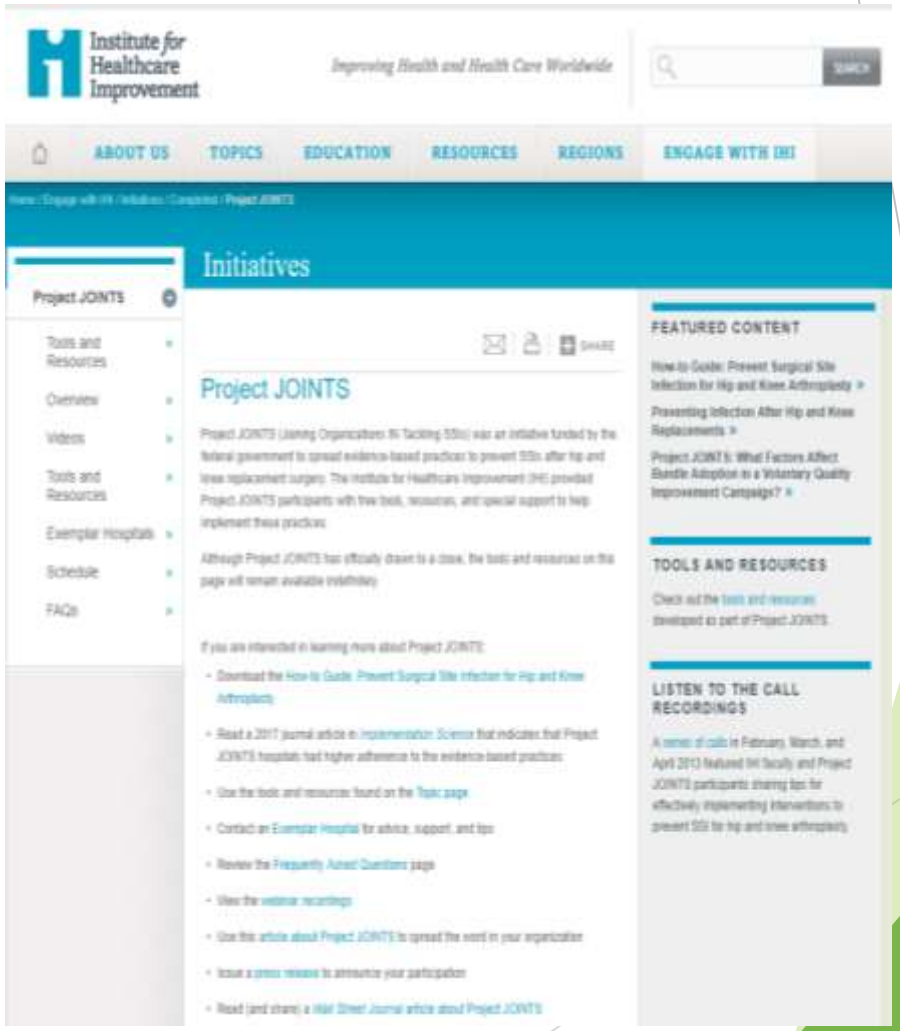


Carey R & Lloyd R. Measuring Quality Improvement in Healthcare. A Guide to Statistical Process Control Applications.2001 by ASC, Wisconsin

Strategies to initiate a Quality Improvement Infection Control Project

- **Prepare infection control briefing material**
  - Infection Control committee
  - Risk management committee
  - Quality improvement committee
  - Key Hospital Executives
    - CEO, GM
  - Key Clinical staff/stakeholders
    - Managers of high risk patient care areas
      - ICU
      - Haematology/Oncology
      - Transplant
      - Orthopaedic procedures

Institute of Healthcare Improvement Project JOINTS



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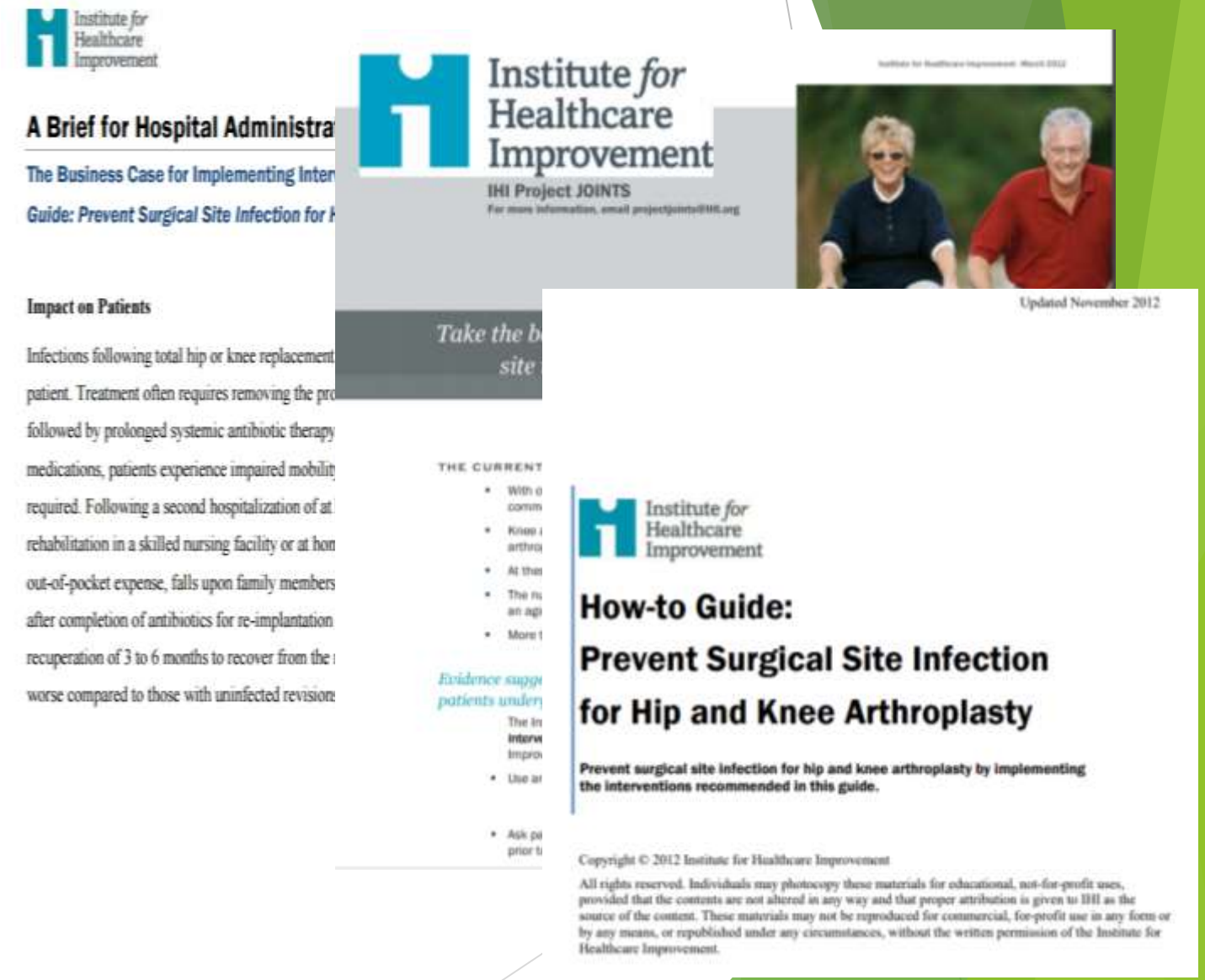
Strategies to initiate a Quality Improvement Infection Control Project

Institute of Healthcare Improvement Project JOINTS

- **Prepare infection control briefing material**
  - "**A Brief for Hospital Administrators**: The Business Case for Preventing SSI for Hip and Knee Arthroplasty,"
  - **One-Pager for Surgeons**
  - **How-to Guide:** Prevent Surgical Site Infection for Hip and Knee Arthroplasty



IHI Project JOINTS_http://www.ihi.org/Engage/Initiatives/Completed/ProjectJOINTS/Pages/default.aspx

Strategies to initiate a Quality Improvement Infection Control Project

Institute of Healthcare Improvement Project JOINTS

- Find a champion
- Develop a campaign slogan
  - “One is too many”
- Storytelling
  - Tell or include a patients story
- Engage the public

DR. TONY DIGIOIA TALKS ABOUT THE VALUE OF PROJECT JOINTS

Strategies to initiate a Quality Improvement Infection Control Project

- **ORION (Outbreak Reports and Intervention Studies of Nosocomial infection)**
  - Consists of a **22 item checklist** for **reporting an outbreak or intervention study of a nosocomial organism**

Review

The ORION statement: guidelines for transparent reporting of outbreak reports and intervention studies of nosocomial infection

Sheldon P Stone, Ben S Cooper, Chris C Kibbler, Barry D Cookson, Jenny A Roberts, Graham F Medley, Georgia Duckworth, Rosalind Lai, Shah Ebrahim, Erwin M Brown, Phil J Wiffen, Peter G Davey

Lancet Infect Dis 2007; 7: 282–88

See Reflection and Reaction page 244

Academic Department of Geriatric Medicine (S P Stone FRCP), Medical Microbiology (C C Kibbler FRCPath), and Medical School Library (R Lai MLib), Royal Free and University College Medical School, London, UK; Statistics, Modelling and Economics Group (B S Cooper PhD), Laboratory of

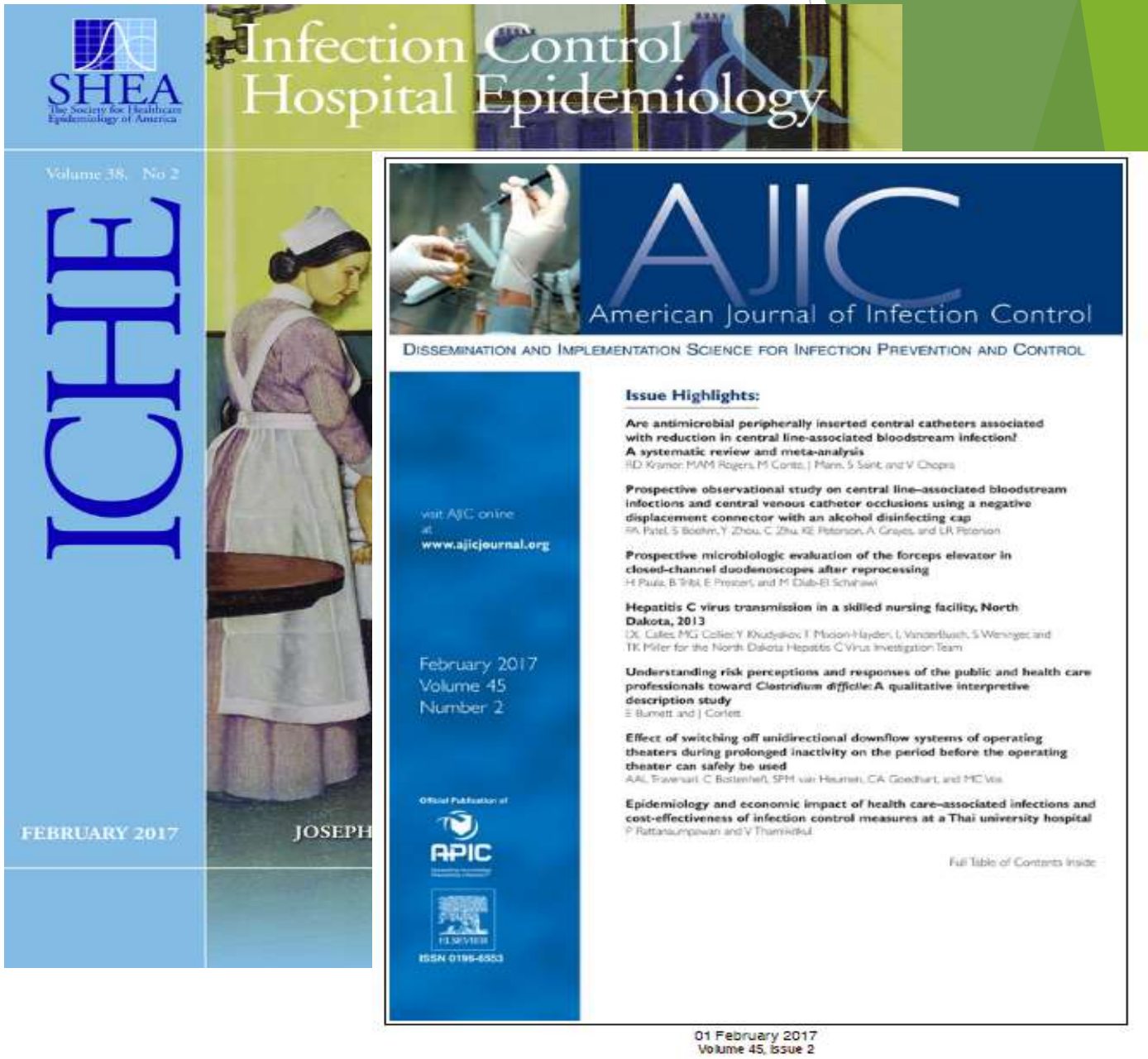
The quality of research in hospital epidemiology (infection control) must be improved to be robust enough to influence policy and practice. In order to raise the standards of research and publication, a CONSORT equivalent for these largely quasi-experimental studies has been prepared by the authors of two relevant systematic reviews, following consultation with learned societies, editors of journals, and researchers. The ORION (Outbreak Reports and Intervention Studies Of Nosocomial infection) statement consists of a 22 item checklist, and a summary table. The emphasis is on transparency to improve the quality of reporting and on the use of appropriate statistical techniques. The statement has been endorsed by a number of professional special interest groups and societies. Like CONSORT, ORION should be considered a "work in progress", which requires ongoing dialogue for successful promotion and dissemination. The statement is therefore offered for further public discussion. Journals and research councils are strongly recommended to incorporate it into their submission and reviewing processes. Feedback to the authors is encouraged and the statement will be revised in 2 years.

Saturday, 11 Fe

***Lancet Infect Dis* 2007; 7:282–88**

QI strategies - Regular review of the literature

- **Keep up-to-date with the literature**
  - Essential for developing your own QI strategies
  - Helps you identify “issues that are of sufficient importance”
- **Strategies**
  - Try to read 3 - 4 peer review publications per week
  - Discuss 1 peer review publication with your team per week
  - Discuss 1 posting on an infection control blog site per week



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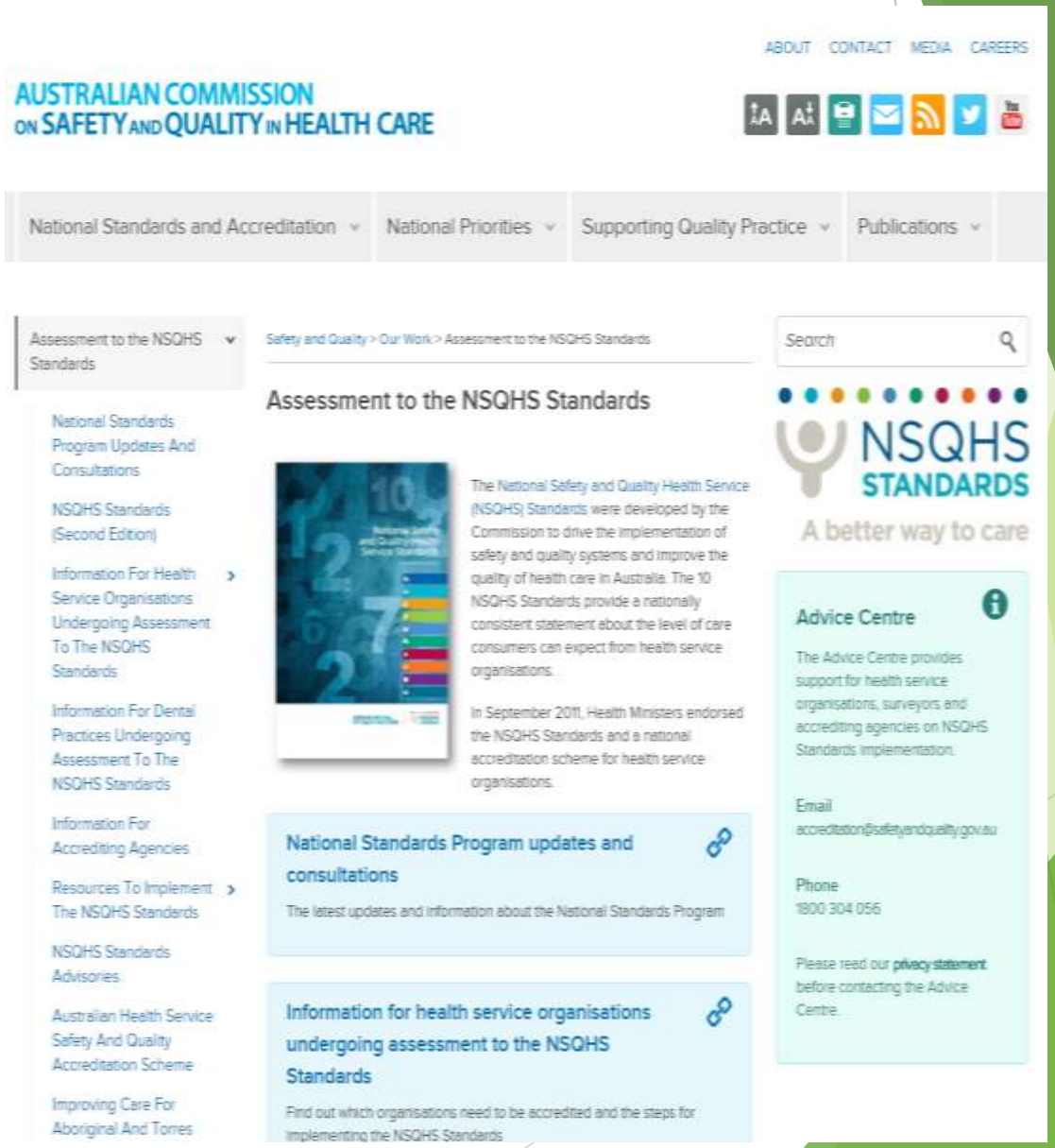
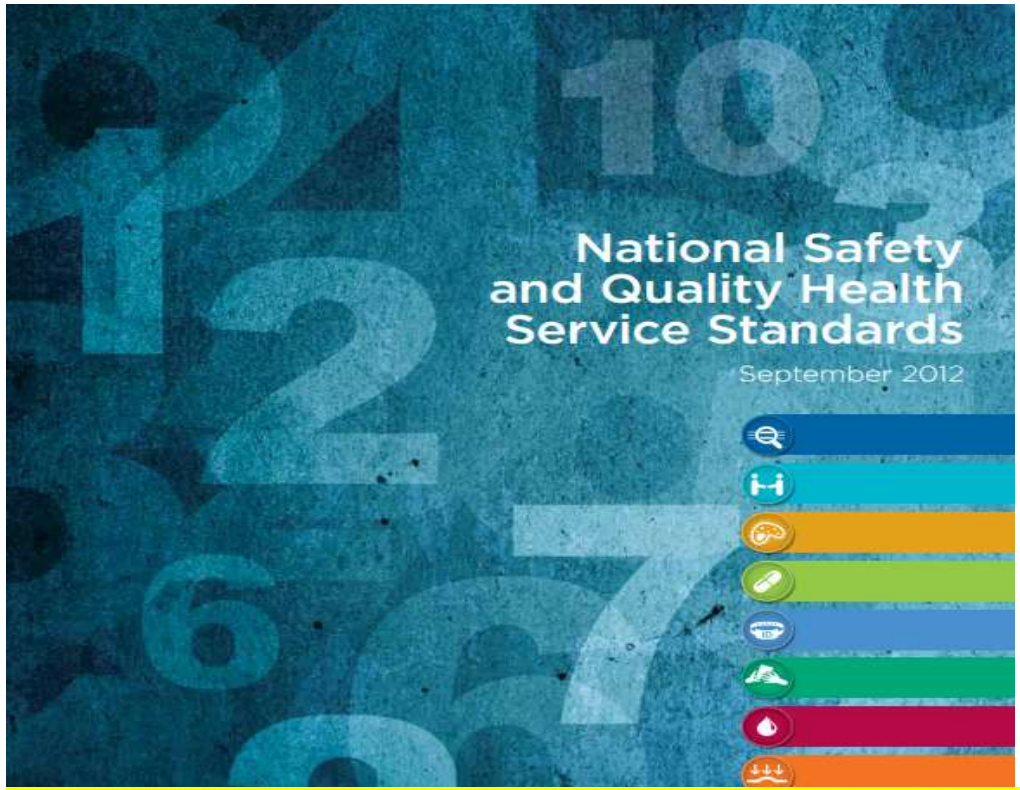
Accreditation - Australian Commission on Safety and Quality in Healthcare National Safety and Quality Health Service Standards

- **Australian Commission on Safety and Quality in Healthcare**
  - A government agency that leads and coordinates national improvements in safety and quality in health care across Australia
  - **Aim:**
    - To support healthcare professionals, organisations and policy makers who work with patients and carers



https://www.safetyandquality.gov.au/

Accreditation - Australian Commission on Safety and Quality in Healthcare National Safety and Quality Health Service Standards



In September 2011, Health Ministers endorsed the NSQHS Standards and a national accreditation scheme for health service organisations

https://www.safetyandquality.gov.au/

Accreditation - Australian Commission on Safety and Quality in Healthcare National Safety and Quality Health Service Standards

State and territory health departments endorsed the Australian Health Service Safety and Quality Accreditation Scheme (AHSSQA) which requires all hospitals and day procedure services to be accredited to the NSQHS Standards

All hospitals and day procedure services and the majority of public dental services across Australia need to implement the NSQHS Standards

https://www.safetyandquality.gov.au/

Accreditation - Australian Commission on Safety and Quality in Healthcare National Safety and Quality Health Service Standards

- **The National Safety and Quality Health Service (NSQHS) Standards** deal with the following areas:
  - Governance for Safety and Quality in Health Service Organisations
  - Partnering with Consumers
  - **Preventing and Controlling Healthcare Associated Infections**
  - Medication Safety
  - Patient Identification and Procedure Matching
  - Clinical Handover
  - Blood and Blood Products
  - Preventing and Managing Pressure Injuries
  - Recognising and Responding to Clinical Deterioration in Acute Health Care and
  - Preventing Falls and Harm from Falls

Accreditation ratings

Previous

Little Achievement (LA)

Awareness in a particular criteria

Satisfaction Achievement (SA)

Implementation of relevant policy and strategy

Moderate Achievement (MA)

Evaluation of the strategies

Current

Met

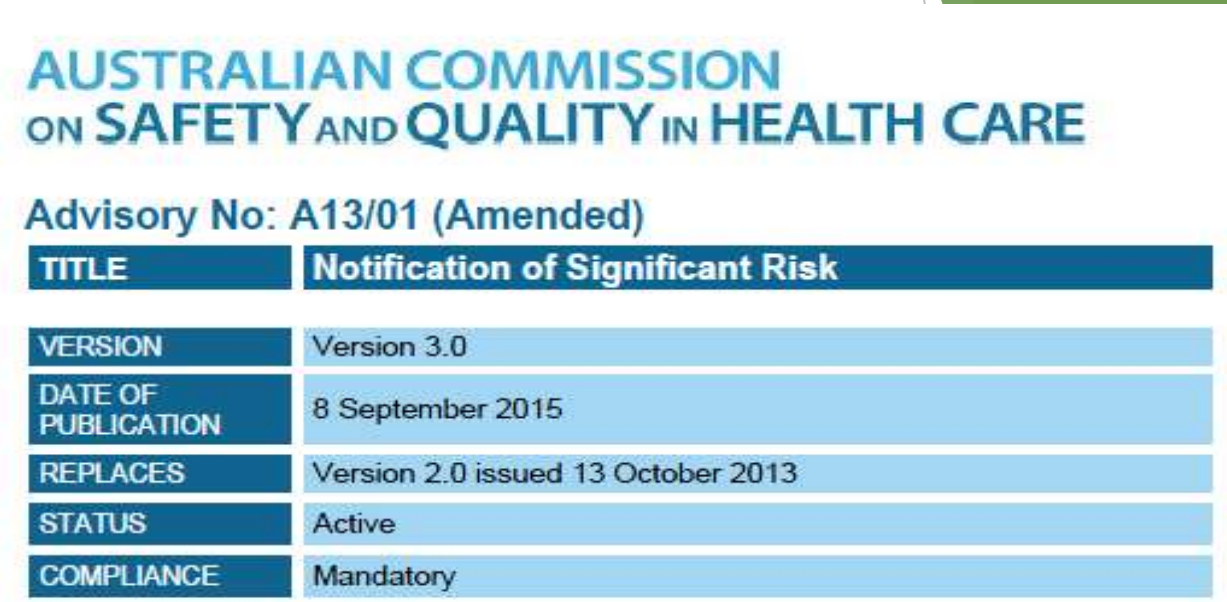
Not met

The new requirements mean that:

- **Standards are no longer assessed 'on balance' and**
- **Health services must provide evidence that each action is "met"**

Notification of significant risk

- Accrediting agencies are to notify the regulator (i.e. heath department) and the commission when a significant patient risk is identified
- Notification should be made within 48 hours
- The notification is to include an action plan developed by the health service organisation to mitigate the patient risk



AUSTRALIAN COMMISSION ON SAFETY AND QUALITY IN HEALTH CARE

Advisory No: A13/01 (Amended)

TITLE	Notification of Significant Risk
VERSION	Version 3.0
DATE OF PUBLICATION	8 September 2015
REPLACES	Version 2.0 issued 13 October 2013
STATUS	Active
COMPLIANCE	Mandatory

Standard 3: Preventing & Controlling Healthcare Associated Infections	
Risks	**Impact**
• Hand hygiene is not evident across the organisation • Single use invasive devices are being reused • Multiple instances of aseptic technique is not being practiced in the health service • Multiple instances of standard precautions and transmission based precautions are not being practiced in the health service • Reusable medical devices are not decontaminated before reuse	• Preventable infections are transmitted to patients.

National Safety and Quality Health Service Standards

28 |

Preventing and Controlling Healthcare Associated Infections

Standard 3

The Preventing and Controlling Healthcare Associated Infections Standard:

Clinical leaders and senior managers of a health service organisation implement systems to prevent and manage healthcare associated infections and communicate these to the workforce to achieve appropriate outcomes. Clinicians and other members of the workforce use the healthcare associated infection prevention and control systems.

The intention of this Standard is to:

Prevent patients from acquiring preventable healthcare associated infections and effectively manage infections when they occur by using evidence-based strategies.

Context:

It is expected that this Standard will be applied in conjunction with Standard 1, 'Governance for Safety and Quality in Health Service Organisations' and Standard 2, 'Partnering with Consumers'.

Criteria to achieve the Preventing and Controlling Healthcare Associated Infections Standard:

Governance and systems for infection prevention, control and surveillance

Effective governance and management systems for healthcare associated infections are implemented and maintained.

Infection prevention and control strategies

Strategies for the prevention and control of healthcare associated infections are developed and implemented.

Managing patients with infections or colonisations

Patients presenting with, or acquiring an infection or colonisation during their care are identified promptly and receive the necessary management and treatment.

Antimicrobial stewardship

Safe and appropriate antimicrobial prescribing is a strategic goal of the clinical governance system.

Cleaning, disinfection and sterilisation

Healthcare facilities and the associated environment are clean and hygienic. Reprocessing of equipment and instrumentation meets current best practice guidelines.

Communicating with patients and carers

Information on healthcare associated infections is provided to patients, carers, consumers and service providers.

Australian Commission on Safety and Quality in Health Care

Preventing and Controlling Healthcare Associated Infections

Standard 3

Governance and systems for infection prevention, control and surveillance

Effective governance and management systems for healthcare associated infections are implemented and maintained.

This criterion will be achieved by:	Actions required:
3.1 Developing and implementing governance systems for effective infection prevention and control to minimise the risks to patients of healthcare associated infections	**3.1.1** A risk management approach is taken when implementing policies, procedures and/or protocols for: - standard infection control precautions - transmission-based precautions - aseptic non-touch technique - safe handling and disposal of sharps - prevention and management of occupational exposure to blood and body substances - environmental cleaning and disinfection - antimicrobial prescribing - outbreaks or unusual clusters of communicable infection - processing of reusable medical devices - single-use devices - surveillance and reporting of data where relevant - reporting of communicable and notifiable diseases - provision of risk assessment guidelines to workforce - exposure-prone procedures
	3.1.2 The use of policies, procedures and/or protocols is regularly monitored
	3.1.3 The effectiveness of the infection prevention and control systems is regularly reviewed at the highest level of governance in the organisation
	3.1.4 Action is taken to improve the effectiveness of infection prevention and control policies, procedures and/or protocols
3.2 Undertaking surveillance of healthcare associated infections	**3.2.1** Surveillance systems for healthcare associated infections are in place
	3.2.2 Healthcare associated infections surveillance data are regularly monitored by the delegated workforce and/or committees

https://www.safetyandquality.gov.au/

The Role of Accrediting Agencies

The Role of Accrediting Agencies

- Accrediting agencies wishing to accredit health service organisations to the NSQHS Standards **must undergo a formal application and assessment process**
- **Accrediting agencies seeking approval must:**
  - **Hold current organisational accreditation** with an international recognised body such as International Society for Quality in Healthcare (ISQua) or Joint Accreditation System of Australia and New Zealand (JAS-ANZ)
  - **Offer accreditation programs using the NSQHS Standards**
  - **Maintain an assessor workforce with the skills, knowledge and experience** to effectively perform their role and maximise inter-assessor reliability
  - **Have a formal process for managing complaints and appeals** by health service organisations
  - **Agree to the conditions of approval to assess to the NSQHS Standards** and/or the Trauma Recovery Program(TRP)Standards
- **Applications**
  - **Assessed by a panel** which includes representatives from the public and private health care sectors, as well as senior Commission staff and a representative from the Department of Veterans' Affairs
  - The Assessment Panel is **convened biannually**

ACSQHC - Approved Accrediting Agencies

AUSTRALIAN COMMISSION ON SAFETY AND QUALITY IN HEALTH CARE

NSQHS STANDARDS

TRIM: 68875

Approved Accrediting Agencies

As at 23 December 2015 the following agencies are approved to assess health service organisations to the NSQHS Standards.

The Australian Council on Healthcare Standards
5 Macarthur Street
Ultimo NSW 2007
Phone: 02 9281 9955
Email: achs@achs.org.au
Website: www.achs.org.au

BSI Group ANZ Pty Ltd
Level 7, Suite 2
15 Talavera Rd
North Ryde NSW 2113
Phone: 1300 730 134
Phone: 02 8877 7100
Email: sales.aus@bsigroup.com
Website: www.bsigroup.com.au

Global Mark Pty Ltd
Suite 4.07
32 Delhi Road
North Ryde NSW 2113
Phone: 1300 766 509
Phone: 02 9886 0222
Email: Health@Global-Mark.com.au
Website: www.global-mark.com.au

HDAA Australia Pty Ltd
PO Box 365
North Lakes QLD 4509
Free Phone: 1800 601 696
Phone: 07 3491 6878
Contact: Suzanne Le Huray, General Manager
Email: suzanne.lehuray@hdaau.com.au
Website: www.hdaau.com.au

Institute for Healthy Communities Australia Certification Pty Ltd
PO Box 5582
West End QLD 4101
Phone: 07 3844 2222
Email: ihcac@ihcac.com.au
Website: www.ihcac.com.au

International Standards Certifications Pty Ltd
Level 4, 181 Miller Street
North Sydney NSW 2060
Phone: 02 9900 9545
Contact: Elizabeth McLoughlin, Administration – Health and Accreditation
Email: elizabeth.mcloughlin@dnvgl.com
Website: www.isc-worldwide.com www.dnvgl.com

AGPAL Group of Companies
Incorporating: Australian General Practice Accreditation Limited (AGPAL) and Quality Innovation Performance Limited (QIP)
PO Box 2058
Milton BC QLD 4064
Phone: 1300 888 329
Email: info@qip.com.au
Website: www.qip.com.au

SAI Global Certification Services Pty Ltd
Level 37, 680 George Street
Sydney NSW 2000
Client Service Centre: 1300 360 314
Phone: 0499 029 442
Contact: Ann Knight, Technical Manager – Health
Email: ann.knight@saiglobal.com
Website: www.saiglobal.com

TQCS International Pty Ltd
PO Box 483
Woodville SA 5011
Free Phone: 1800 686 739
Phone:08 8347 0603
Contact: Stuart Batchelor, General Manager, TQCSI (Australia)
Email: gm@tqcsi.com
Website: www.tqcsi.com

Standard 3 – Preventing and Controlling Healthcare Associated Infections

Action 3.16.1 of the National Safety and Quality Health Service (NSQHS) Standards states:

- "**Compliance with relevant national or international standards** and manufacturer's instructions for cleaning, disinfection and sterilisation of reusable instruments and devices is regularly monitored"

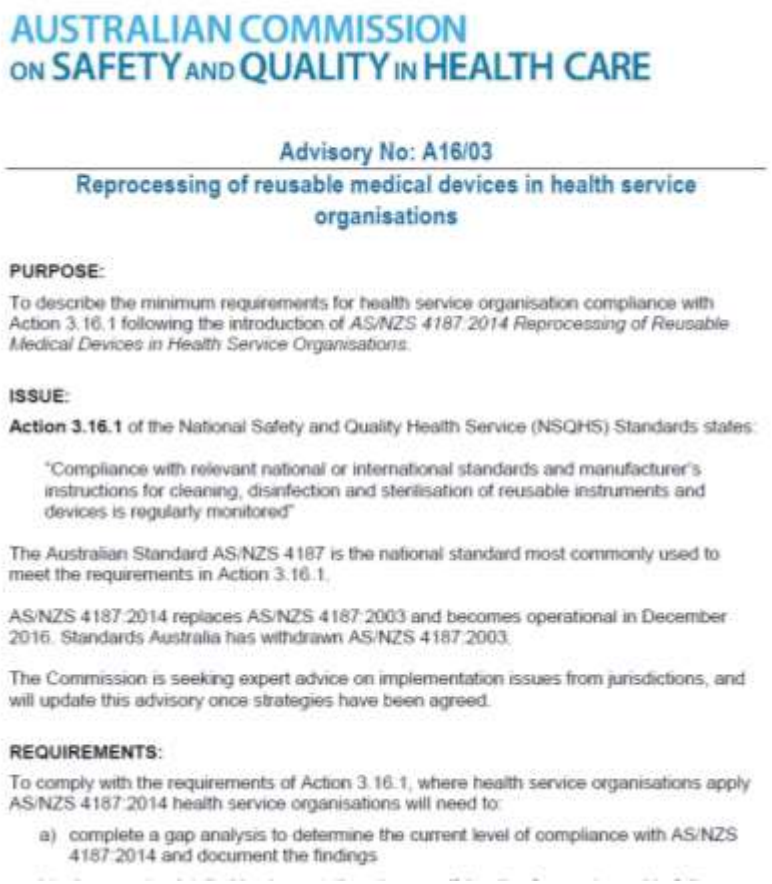
Standard 3 – Preventing and Controlling Healthcare Associated Infections

- **3.16 Reprocessing reusable medical equipment, instruments and devices in accordance with relevant national or international standards and manufacturers' instructions**

Health Service Organisations will need to:

- **a) complete a gap analysis** to determine the current level of compliance with AS/NZS 4187:2014 and document the findings
- **b) document a detailed implementation plan specifying timeframes** to enable full implementation of AS/NZS 4187:2014 **over a five year period, from December 2016**
- **c) implement the plan and demonstrate progress toward implementation**

Standard 3 – Preventing and Controlling Healthcare Associated Infections



AUSTRALIAN COMMISSION
ON SAFETY AND QUALITY IN HEALTH CARE

Advisory No: A16/03

Reprocessing of reusable medical devices in health service organisations

PURPOSE:

To describe the minimum requirements for health service organisation compliance with Action 3.16.1 following the introduction of *AS/NZS 4187:2014 Reprocessing of Reusable Medical Devices in Health Service Organisations*.

ISSUE:

Action 3.16.1 of the National Safety and Quality Health Service (NSQHS) Standards states:

> "Compliance with relevant national or international standards and manufacturer's instructions for cleaning, disinfection and sterilisation of reusable instruments and devices is regularly monitored"

The Australian Standard AS/NZS 4187 is the national standard most commonly used to meet the requirements in Action 3.16.1.

AS/NZS 4187:2014 replaces AS/NZS 4187:2003 and becomes operational in December 2016. Standards Australia has withdrawn AS/NZS 4187:2003.

The Commission is seeking expert advice on implementation issues from jurisdictions, and will update this advisory once strategies have been agreed.

REQUIREMENTS:

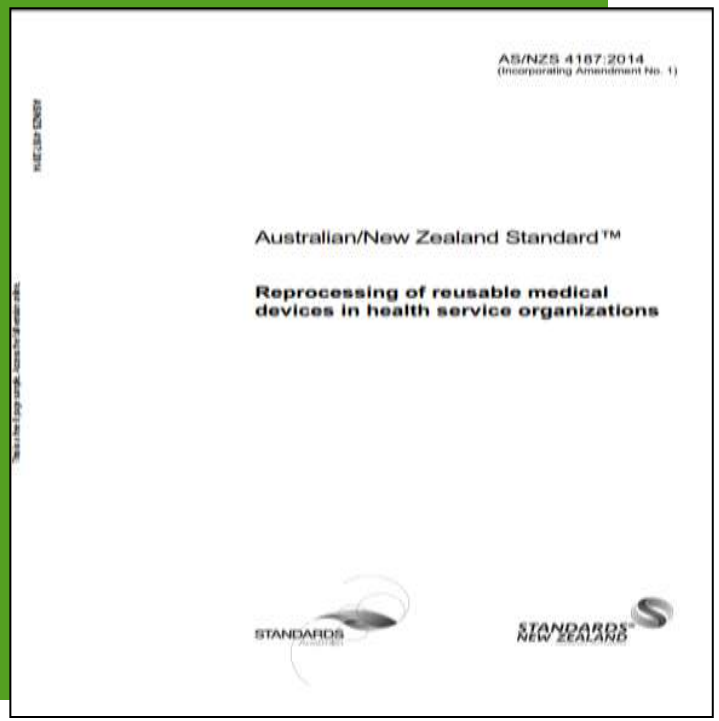
To comply with the requirements of Action 3.16.1, where health service organisations apply AS/NZS 4187:2014 health service organisations will need to:

a) complete a gap analysis to determine the current level of compliance with AS/NZS 4187:2014 and document the findings

- **3.16 Reprocessing reusable medical equipment, instruments and devices** in accordance with relevant national or international standards and manufacturers' instructions

Standard 3 – Preventing and Controlling Healthcare Associated Infections

- **3.16 Reprocessing reusable medical equipment, instruments and devices in accordance with relevant national or international standards and manufacturers' instructions**



Accrediting Agencies are required to:

- a) **Assess progress on implementation** at each accreditation assessment
- b) **Rate Action 3.16.1 "met" only in health service organisations that demonstrate progress towards full implementation** as set out in their implementation plan for AS/NZS 4187:2014

Standard 3 – Preventing and Controlling Healthcare Associated Infections

- **Implementation plan**
- **Accreditation agency……**
  - Establish the governance process for the implementation plan?
    - Who is responsible, including executive management
  - Where is progress on the implementation plan being reported in the organisation and how often?
  - Does the plan include allocation of resources as needed?
    - If not establish why not with those responsible for governance
  - Determine if there have been any delays in the implementation plan and what action has been or is being taken to rectify these delays

Standard 3 – Preventing and Controlling Healthcare Associated Infections

- **GAP Analysis**
- **a) complete a gap analysis** to determine of compliance with AS/NZS 4187:2014 and document the findings
- **Accreditation agency……..**
  - Has the gap analysis been undertaken?
    - If no why not?
  - View/sight this document
  - Has the gap analysis covered all “Sections” of AS/NZS 4187:2004?
  - Where in the organisation were the findings reported?
  - Who in executive management has ultimate responsibility for the findings?
  - Have the findings been reported to relevant committees
    - Infection Control committee
    - Quality committee
    - Other

Standard 3 – Preventing and Controlling Healthcare Associated Infections

- GAP Analysis…..
- Accreditation agency…….
  - What is the governance around the gap analysis findings
    - Line reporting
    - Committee reporting
    - Action plan
- Implementation plan
- Accreditation agency……
  - **b) Rate Action 3.16.1 met only in health service organisations that demonstrate progress towards full implementation as set out in their implementation plan for AS/NZS 4187:2014**
  - **document a detailed implementation plan specifying timeframes** to enable full implementation of AS/NZS 4187:2014 **over a five year period, from December 2016**
  - Ensure the plan includes timelines for implementation

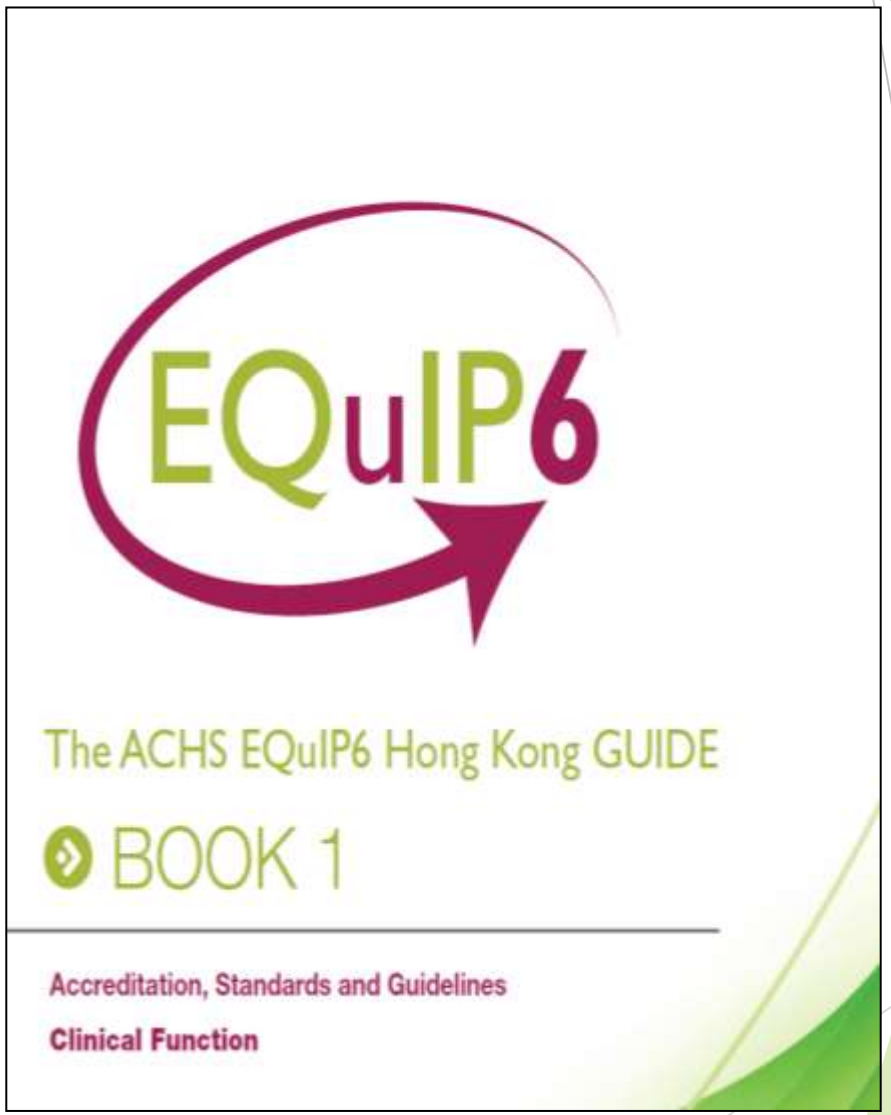
What is accreditation?

- Accreditation is a status that is conferred on an organisation that has been assessed as having met particular standards
- The two conditions for accreditation are an unambiguous definition of quality (i.e. standards) and an independent review process aimed at identifying the level of similarity between practices and quality standards

ACSQHC Standard Setting and Accreditation Systems in Health: Consultation Paper July 2003

Accreditation in Hong Kong

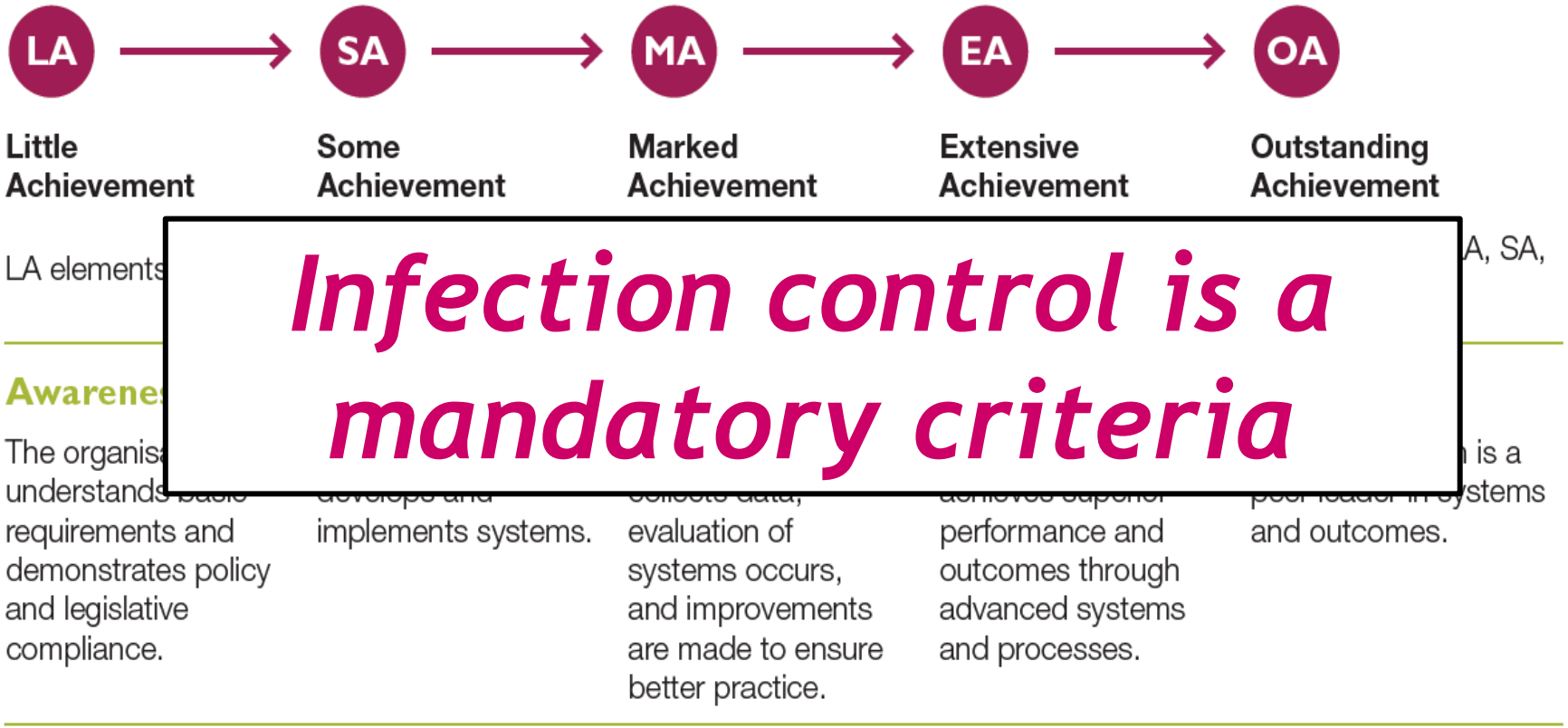
- 13 Standards
- 47 Criteria
- 16 Mandatory Criteria
  - *1.5.2 The infection control system supports safe practice and ensures a safe environment for consumers/ patients and healthcare workers*



The ACHS EQuIP6 Hong Kong Guide

Accreditation in Hong Kong

- Mandatory criteria are those where a rating of **Marked Achievement (MA) or higher** is required to gain or maintain ACHS accreditation.



Infection control is a mandatory criteria

The ACHS EQuIP6 Hong Kong Guide

Accreditation in Hong Kong

Achievement Rating		
1	**Little Achievement**	**LA**
2	**Some Achievement** (LA + SA)	**SA**
3	**Marked Achievement** (LA + SA + MA)	**MA**
4	**Extensive Achievement** (LA + SA + MA + EA)	**EA**
5	**Outstanding Achievement** (LA + SA + MA + EA + OA)	**OA**

The ACHS EQuIP6 Hong Kong Guide

Accreditation in Hong Kong

- **Achieving Extensive achievement (EA)**
- The organisation must:
  - Meet the requirements of all the LA, SA and MA elements
  - Not have any recommendations for the relevant criterion, and
  - Be able to show distinction in its systems and practices for the relevant criterion

- **INNOVATION**
  - The application of new or better ideas, in order to improve a system, process or service
- In order for an organisation to self-rate EA
  - **CREATE:** a new / improved process or procedure that is a better utilisation of resources, adopts new methods, etc.
  - **COMPARE:** with existing practice, with other institutions, with the literature
  - **CALCULATE:** the magnitude of the benefit - increased efficiency, reduced costs, fewer complications in consumers / patients, decreased mortality rates in consumers / patients, etc.
  - **CONTINUE:** the new practice must be sustainable
  - Demonstrate that it has used **benchmarking** data as the basis of improvement activities
  - ***Evidence***
    - ***Publication of a high-level quality improvement projects***

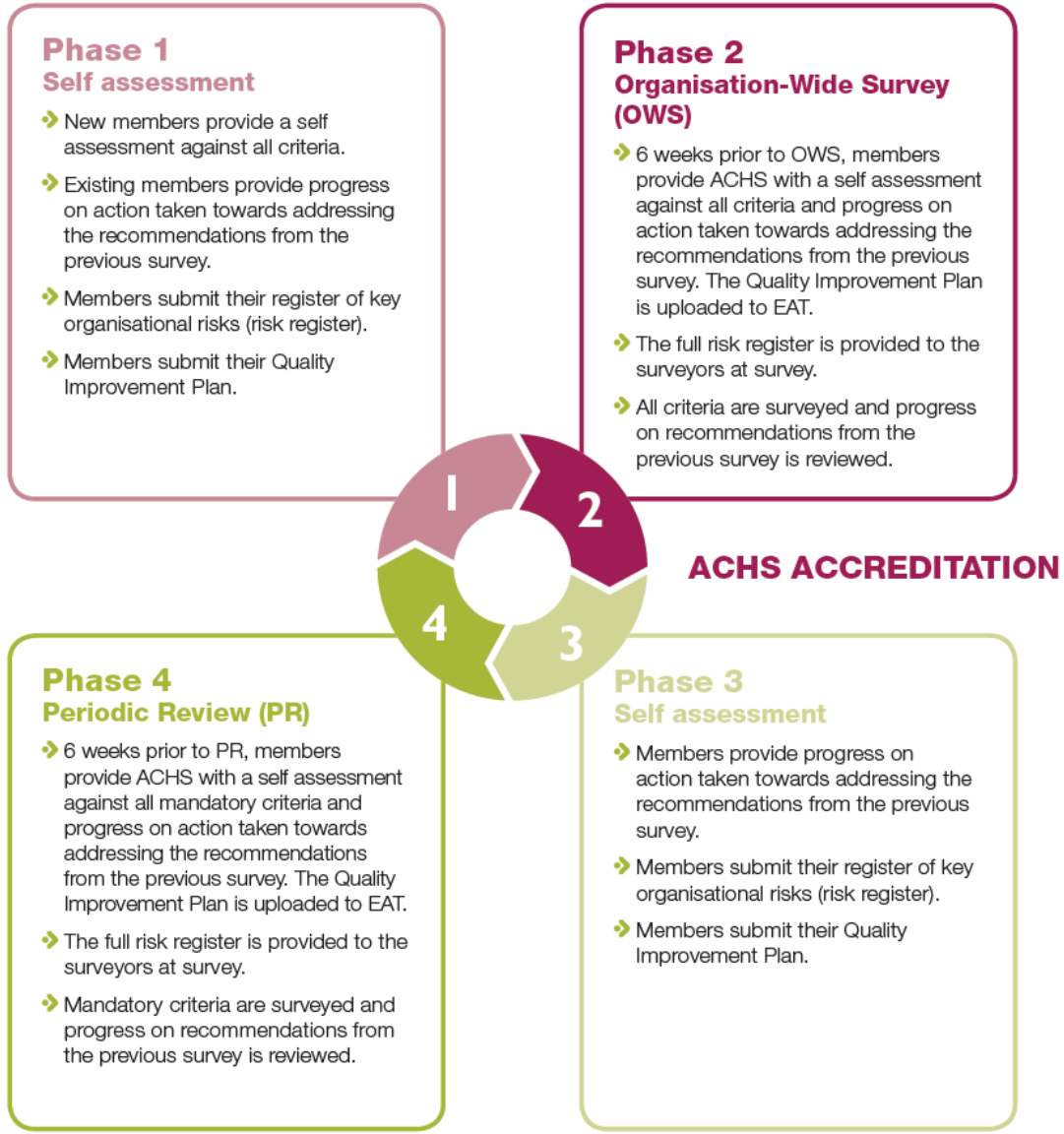
The ACHS EQuIP6 Hong Kong Guide

Accreditation in Hong Kong

- **Achieving OA**
  - To achieve an outstanding achievement (OA)
  - The organisation must:
  - all requirements of the LA, SA, MA and EA elements, as well as demonstrating *leadership*
  - A requirement for external recognition/adoption of the organisation's achievements
  - cannot self-rate at an OA level
    - surveyors should be provided with a brief (one-page) submission summarising the steps taken to achieve this
    - Surveyors may also award an OA rating without a submission from the organisation

Accreditation in Hong Kong

- Four-year cycle



The ACHS EQuIP6 Hong Kong Guide

SECTION 5
Standards, criteria, elements and guidelines
Standard 1.5: The organisation provides safe care and services

Criterion	LA Awareness	SA Implementation LA plus the following
Criterion 1.5.2 *The infection control system supports safe practice and ensures a safe environment for consumers / patients and healthcare workers.* **This is a mandatory criterion**	a) Policy / guidelines addressing infection control are consistent with relevant legislation, standards, guidelines and/or codes of practice, and are readily available to staff. b) The infection control plan includes: (i) hand hygiene and aseptic technique (ii) antimicrobial stewardship and appropriate use of antibiotics (iii) notifiable diseases (iv) outbreak management (v) transmission precautions and occupational exposure prevention and management (vi) sterilisation and reprocessing of instruments and devices. c) The infection control plan addresses environmental factors, including: (i) cleaning services (ii) food safety and kitchen cleaning (iii) linen handling and laundry services (iv) relevant equipment and plant. d) The infection control plan is approved, supported and properly resourced by the governing body and/or its delegated authority. e There is an effective surveillance system to monitor and report healthcare-associated infections.	a) The infection control system, including the infection control plan, is managed and monitored by a multidisciplinary infection control committee and/or team. b) Infection prevention strategies are integrated into all stages of healthcare planning, including health facility planning, construction and refurbishment. c) There is a planned and documented schedule of regular maintenance and/or monitoring of the environmental factors associated with infection control. d) There are documented risk reduction and containment measures for identified infections. e) Health professionals and other staff are trained in infection prevention and control strategies relevant to their role and responsibilities. f) Infection risks, control strategies and safety requirements are communicated to consumers / patients and carers.

SECTION 5
Standards, criteria, elements and guidelines
Standard 1.5: The organisation provides safe care and services

MA Evaluation SA plus the following	EA Distinction MA plus the following	OA Leadership EA plus the following
a) Compliance with the infection control policy / guidelines is monitored and evaluated, and improvements are made as required.	a) The organisation shows distinction in its management of infection prevention and control.	a) The organisation demonstrates it is a leader in infection prevention and control systems.
b) The infection control system, including all aspects of the infection control plan, is evaluated, and improvements are made as required.		
c) Maintenance and monitoring of environmental factors relevant to infection control are evaluated, and improvements are made as required.		
d) The organisation collects a suite of infection control indicators and evaluates the results, and improvements are made as required.		
e) Education and training in infection prevention and control are evaluated in consultation with relevant staff, and improvements are made as required.		
f) The effectiveness of communication of infection risks, control strategies and safety requirements to consumers / patients, carers, visitors, students and external service providers is		

SECTION 5
Standards, criteria, elements and guidelines
Standard 1.5: The organisation provides safe care and services

Prompt points

- Describe how the organisation uses 'barriers' to prevent infection?
- How does the organisation respond in the event of a healthcare-associated i system or process changes a result of a healthcare-asso
- What notifiable diseases is t required to report on? Who ensuring that reporting is ca
- What contingency drill does organisation conduct to pre disease outbreaks?
- Who is responsible for moni throughout the organisation organisation respond when fall in a particular area?
- How does the organisation communicate the necessity, and correct techniques, for hand hygiene and respiratory etiquette to consumers / patients, carers and other visitors?
- How has the organisation addressed the unnecessary prescribing of antibiotics?
- What standards and guidelines does the organisation draw upon in its management of sterilisation?
- What reprocessing of instruments and medical devices occurs in this organisation? How does the organisation ensure compliance with policy and procedures for reprocessing? What action is taken in the event of identified non-compliance?

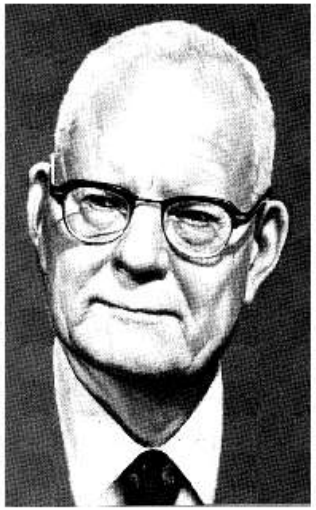
Who is responsible for monitoring hand hygiene throughout the organisation? How does the organisation respond when compliance rates fall in a particular area?

How has the organisation addressed the unnecessary prescribing of antibiotics?

Success - knowledge & data, data, data……

"In God we Trust, all others bring data"

Designing a Data-Informed Decision Process with Edwards Deming: Grandfather of the Lean Startup



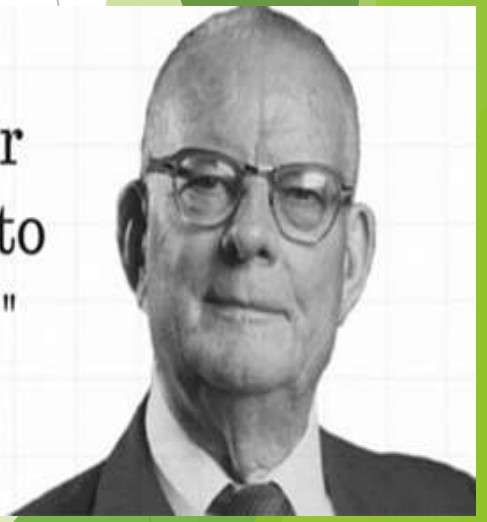
W. Edwards Deming

The late William Edwards Deming was an American ***statistician, professor, author, lecturer, and consultant.***

He is perhaps best known for the "*Plan-Do-Check-Act*" cycle popularly named after him, and is also credited for the quote:

"In God we trust; all others must bring data."—[30]

"It is not enough to do your best; you must know what to do, and then do your best."



Thankyou

Glenys Harrington
Consultant
Infection Control Consultancy (ICC)
Melbourne, Australia
infexion@ozemail.com.au