gama healthcare | ACIPC Australasian College for Infection Prevention and Control

Welcome to the **IPC Tour 2024!**

Kathy Dempsey

Australian IPC Governance - Mapping our pathway: Past, Present and Emerging

Australian IPC Governance – Mapping our pathway: Past, Present and Emerging

Kathy Dempsey RN, DippApSc, BSc (Nursing), MNSc (Infection Control & Hospital Epidemiology)
SHEA/CDC Cert Infection Control, Cert Med Micro, DipLdrshp&Mgt.CICP-E; Future Leaders of Healthcare DrPH Candidate

NSW Chief ICP & HAI Advisor | IPAC COVID-19 Response Clinical Lead | Clinical Excellence Commission
Infection Prevention and Control Practitioner (CICPE).

The Clinical Excellence Commission continues to support safety in the NSW Health system.
Our resources relating to COVID-19 are available at http://www.cec.health.nsw.gov.au/keep-patients-safe/Coronavirus-COVID-19

We work flexibly at the CEC. I'm sending this message at a time that suits me. I don't expect you to read, action or respond out of your normal work hours.

T 02 9269 5614
M 0429 162 892 **(No SMS)**
E kathy.dempsey@health.nsw.gov.au
W cec.health.nsw.gov.au

NSW GOVERNMENT

CLINICAL EXCELLENCE COMMISSION

UNSW AUSTRALIA

Acknowledgement of Country and Elders

I acknowledge the Traditional Custodians of the lands that we are meeting here today. I pay my respects to Elders past, present and emerging and celebrate the diversity of Aboriginal peoples and their ongoing cultures and connections to the lands and waters of NSW.

I also acknowledge and pay my respects to our Aboriginal and Torres Strait Islander people/colleagues joining us today.

Disclaimer

- Information represents authors views
- Some information is part of research and work towards DrPH and in the process of being published
- No ICPs were hurt in the collection of this data
- Info does not fully detail the work being done by IPaC at all levels and the Aged Care

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Acknowledgements

Dr Susan Jain

Prof David Greenfield

Adj Assoc Prof Patricia Bradd

Dr Kate Clezy

Australian IPC Governance Where have we come from?; where are we?; Where are we going?

In memory of:

Prof M-L McLaws - UNSW

Epidemiology
Infectious Diseases
Medical Microbiology
Medical Infection Agents (incl. Prions)
Intensive Care
Public Health and Health Services

17/3/1953 – 12/8/2023

Dr Annette Pantle

Medical Director | **Medical Council of NSW**
PO Box 104, Gladesville, NSW, 1675, DX: 22808
T (02) 9879 2219 | F (02) 9816 5307
E annette.pantle@health.nsw.gov.au | W www.mcnsw.org.au

13/5/158-16/5/2023

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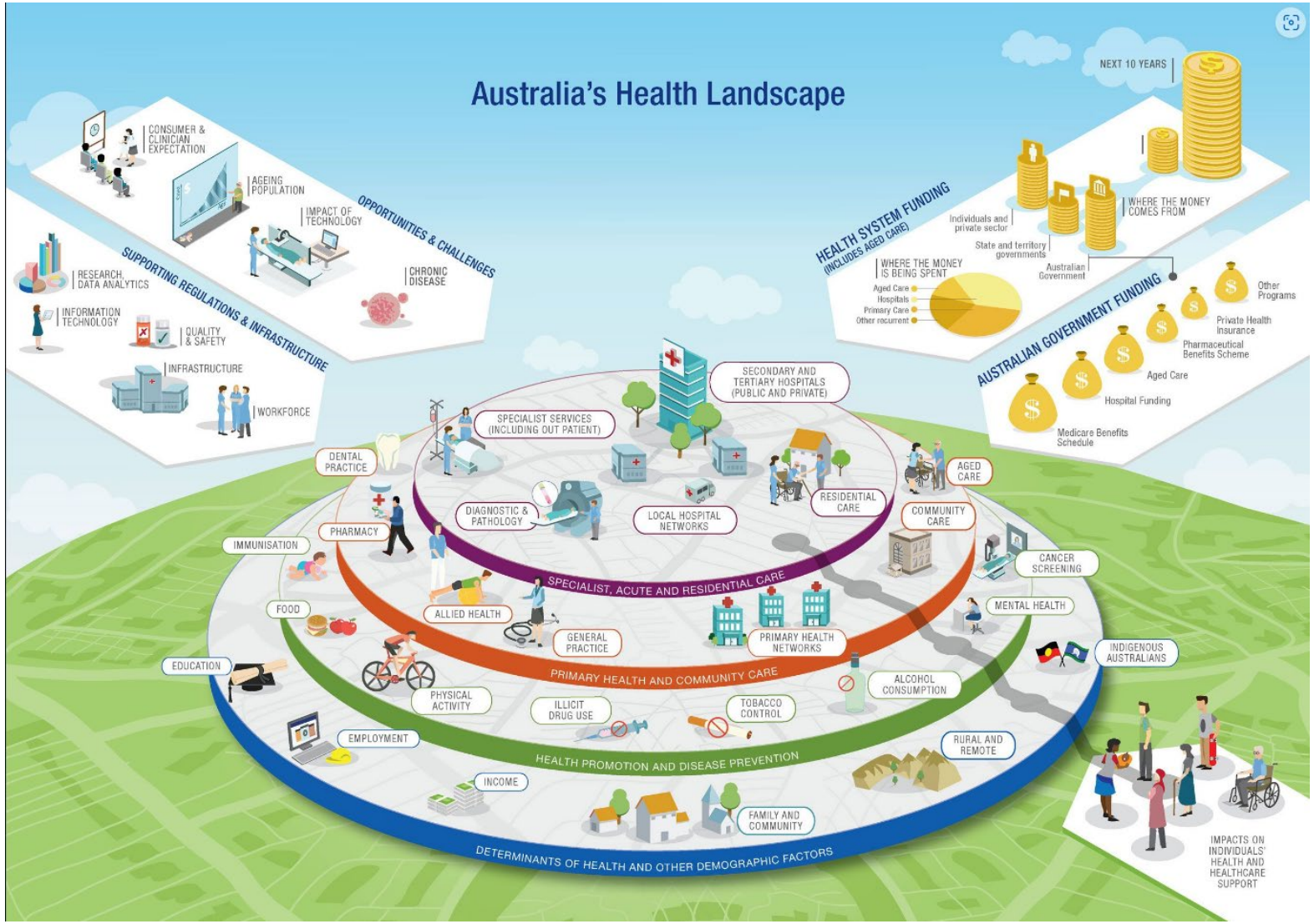
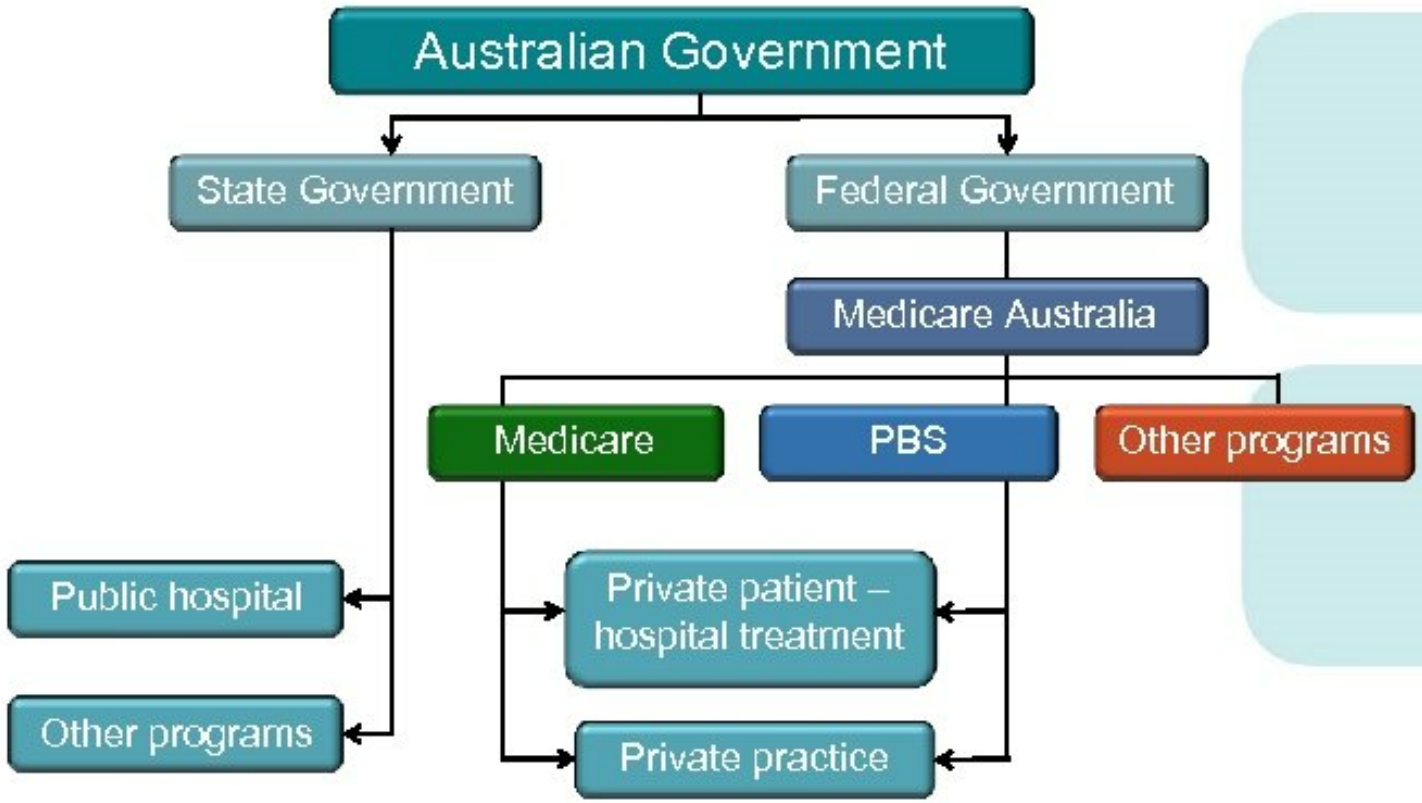


[Australia's health landscape infographic | Australian Government Department of Health and Aged Care]

Australian healthcare system

Three levels of Government



[Orientation to Australian health system and working in (present5.com)]

HAI & IPAC ACROSS AUSTRALIA

NSW GOVERNMENT | CLINICAL EXCELLENCE COMMISSION

Queensland Government
Queensland Health

VICTORIA State Government health.vic
Victoria's hub for health services & business

Government of South Australia
SA Health

Government of Western Australia
Department of Health

Tasmanian Government | Department of Health

NORTHERN TERRITORY GOVERNMENT | Department of Health

ACT Government | Health

MANATŪ HAUORA
MINISTRY OF HEALTH

VICNISS
HEALTHCARE ASSOCIATED INFECTION SURVEILLANCE

NSW GOVERNMENT | CLINICAL EXCELLENCE COMMISSION

Australian Government
Department of Health

Infection Prevention and Control Expert Group (ICEG)

AUSTRALIAN COMMISSION ON SAFETY AND QUALITY IN HEALTH CARE

NATIONAL COVID-19 CLINICAL EVIDENCE TASKFORCE

HAI STEERING COMMITTEE

Australasian College for Infection Prevention and Control

Australian Centre for Disease Control

History Australian IPaC

1960s

1959 first joint Hospitals Infection Committee formed in Brisbane

1962

Princess Alexandra Hospital appoints Australia's First ICS

1965

NSW POW Hospital appoints first ICS

(Infection Control Sister)

1967

Canberra Hospital appoints first full time ICP

Late 1960s

SA appoints first IC Adelaide's Children Hospital

1975 - 1977

NSW – 7 metropolitan hospitals in Sydney had FTE ICS

Tasmania appoints first ICS

NB: Vic & NT unrecorded.

Role and function first described for Infection surveillance and Control programs by ACHS

1989

Australia's 1st reported case of pt-to-pt transmission HIV

HCV transmission

1995

NSW first Australian state to adopt a government policy position to employ an ICP

1996 Federal rec ICN/200-250 beds

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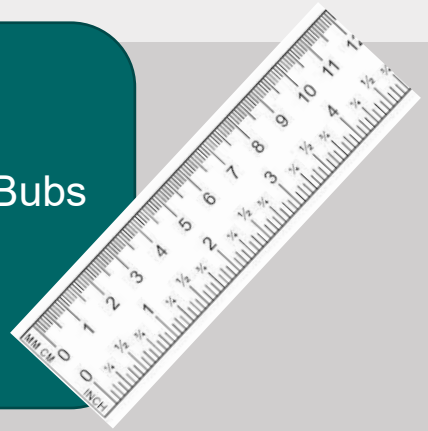
Murphy CL. *Infection control in the Australian health care setting* (Doctoral dissertation, UNSW Sydney).

JE; Mpox; Measles

COVID-19

ICU
Emergency
Paediatric / Bubs
Patient Flow
Ambulance
Surgery



EBOLA 2014

MERS 2012

H1N1 2009-2010

SARs COV 1 2003

FLORENCE
HIV
HAND HYGIENE
MROs /HAI

IPAC

2006 intro of ABHR

1996 Standard Precautions & TBP

1996 Standard Precautions & TBP

1987 body substance isolation

1985 universal precautions

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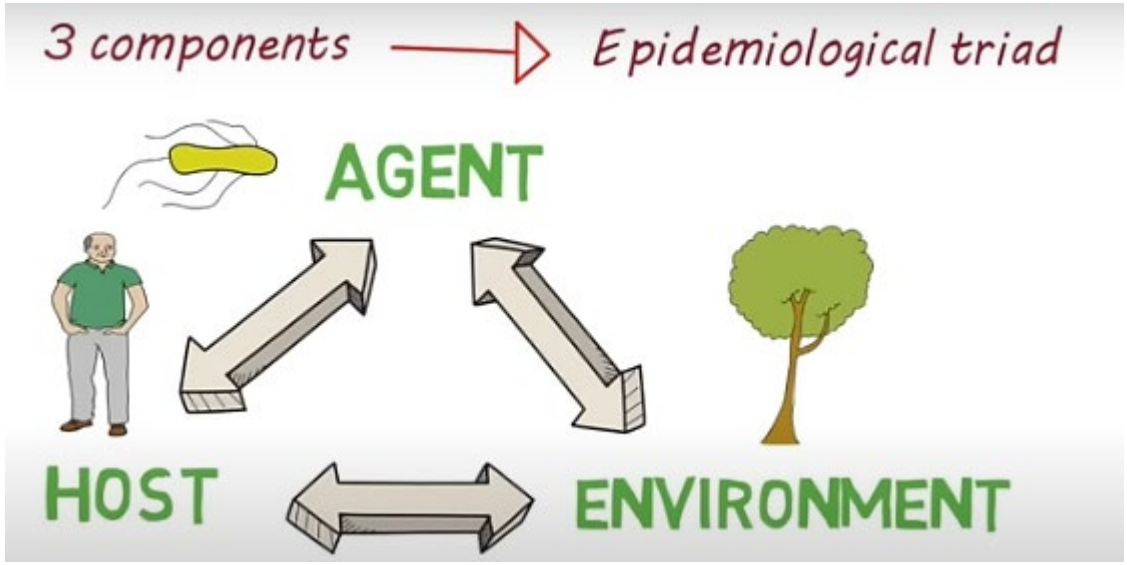
Difference between Public Health and Infection Prevention and Control

How do people get infectious diseases



Direct

touching

intercourse

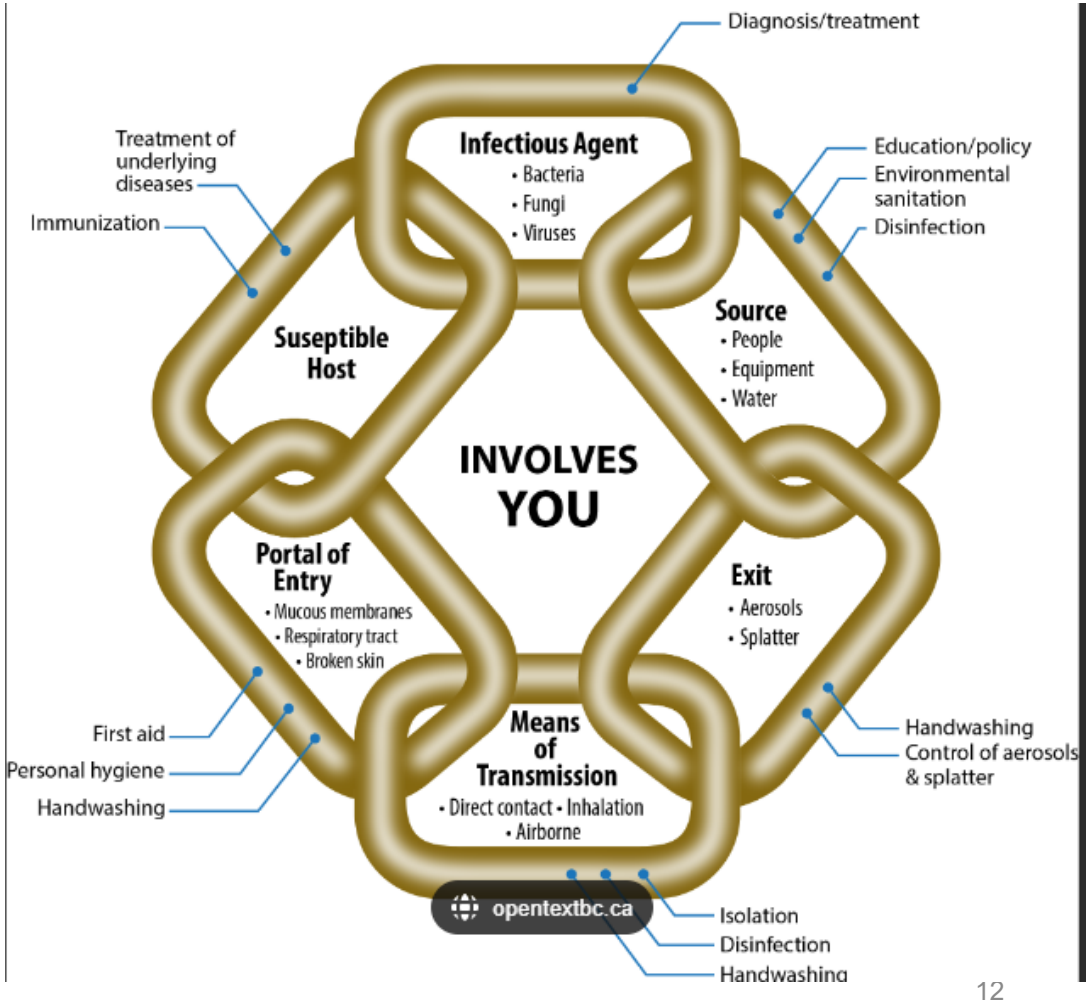
coughing

Indirect

intermediate

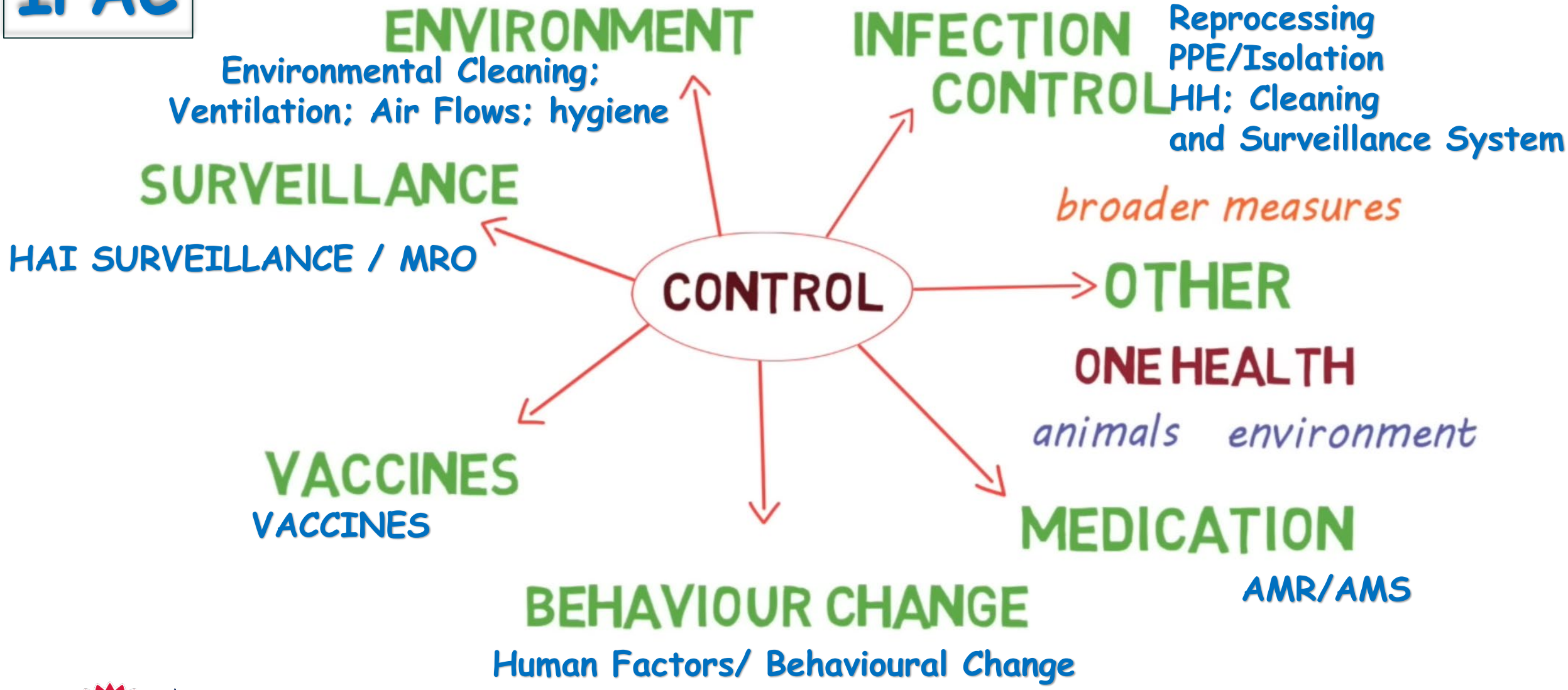
contaminated objects

vectors



https://opentextbc.ca/clinicalskills/chain-of-infection01-2

IPAC



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Let's Learn Public Health

PUBLIC HEALTH

Public Health and Infection Prevention and Control (IPC) are distinct yet interconnected fields within the realm of healthcare.

Public Health:

- **Focus**: Public health is a discipline dedicated to improving the health of **populations**.

Scope

- Population-Level:
- Preventive Measures:

Goal: To enhance overall health and well-being across populations.

Infection Prevention and Control (IPC):

- **Focus**: IPC specifically targets the prevention and management of **infections** within healthcare settings.

Scope

- Healthcare context:
- Individual patients:

Goal: To minimize infection transmission, reduce antimicrobial resistance, and enhance patient safety.

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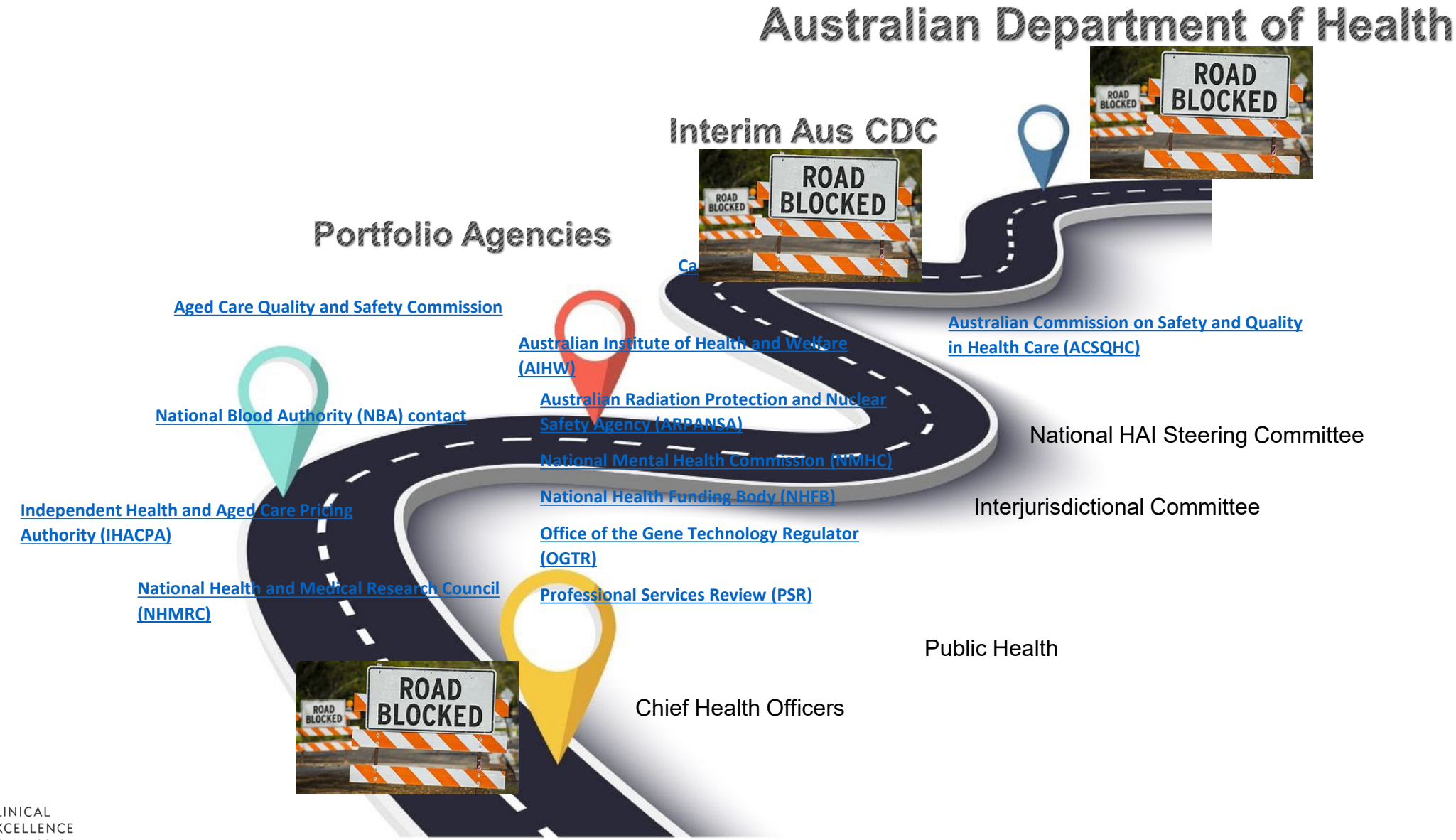
Attempt to unpack Governance



HAI/IPAC Programs - jurisdictional

What is Governance?

- *Governance encompasses the system by which an organisation is controlled and operates, and the mechanisms by which it, and its people, are held to account.*
- *involves a set of relationships*
- *is 'the framework of rules, relationships, systems and processes within and by which authority is exercised and controlled in corporations*

AHPPC

Sub committees

- Communicable Diseases Network Australia CDNA
- Public Health Laboratory Network (PHLN)
- Environmental Health (enHealth)
- National Health Emergency Management Subcommittee (NHEMS)
- Blood Borne Viruses Sexually Transmissible Infections Subcommittee)BBVSS)

Advisory committees (COVID)

- AHPPC Aged Care Advisory Group (ACAG)
- National Aboriginal and Torres Strait Islander Health Protection Sub-Committee (NATSIHP)
- Advisory Committee for the COVID-19 Response for People with a Disability
- Infection Control Expert Group (ICEG)
- Culturally and Linguistically Diverse Communities COVID-19 Health Advisory Group (CALDAG)

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Australian Government
Department of Health and Aged Care

The interim Australian CDC launched on 1 January 2024 within the Department of Health and Aged Care.

Australian Centre for Disease Control

We are establishing an Australian Centre for Disease Control (CDC) to improve our response to public health emergencies.

About the CDC

We are establishing an Australian CDC to improve Australia's response and preparedness for public health emergencies.

By establishing an Australian CDC we will build on our nation's existing strengths and capabilities, drive better health outcomes for all Australians, and help protect our country from whatever nationally significant health threats we may face in the future.

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Australian Government
Department of Health and Aged Care

The interim Australian Centre for Disease Control (CDC)

Protecting the health of all Australians.

WHY IT IS IMPORTANT

Risk of public health emergencies is increasing in Aus

BACKGROUND

Need identified following recent public health emergencies:

- Pandemic
- JE virus outbreak
- Emergence of mpox
- 2019-20 bush fires and other natural disasters

INTO THE FUTURE

The CDC will continue to grow in a phased approach. The CDC will:

- Prepare and plan
- Respond
- Coordinate and collaborate
- Collate, monitor and analyse
- advise

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Australian Government
Department of Health and Aged Care

The interim Australian Centre for Disease Control (CDC)

Protecting the health of all Australians.

Role and functions of an Australian CDC

Stakeholder responses and consultation

Statement of intent: how we will work together

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CLINICAL EXCELLENCE COMMISSION

[Resources | Australian Centre for Disease Control (cdc.gov.au)]

In Detail

Opportunities for change and improvement in Australia include:

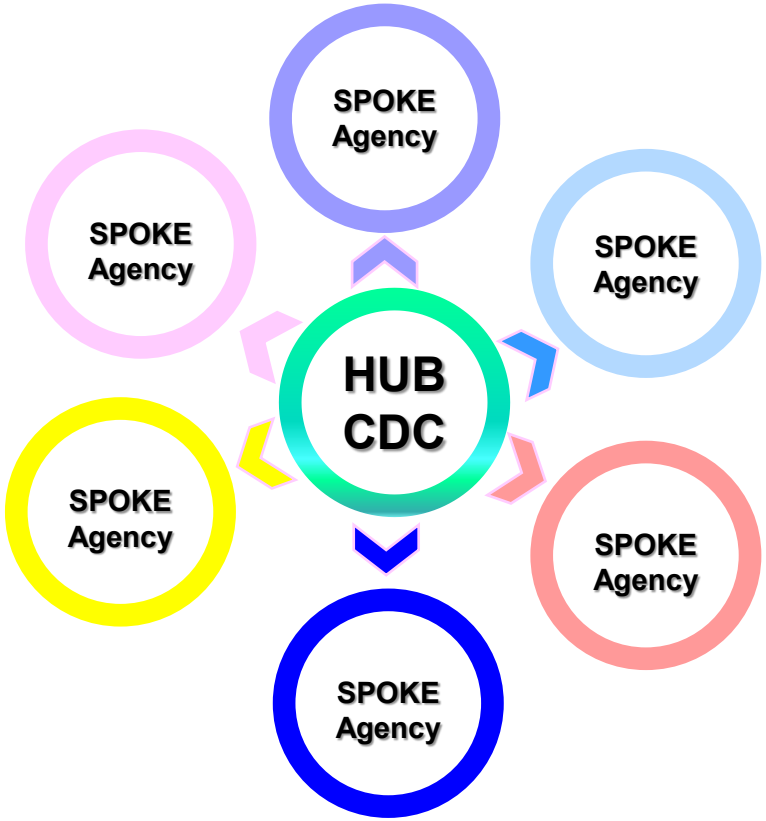
- increasing capacity and capability in ,,,,, infection, prevention and control

In Scope

- **Infection Prevention and Control – Guide and Communicate**
- **COVID-19 demonstrated need for the rapid development of a whole or suite of short term traininga nd resources – particularly in the IPAC space**
- **IPAC representation on CDNA**

CDC Stakeholder Engagement

- the establishment of a CDC will drive much greater linkage and collaboration across the Australian health system and offer a genuine ‘one source of truth’ on how Australia responds to both communicable and non-communicable disease challenges into the future.



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5 Objectives Framing Development


STATEMENT OF INTENT
Working together to support the Australian Centre for Disease Control

- increase independence and strengthen evidence-based and transparent decision-making to maintain trust;
- improve national coordination of effort and efficiencies, with stronger partnerships, including across Commonwealth agencies and between jurisdictions;
- support national action through enhanced national capabilities, underpinned by the distinct and complementary roles and responsibilities of jurisdictions and the Commonwealth;
- enhance international connections; and
- increase and productively utilise resources to support preparedness and response across all jurisdictions, including nationally.

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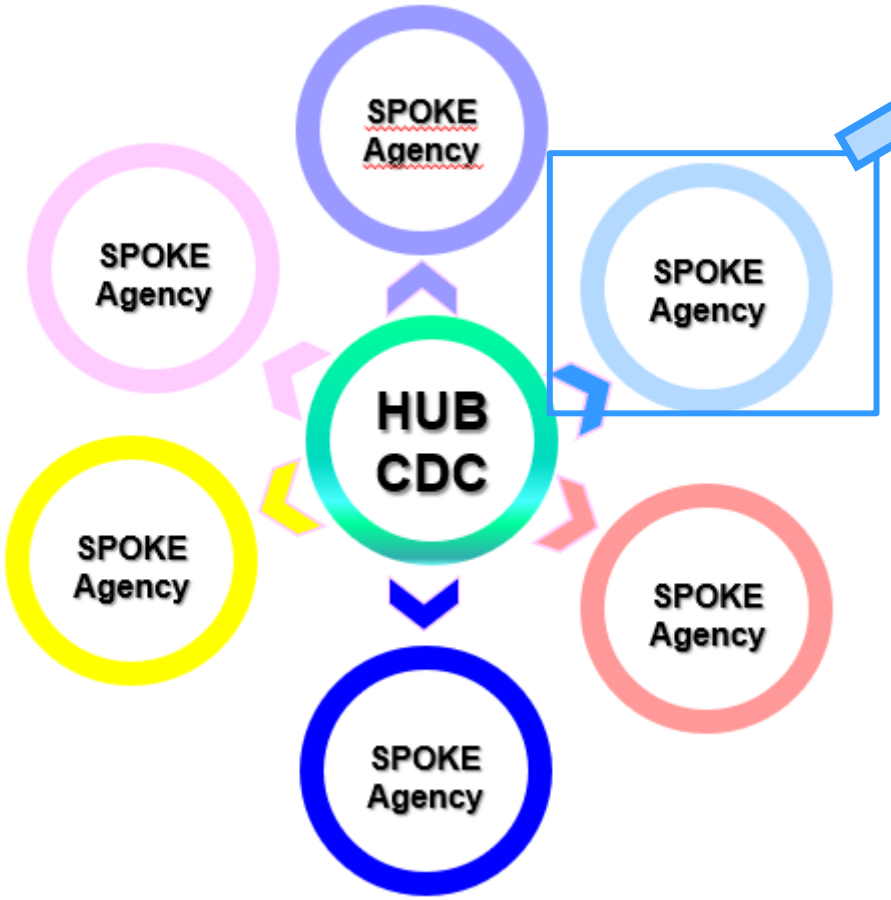
IPAC & the Aus CDC



ACSQHC NSQHCS 3

- HAI Steering
- Standard 3
- NHHI
- Aus Guidelines
- eLearning modules
- Guides for implementation
- Environmental Cleaning
- Aseptic Technique
- Patient Placement
- Precautions
- AMR/AMS
- Surveillance
- ?????

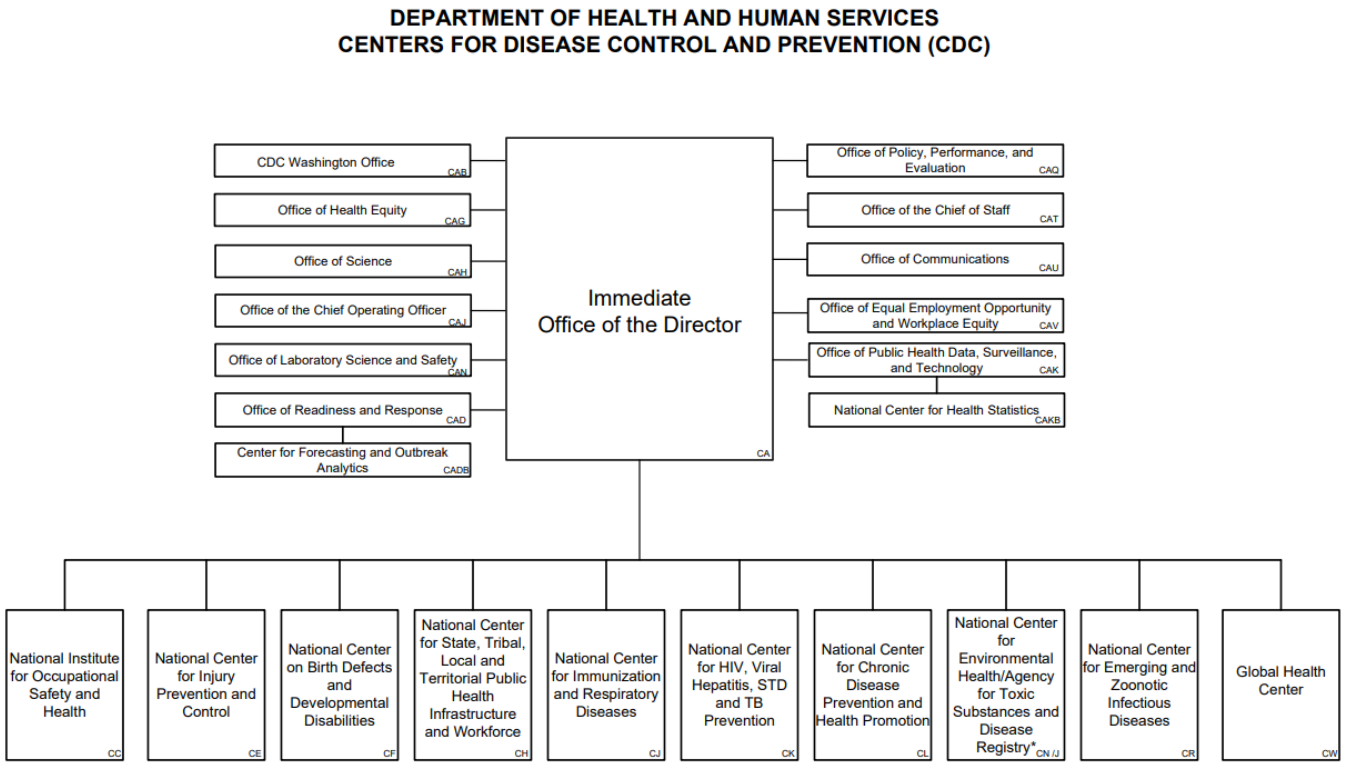
Role and functions of governing bodies in governance

	Accountability (conformance)		Leadership (performance)
	Past and present oriented		Future oriented
External focus	External accountability	Appoint and work through the chief executive officer	Strategy
Internal focus	Monitoring and supervision		Policymaking

The interim CDC has taken over the responsibilities of the department's Chief Medical Officer Group. These include:

- health alerts
- emergency health management, including management of the National Medical Stockpile
- communicable diseases
- national and international disease surveillance
- environmental health.

The interim CDC functions and services will expand throughout 2024.



CDC MOVING FORWARD

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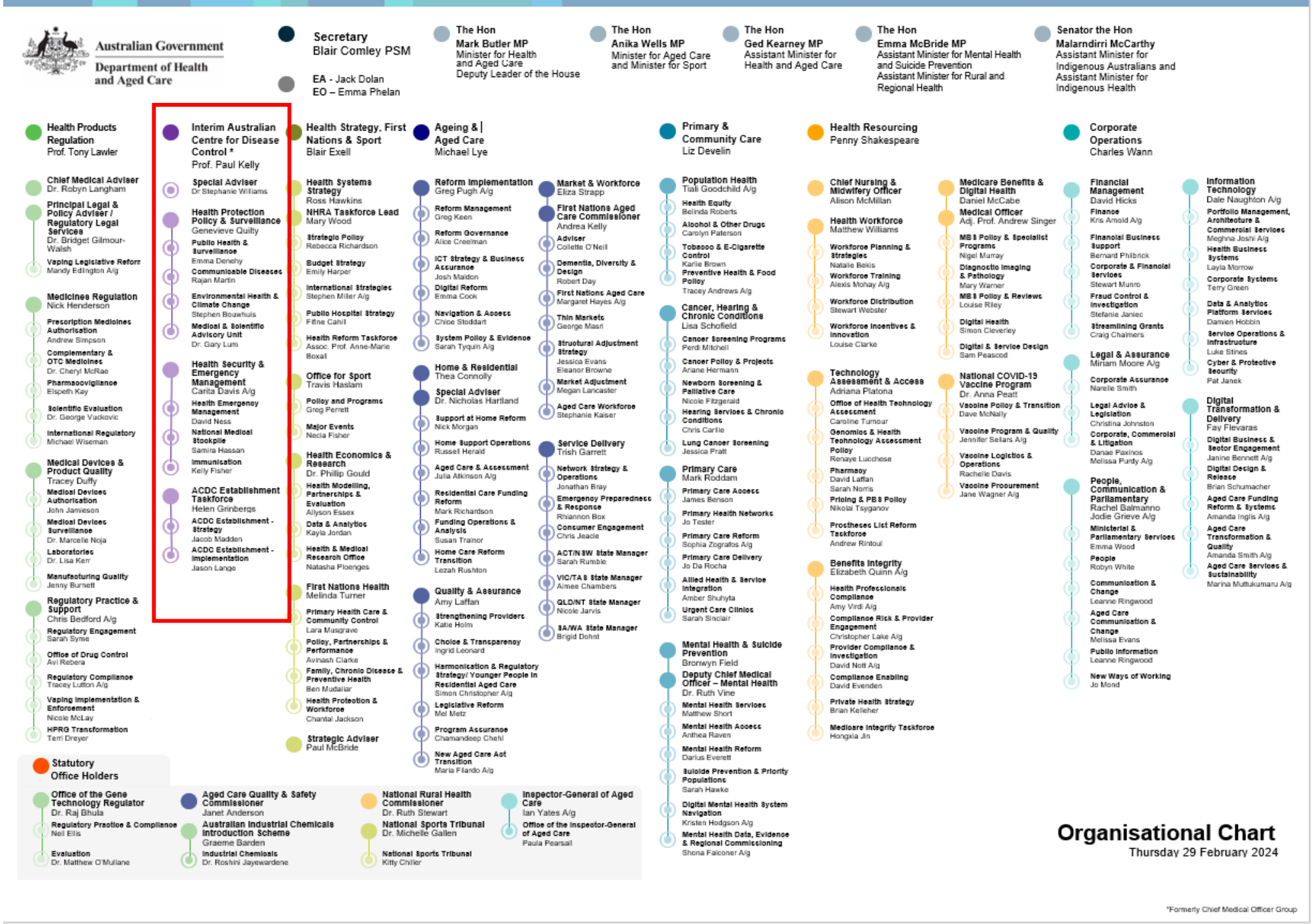

Australian Government
Department of Health and Aged Care
Secretary
Blair Comley PSM
EA - Jack Dolan
EO – Emma Phelan
The Hon
Mark Butler MP
Minister for Health and Aged Care
Deputy Leader of the House
The Hon
Anika Wells MP
Minister for Aged Care and Minister for Sport
The Hon
Ged Kearney MP
Assistant Minister for Health and Aged Care
The Hon
Emma McBride MP
Assistant Minister for Mental Health and Suicide Prevention
Assistant Minister for Rural and Regional Health
Senator the Hon
Malarndirri McCarthy
Assistant Minister for Indigenous Australians and Assistant Minister for Indigenous Health
Health Products Regulation
Prof. Tony Lawler
Chief Medical Adviser
Dr. Robyn Langham
Principal Legal & Policy Adviser / Regulatory Legal Services
Dr. Bridget Gilmour-Walsh
Vaping Legislative Reform
Mandy Edlington A/g
Medicines Regulation
Nick Henderson
Prescription Medicines Authorisation
Andrew Simpson
Complementary & OTC Medicines
Dr. Cheryl McRae
Pharmacovigilance
Elspeth Kay
Scientific Evaluation
Dr. George Vuckovic
International Regulatory
Michael Wiseman
Medical Devices & Product Quality
Tracey Duffy
Medical Devices Authorisation
John Jamieson
Medical Devices Surveillance
Dr. Marcelle Noja
Laboratories
Dr. Lisa Kerr
Manufacturing Quality
Jenny Burnett
Regulatory Practice & Support
Chris Bedford A/g
Regulatory Engagement
Sarah Syme
Office of Drug Control
Avi Rebera
Regulatory Compliance
Tracey Lutton A/g
Vaping Implementation & Enforcement
Nicole McLay
HPRG Transformation
Terri Dreyer
Interim Australian Centre for Disease Control *
Prof. Paul Kelly
Special Adviser
Dr Stephanie Williams
Health Protection Policy & Surveillance
Genevieve Quilty
Public Health & Surveillance
Emma Denehy
Communicable Diseases
Rajan Martin
Environmental Health & Climate Change
Stephen Bouwhuis
Medical & Scientific Advisory Unit
Dr. Gary Lum
Health Security & Emergency Management
Carita Davis A/g
Health Emergency Management
David Ness
National Medical Stockpile
Samira Hassan
Immunisation
Kelly Fisher
ACDC Establishment Taskforce
Helen Grinbergs
ACDC Establishment - Strategy
Jacob Madden
ACDC Establishment - Implementation
Jason Lange
Health Strategy, First Nations & Sport
Blair Exell
Health Systems Strategy
Ross Hawkins
NHRA Taskforce Lead
Mary Wood
Strategic Policy
Rebecca Richardson
Budget Strategy
Emily Harper
International Strategies
Stephen Miller A/g
Public Hospital Strategy
Fifine Cahill
Health Reform Taskforce
Assoc. Prof. Anne-Marie Boxall
Office for Sport
Travis Haslam
Policy and Programs
Greg Perrett
Major Events
Necia Fisher
Health Economics & Research
Dr. Phillip Gould
Health Modelling, Partnerships & Evaluation
Allyson Essex
Data & Analytics
Kayla Jordan
Health & Medical Research Office
Natasha Ploenges
First Nations Health
Melinda Turner
Primary Health Care & Community Control
Lara Musgrave
Policy, Partnerships & Performance
Avinash Clarke
Family, Chronic Disease & Preventive Health
Ben Mudaliar
Health Protection & Workforce
Chantal Jackson
Strategic Adviser
Paul McBride
Ageing & Aged Care
Michael Lye
Reform Implementation
Greg Pugh A/g
Reform Management
Greg Keen
Reform Governance
Alice Creelman
ICT Strategy & Business Assurance
Josh Maldon
Digital Reform
Emma Cook
Navigation & Access
Chloe Stoddart
System Policy & Evidence
Sarah Tyquin A/g
Home & Residential
Thea Connolly
Special Adviser
Dr. Nicholas Hartland
Support at Home Reform
Nick Morgan
Home Support Operations
Russell Herald
Aged Care & Assessment
Julia Atkinson A/g
Residential Care Funding Reform
Mark Richardson
Funding Operations & Analysis
Susan Trainor
Home Care Reform Transition
Lezah Rushton
Quality & Assurance
Amy Laffan
Strengthening Providers
Katie Holm
Choice & Transparency
Ingrid Leonard
Harmonisation & Regulatory Strategy/ Younger People in Residential Aged Care
Simon Christopher A/g
Legislative Reform
Mel Metz
Program Assurance
Chamandeep Chehl
New Aged Care Act Transition
Maria Filardo A/g
Market & Workforce
Eliza Strapp
First Nations Aged Care Commissioner
Andrea Kelly
Adviser
Collette O'Neil
Dementia, Diversity & Design
Robert Day
First Nations Aged Care
Margaret Hayes A/g
Thin Markets
George Masri
Structural Adjustment Strategy
Jessica Evans
Eleanor Browne
Market Adjustment
Megan Lancaster
Aged Care Workforce
Stephanie Kaiser
Service Delivery
Trish Garrett
Network Strategy & Operations
Jonathan Bray
Emergency Preparedness & Response
Rhiannon Box
Consumer Engagement
Chris Jeacle
ACT/NSW State Manager
Sarah Rumble
VIC/TAS State Manager
Aimee Chambers
QLD/NT State Manager
Nicole Jarvis
SA/WA State Manager
Brigid Dohnt
Primary & Community Care
Liz Develin
Population Health
Trial Goodchild A/g
Health Equity
Belinda Roberts
Alcohol & Other Drugs
Carolyn Paterson
Tobacco & E-Cigarette Control
Karlie Brown
Preventive Health & Food Policy
Tracey Andrews A/g
Cancer, Hearing & Chronic Conditions
Lisa Schofield
Cancer Screening Programs
Perdi Mitchell
Cancer Policy & Projects
Ariane Hermann
Newborn Screening & Palliative Care
Nicole Fitzgerald
Hearing Services & Chronic Conditions
Chris Carlile
Lung Cancer Screening
Jessica Pratt
Primary Care
Mark Roddam
Primary Care Access
James Benson
Primary Health Networks
Jo Tester
Primary Care Reform
Sophia Zografos A/g
Primary Care Delivery
Jo Da Rocha
Allied Health & Service Integration
Amber Shuhyta
Urgent Care Clinics
Sarah Sinclair
Mental Health & Suicide Prevention
Bronwyn Field
Deputy Chief Medical Officer – Mental Health
Dr. Ruth Vine
Mental Health Services
Matthew Short
Mental Health Access
Anthea Raven
Mental Health Reform
Darius Everett
Suicide Prevention & Priority Populations
Sarah Hawke
Digital Mental Health System Navigation
Kristen Hodgson A/g
Mental Health Data, Evidence & Regional Commissioning
Shona Falconer A/g
Health Resourcing
Penny Shakespeare
Chief Nursing & Midwifery Officer
Alison McMillan
Health Workforce
Matthew Williams
Workforce Planning & Strategies
Natalie Bekis
Workforce Training
Alexis Mohay A/g
Workforce Distribution
Stewart Webster
Workforce Incentives & Innovation
Louise Clarke
Technology Assessment & Access
Adriana Platona
Office of Health Technology Assessment
Caroline Turnour
Genomics & Health Technology Assessment Policy
Renaye Lucchese
Pharmacy
David Laffan
Sarah Norris
Pricing & PBS Policy
Nikolai Tsyganov
Prosthesis List Reform Taskforce
Andrew Rintoul
Benefits Integrity
Elizabeth Quinn A/g
Health Professionals Compliance
Amy Virdi A/g
Compliance Risk & Provider Engagement
Christopher Lake A/g
Provider Compliance & Investigation
David Nott A/g
Compliance Enabling
David Evenden
Private Health Strategy
Brian Kelleher
Medicare Integrity Taskforce
Hongxia Jin
Medicare Benefits & Digital Health
Daniel McCabe
Medical Officer
Adj. Prof. Andrew Singer
MBS Policy & Specialist Programs
Nigel Murray
Diagnostic Imaging & Pathology
Mary Warner
MBS Policy & Reviews
Louise Riley
Digital Health
Simon Cleverley
Digital & Service Design
Sam Peascod
National COVID-19 Vaccine Program
Dr. Anna Peatt
Vaccine Policy & Transition
Dave McNally
Vaccine Program & Quality
Jennifer Sellars A/g
Vaccine Logistics & Operations
Rachelle Davis
Vaccine Procurement
Jane Wagner A/g
Corporate Operations
Charles Wann
Financial Management
David Hicks
Finance
Kris Arnold A/g
Financial Business Support
Bernard Philbrick
Corporate & Financial Services
Stewart Munro
Fraud Control & Investigation
Stefanie Janiec
Streamlining Grants
Craig Chalmers
Legal & Assurance
Miriam Moore A/g
Corporate Assurance
Narelle Smith
Legal Advice & Legislation
Christina Johnston
Corporate, Commercial & Litigation
Danae Paxinos
Melissa Purdy A/g
People, Communication & Parliamentary
Rachel Balmanno
Jodie Grieve A/g
Ministerial & Parliamentary Services
Emma Wood
People
Robyn White
Communication & Change
Leanne Ringwood
Aged Care Communication & Change
Melissa Evans
Public Information
Leanne Ringwood
New Ways of Working
Jo Mond
Information Technology
Dale Naughton A/g
Portfolio Management, Architecture & Commercial Services
Meghna Joshi A/g
Health Business Systems
Layla Morrow
Corporate Systems
Terry Green
Data & Analytics Platform Services
Damien Hobbin
Service Operations & Infrastructure
Luke Stines
Cyber & Protective Security
Pat Janek
Digital Transformation & Delivery
Fay Flevaras
Digital Business & Sector Engagement
Janine Bennett A/g
Digital Design & Release
Brian Schumacher
Aged Care Funding Reform & Systems
Amanda Inglis A/g
Aged Care Transformation & Quality
Amanda Smith A/g
Aged Care Services & Sustainability
Marina Muttukumaru A/g
Statutory Office Holders
Office of the Gene Technology Regulator
Dr. Raj Bhula
Regulatory Practice & Compliance
Neil Ellis
Evaluation
Dr. Matthew O'Mullane
Aged Care Quality & Safety Commissioner
Janet Anderson
Australian Industrial Chemicals Introduction Scheme
Graeme Barden
Industrial Chemicals
Dr. Roshini Jayewardene
National Rural Health Commissioner
Dr. Ruth Stewart
National Sports Tribunal
Dr. Michelle Gallen
National Sports Tribunal
Kitty Chiller
Inspector-General of Aged Care
Ian Yates A/g
Office of the Inspector-General of Aged Care
Paula Pearsall
Organisational Chart
Thursday 29 February 2024
*Formerly Chief Medical Officer Group

Portfolio Agencies

Aged Care Quality and Safety Commission

Australian Commission on Safety and Quality in Health Care (ACSQHC)

Australian Institute of Health and Welfare (AIHW)

Cancer Australia

National Blood Authority (NBA) contact

National Health and Medical Research Council (NHMRC)

Independent Health and Aged Care Pricing Authority (IHACPA)

Food Standards Australia New Zealand (FSANZ)

Australian Sports Commission

National Blood Authority (NBA) contact

Australian Radiation Protection and Nuclear Safety Agency (ARPANSA)

National Mental Health Commission (NMHC)

National Health Funding Body (NHFB)

Office of the Gene Technology Regulator (OGTR)

Professional Services Review (PSR)

National Sports Tribunal Registry contact

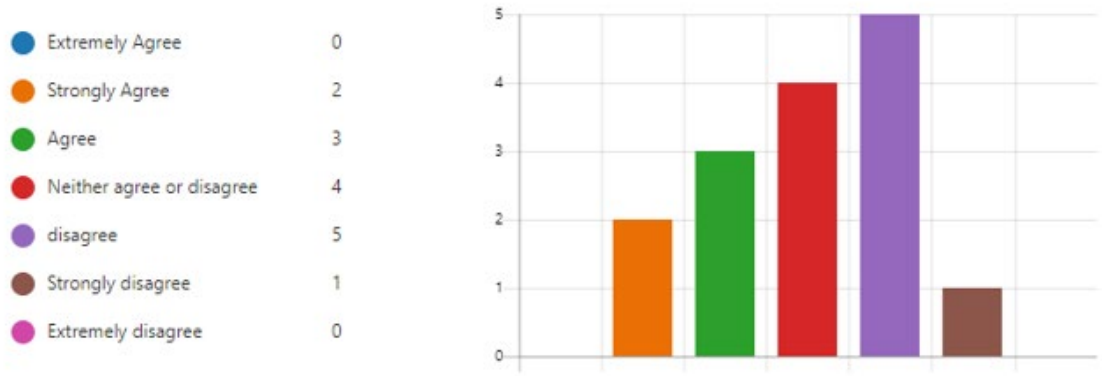
Sport Integrity Australia

Survey of Jurisdictional programs

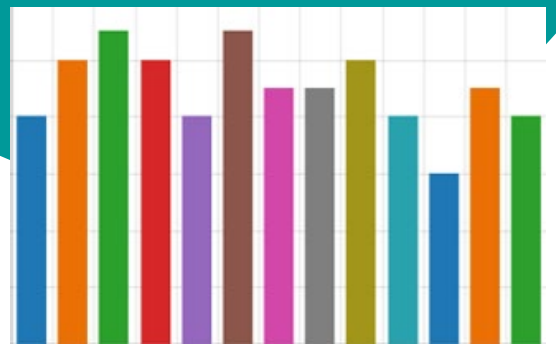
GOVERNANCE

- Patient Safety
- Health protection/Public Health
- Communicable Diseases
- Is Governance Clear – 50% No

Is there an understanding by Clinicians HAI also leads IPAC?



What is your routine state/national IPC/HAI program content



- IPAC Principles
- HAI
- Transmission Based Precautions
- Environmental Cleaning
- Reprocessing
- MRO
- HCID
- Device related Infections
- Surveillance (SSI,SAB,CDI)
- Governance, quality and risk
- Procurement, redevelopment*
- Incident/Outbreak management

- ICP
- ID/Micro
- Non specialist MO
- Public Health Dr
- Environmental Health Officer
- Research officer/assistant
- Data Manager
- IT expert
- Project Officer

Did the statewide HAI/IPAC program also manage IPAC response for COVID-19

Definitely

Somewhat

Not at all

Across the States

NSW GOVERNMENT / CLINICAL EXCELLENCE COMMISSION	Queensland Government Queensland Health	VICTORIA State Government health.vic Victoria's hub for health services & business	Government of South Australia SA Health
WEB SEARCH TERM: State Infection Prevention and Control (21/2/21)			
1. NSW Policy – author CEC 2. CEC Infection Control	1. QLD Health Diseases and Infection Prevention 2. Public Health and Infection Control guidance 3. Guidelines for infection control in health care facilities (updated July 2020)	1. Dhhs Coronavirus Infection prevention and control resources 2. Coronavirus IPAC guide 3. Vic Health infectious diseases infection control guidelines	1. Prevention and management of infection in healthcare settings 2. HAI in SA 3. Healthcare infection prevention governance SA Health
INFECTION PREVENTION AND CONTROL • HAI • IPAC PRECAUTIONS • TRANSMISSION BASED PRECAUTIONS • ENVIRONMENTAL CLEANING • REPROCESSING REUSBLE MEDICAL DEVICES • MRO ORGANISMS AND EMERGING PATHOGENS • HIGH CONSEQUENCE INFECTIOUS DISEASES • CATHETER ASSOCIATED URINARY TRACT INFECTIONS (CAUTI) PREVENTION	HAI PROGRAM • PREVENTING AND CONTROLLING HEALTHCARE ASSOCIATED INFECTION STANDARD	PREVENTING INFECTIONS IN HEALTH SERVICES • INFECTION PREVENTION STANDARDS • HAI PREVENTION • CLEANING STANDARDS • AMS • COMMUNICABLE DISEASES • HAND HYGIENE • RURAL INFECTION CENTRES	INFECTION AND INJURY MANAGEMENT • HAI SURVEILLANCE • HEALTH SERVICE STANDARDS • GOVERNANCE AND QUALITY SYSTEMS FOR INFECTION PREVENTION, CONTROL AND SURVEILLANCE • INFECTION PREVENTION AND CONTROL STRATEGIES • MANAGING PATIENTS WITH INFECTION OR COLONISATION • AMS • CLEANING, DISINFECTION AND STERILISATION Communicating with patient and carers
HAI • OVERVIEW • SURVEILLANCE • HAND HYGIENE • HACS • NSQHS STANDARD 3 • RESOURCES INFECTION PREVENTION AND CONTROL PRECAUTIONS	Resources only available internally	INFECTION PREVENTION STANDARDS • NATIONAL STANDARD 3 • NATIONAL GUIDELINES • PRICING FOR QUALITY HAI PREVENTION • VICNISS- HAI MONITORING AND SURVEILLANCE • HEALTH SERVICE MONITORING AND CONTROL\	HAI SURVEILLANCE • INFECTION PREVENTION AND CONTROL MEASURES • GUIDELINES • ELEARNING MODULES • NHHI • ENVIRONMENTAL CLEANING • SIGNAGE • TECHNCAL REPORTS • SAB

sahealth.sa.gov.au
https://www.sahealth.sa.gov.au/.../healthcare+associated+infections

Healthcare associated infections | SA Health

Web The **SA** Health **Infection Control** Service (ICS) coordinates the **SA** Health **HAI** surveillance program to monitor the occurrence of specific HAIs and provides state guidelines, tools ...

Healthcare associated infecti...
SA Health HAI surveillance program. SA Health's Infection Control Service (ICS) ...

Prevention and managemen...
SA Health has developed specific advice on: infection prevention and control of cystic ...

SA Health Healthcare Associ...
> Ensuring that there is an effective infection prevention and control program ...

Infection Prevention and Con...
improvement systems are in place to prevent and control healthcare ...

Staff protection from infectio...
Healthcare infection (HAI) can occur in any setting and infection prevention ...

Infectious disease control | S...
Clinical resources. Clinical Programs and Practice Guidelines. Infectious disease ...

Preventing and controlling he...
Preventing and controlling healthcare associated infection audit tools | SA ...

See results only from sahealth.sa.gov.au

sahealth.sa.gov.au
https://www.sahealth.sa.gov.au/wps/wcm/connect/02035... · PDF file

Healthcare Associated Infection Surveillance Clinical Directive

Web provided in the **SA** Health Healthcare Associated **Infection** Surveillance Manual, the **SA** Health Healthcare Associated **Infection** Prevention Policy Directive, and the Australian ...

NT Health
https://health.nt.gov.au/professionals/centre-for-disease-control

Centre for Disease Control – Public Health Division

Web Centre for Disease **Control** – Public Health Division. The Centre for Disease **Control** sits within the Public Health Division under the Chief Health Officer. CDC units are located ...

Notifiable diseases
The Surveillance and Response Unit sits within the Centre for Disease Control ...

Rheumatic Heart Disease pro...
The Rheumatic Heart Disease (RHD) program aims to reduce the burden of ...

Trachoma program
Antibiotics - active Chlamydia trachomatis infection is treated with antibiotics; ...

Centre for Disease Control c...
Tiwi NT 0810 P: 08 8922 8044 or 1800 008 002 F: 08 8922 8310 E: ...

Tuberculosis and leprosy unit
Tuberculosis (TB) and leprosy are conditions of significant public health ...

Covid-19 Vaccine
Center for Disease Control, Northern Territory Government, Department of ...

NSW Health
https://www.health.nsw.gov.au/professionals/hai

Healthcare associated infection

Web Professionals. Healthcare associated infections (HAIs) are an ever-present factor in every health system. They are varied and complex. Many are caused by multi-resistant ...

Infection Prevention and Con...
A NSW Health Organisation must have in place methods for monitoring, review, ...

Healthcare Associated Infect...
This New South Wales (NSW) Healthcare Associated Infection (HAI) Clinical ...

Infection Prevention and Con...
Infection Prevention and Control. Resources. Infection Prevention and ...

Healthcare Associated Infect...
Healthcare associated infections can occur in any healthcare setting, but it is ...

Infection Prevention and Con...
The Infection Prevention and Control (IPAC) and Healthcare associated Infections ...

Infection Prevention and Con...
Clinical Excellence Commission, 2020, Infection prevention and control practice ...

Preventing and Controlling H...
The Healthcare Associated Infection (HAI) Program at the Clinical Excellence ...

Surveillance - Clinical Excelle...
The New South Wales (NSW) Healthcare Associated Infection Clinical Indicator ...

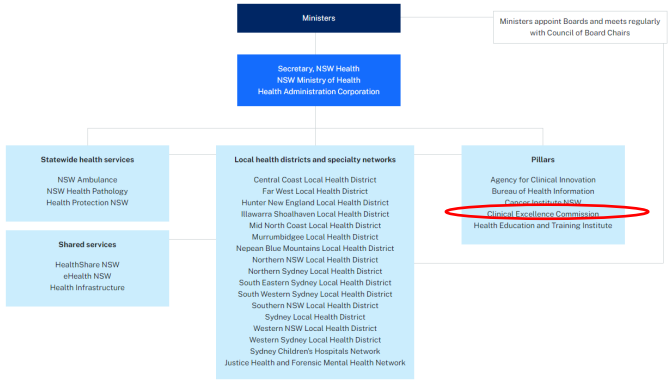
See results only from health.nsw.gov.au

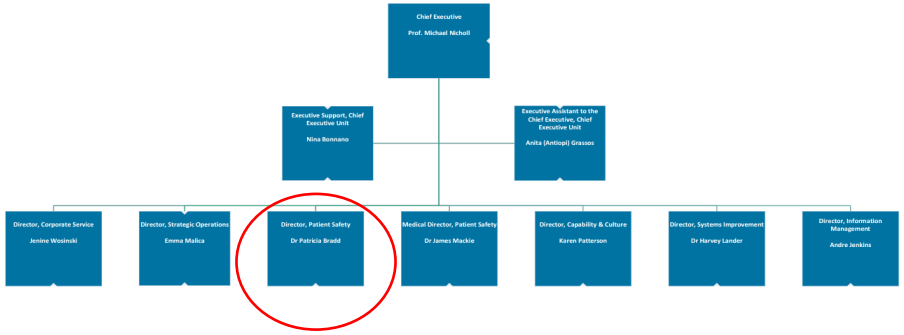
Australian Commission on Safety and Quality in Health Care
https://www.safetyandquality.gov.au/our-work/healthcare-associate...

Healthcare-Associated Infection Program | Australian ...

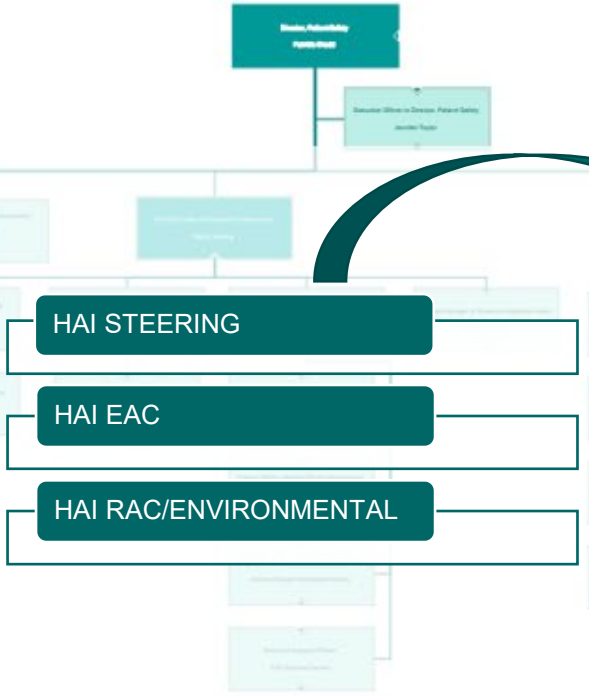
Web Healthcare-Associated **Infection** Program. The Healthcare-Associated **Infection** (**HAI**) Prevention Program aims to reduce HAIs by providing resources that support systems ...

Google

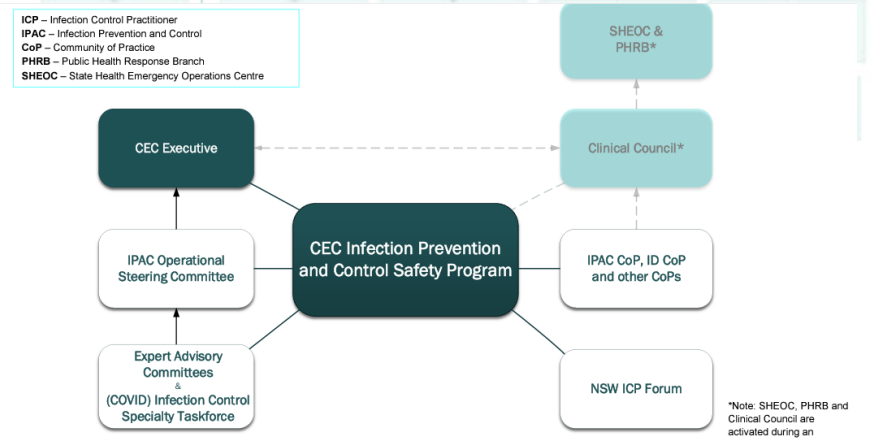




[Our structure - NSW Health]



IPC - One source of truth



[About the CEC - Clinical Excellence Commission (nsw.gov.au)]

AJIC
American Journal of Infection Control

Brief Report

Implementation of a successful infection prevention and control governance structure and capacity building strategies during COVID-19 pandemic – a brief report

Kathy Dempsey [1], Susan Jain [2], Kate Clezy [3], Patricia Bradd [4]

Show more

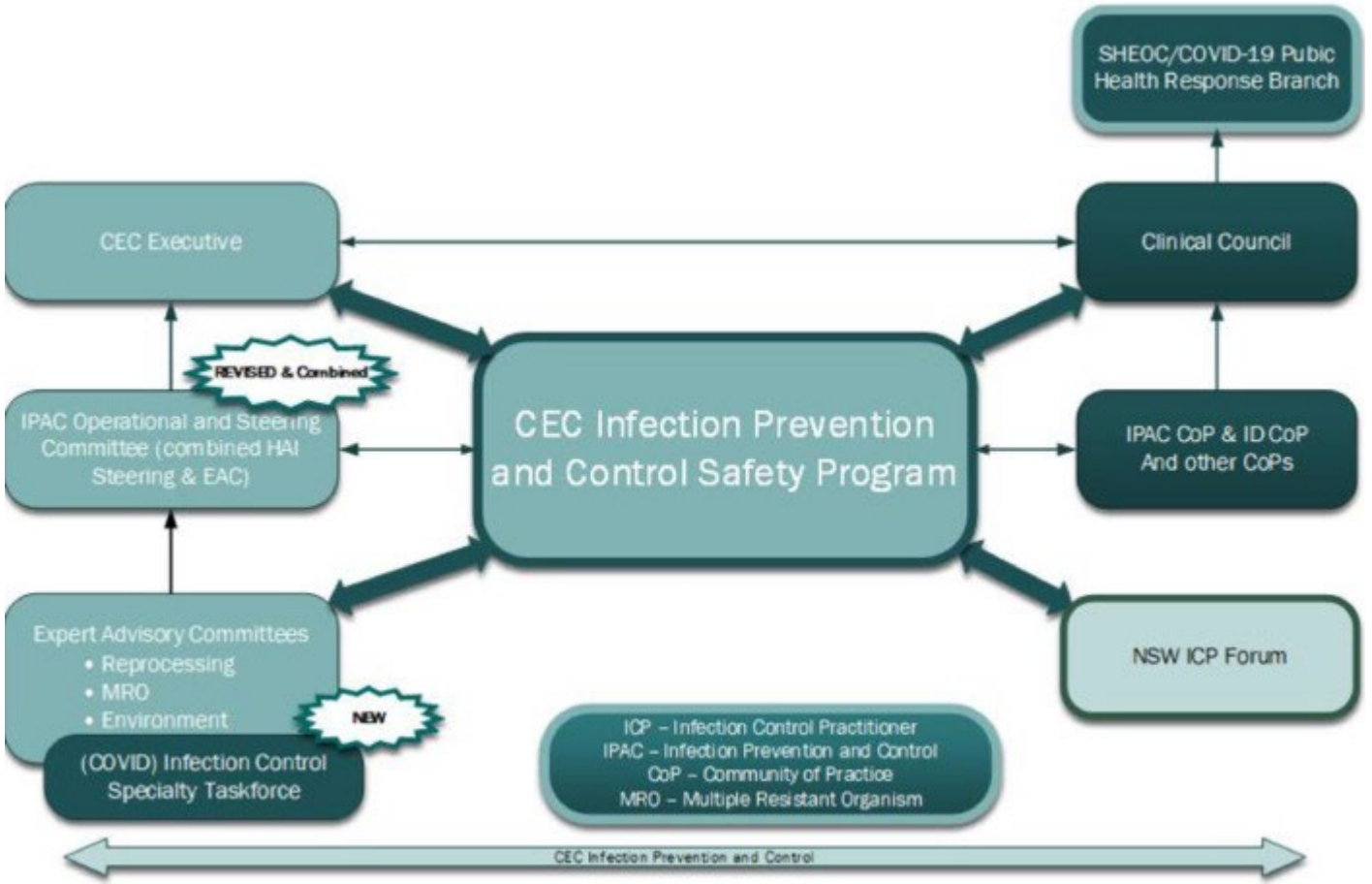
https://doi.org/10.1016/j.ajic.2022.07.002

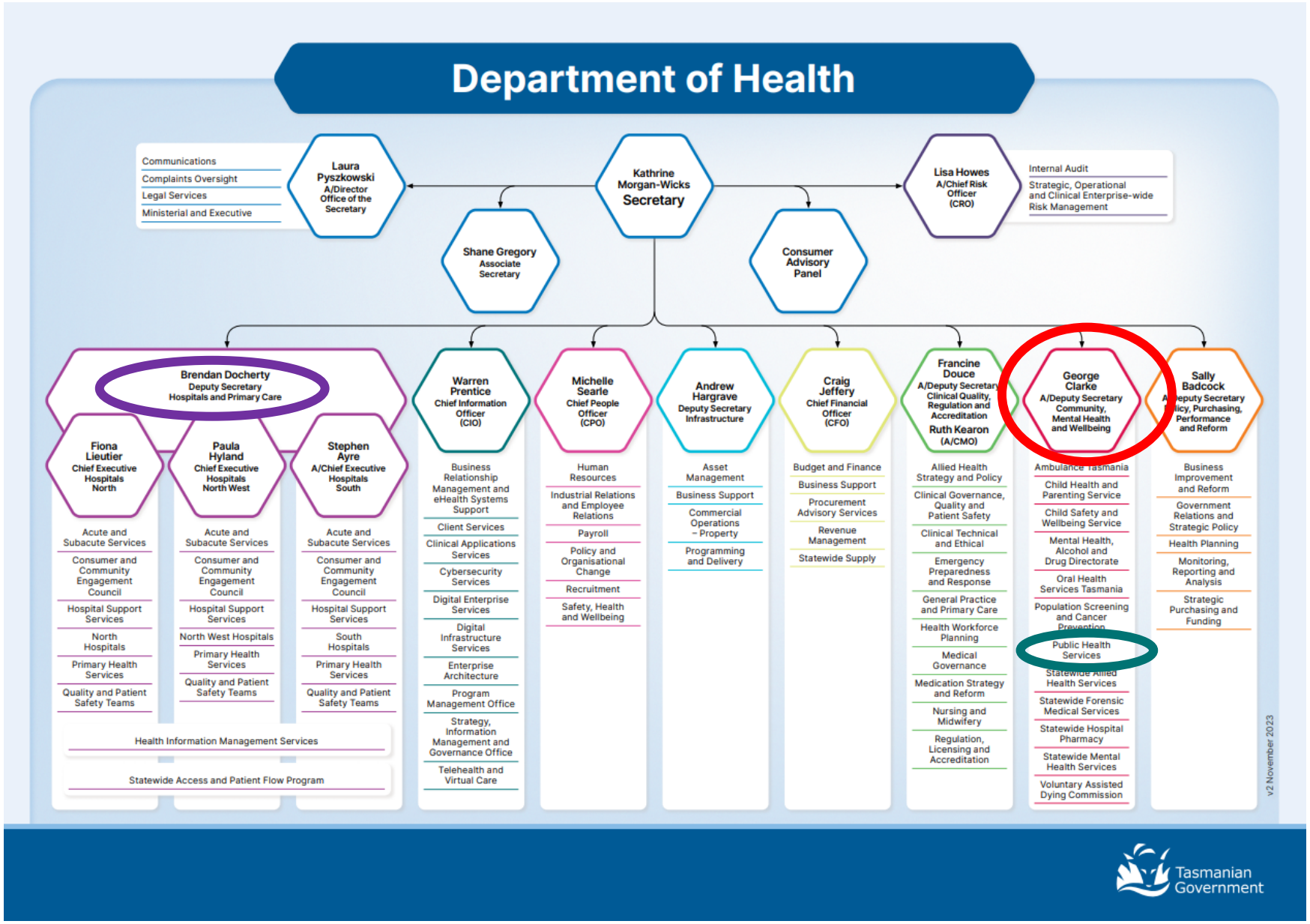
Abstract

An analysis of the Clinical Excellence Commissions response to COVID-19 prevention and protection measures identified the need to build on the existing governance process to achieve a more structured and methodical approach. The infection prevention and control measures and strategies implemented within health and non-healthcare, proved to be effective and sustainable with the ability to build additional clinician capacity even during an ongoing pandemic.

Key words

COVID-19; Capacity building; Governance; Infection prevention and control; Structure





NSW GOVERNMENT

CLINICAL EXCELLENCE COMMISSION

[Department of Health Organisational Chart November 2023]

Governance structure

Figure 2: WA health system governance structure

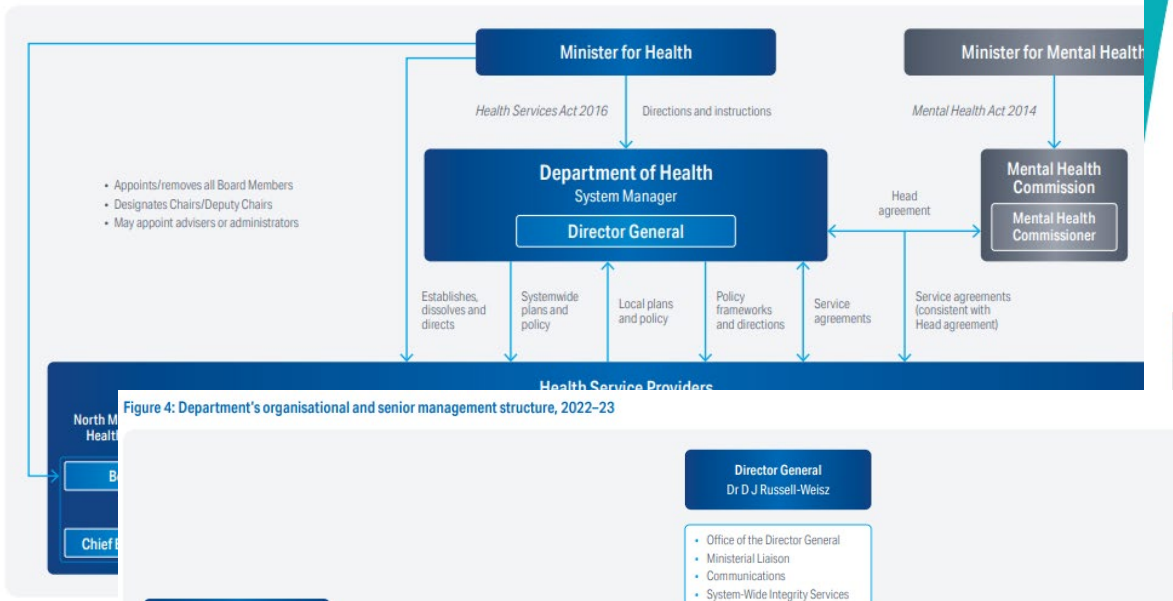
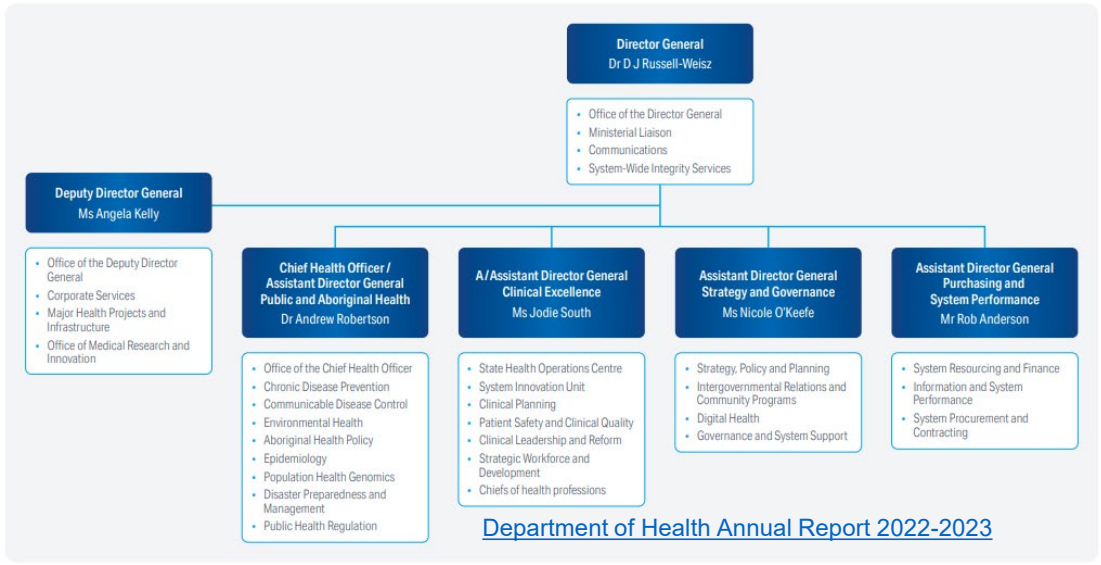


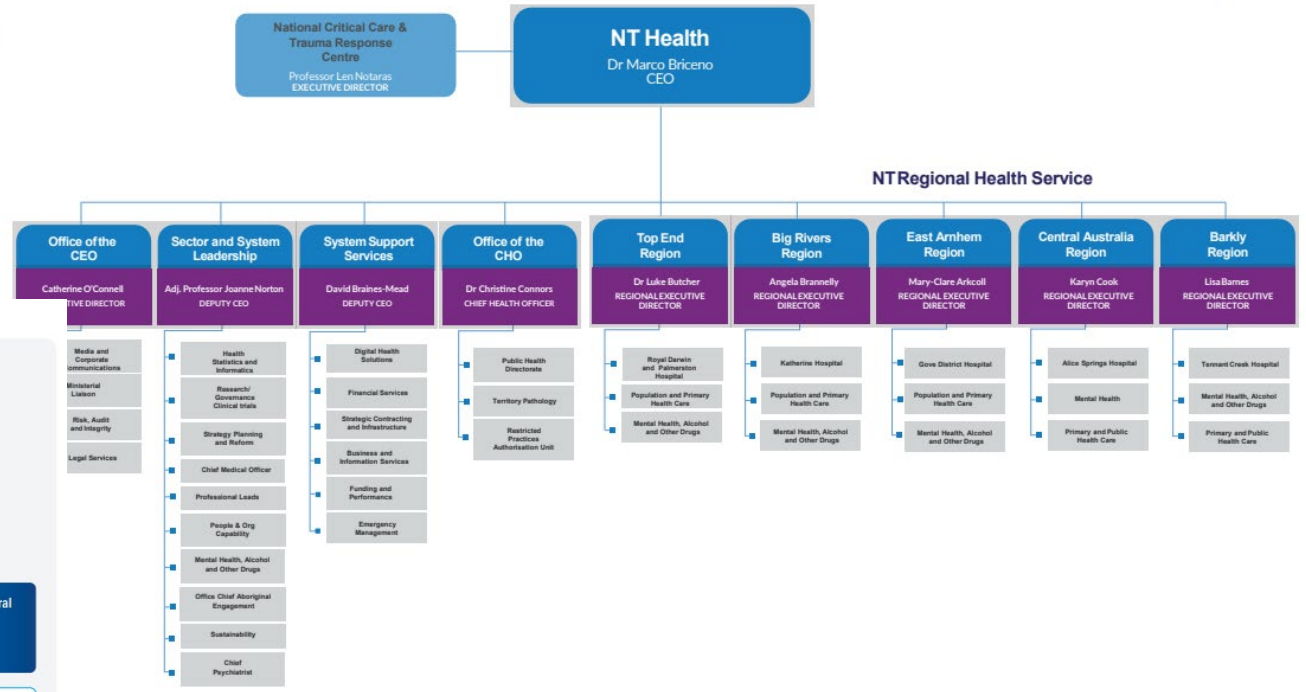
Figure 4: Department's organisational and senior management structure, 2022–23



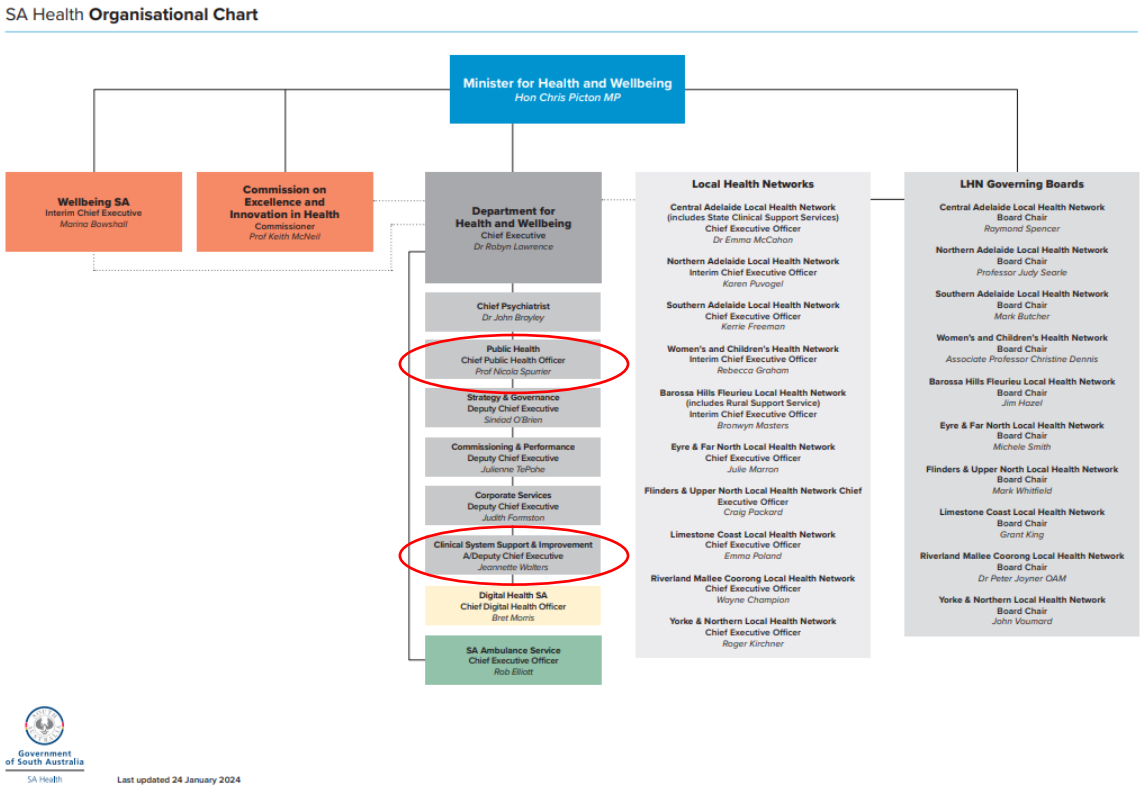
[Department of Health Annual Report 2022-2023]

NT Health Functional Structure

Effective 30 June 2023



[NT Health annual report 2022-23]



[About SA Health | SA Health]

Queensland Infection prevention and control unit

[Queensland Health organisational structure | Queensland Health]

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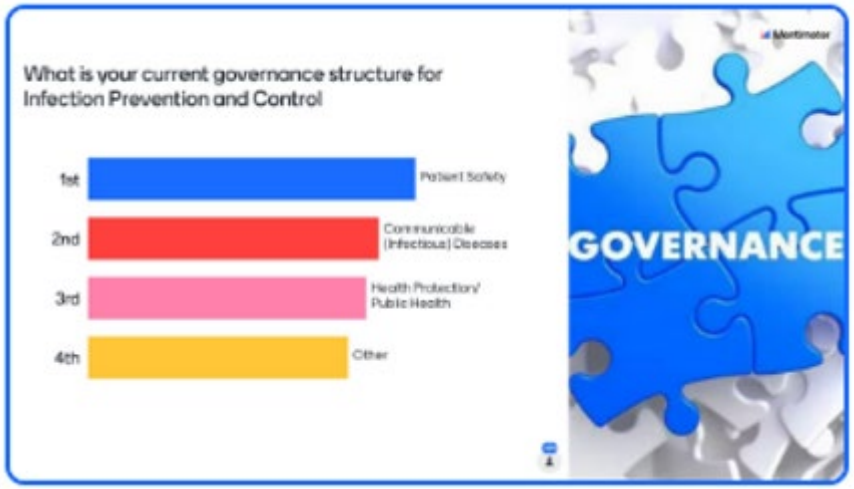
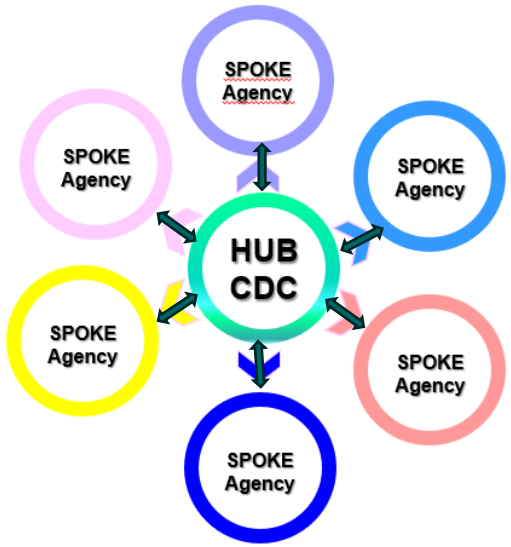
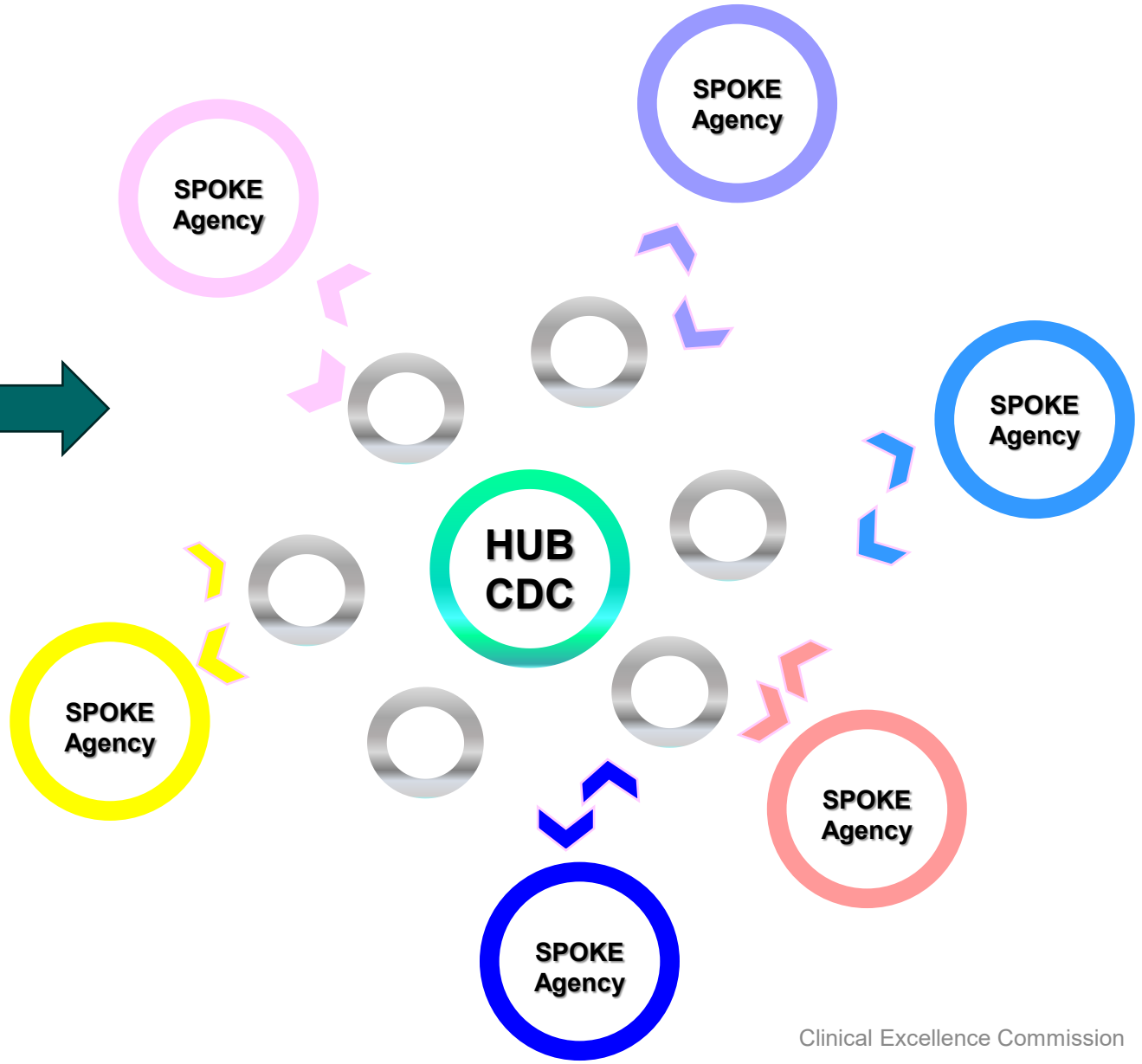
Driving forward:

EMBRACING FUNDAMENTALS & CHARTING A PATH FOR THE FUTURE

12-15 NOV 23 | ADELAIDE, SA & ONLINE







The hub and spoke model refers to a **distribution method in which a centralized "hub" exists**. Everything either originates in the hub or is sent to the hub for distribution. From the hub, goods travel outward to smaller locations, called spokes, for further processing and distribution.

NSW GOVERNMENT | CLINICAL EXCELLENCE COMMISSION

NSW GOVERNMENT

CLINICAL EXCELLENCE COMMISSION

GOVERNANCE: Communicable diseases

Benefits

Reach across system

Connectivity with ICPs delivering services

Engagement - CHO, HCEs, CDNA, ACDC, PHN, Laboratories

Opportunities

Enhanced engagement with Patient Safety

Partnership with research entities

GOVERNANCE: Patient Safety

BENEFITS

Centralised

Standardised

Consistent

Collaborative

Consultive

Timely

One source of Truth

OPPORTUNITIES

Funding

Resource

Surveillance

Proactive than reactive

Continued enhanced engagement with Pub Health

Partnership with Research

NSW GOVERNMENT

CLINICAL EXCELLENCE COMMISSION

Structure- Future considerations

Local Structure – Health Services

LHD/SHN with varying reporting structure

A standardised reporting structure across the Health Services/LHDs/SHN

JURISDICTIONAL STRUCTURE

Centralised model

Close liaison with ACSQH and Australian CDC.

AUSTRALIAN CDC

ICP representation

Consultation and collaboration with leaders from the field

Survey: 1st Aus CDC Structure; 2nd Retains ACSQHC functions + ICEG; Remain under ACSQHC

- Critical to include IPC into Aus CDC
- Centralised Australian IPaC
- Inclusion of Aged Care
- ICEG like structure fully funded

AI - INTERGRATION OF IPC in Australian Governance

Content credentials
Generated with AI · 31 March 2024 at 6:17 pm

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UNSW AUSTRALIA

Where to from here?

- Advocacy / Voice for IPAC
- Lobbying for IPAC Governance & Recognition within Aus CDC
- Continued research on governance and Australian IPC

Kathy Dempsey RN, DippApSc, BSc (Nursing), MNSc (Infection Control & Hospital Epidemiology) SHEA/CDC Cert Infection Control, Cert Med Micro, DipLdrshp&Mgt.CICP-E, FACIPC; Future Leaders of Healthcare DrPH Candidate

NSW Chief ICP & HAI Advisor | IPAC COVID-19 Response Clinical Lead | Clinical Excellence Commission
Infection Prevention and Control Practitioner (CICPE; FACIPC) | Past ACIPC Board Director
ACIPC Professional and Credentialling Standards Committee
ICEG | IPC National Evidence Taskforce

NSW GOVERNMENT | CLINICAL EXCELLENCE COMMISSION

UNSW AUSTRALIA

Morning Tea

A/Prof Stéphane Bouchoucha

IPC and patient safety: Balancing safe care with compassionate care?

Infection Prevention and Control and Patient Safety: Balancing Safe Care with Compassionate Care

A/Prof Stéphane Bouchoucha

Associate Head of School (International)

President – Australasian College for Infection Prevention and Control (ACIPC)

Deakin University, Melbourne

Manipal College of Nursing – Manipal Academy of Higher Education (MAHE)

CIDIR CENTRE FOR INNOVATION IN INFECTIOUS DISEASE AND IMMUNOLOGY RESEARCH

QPS CENTRE FOR QUALITY AND PATIENT SAFETY RESEARCH

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Presentation outline

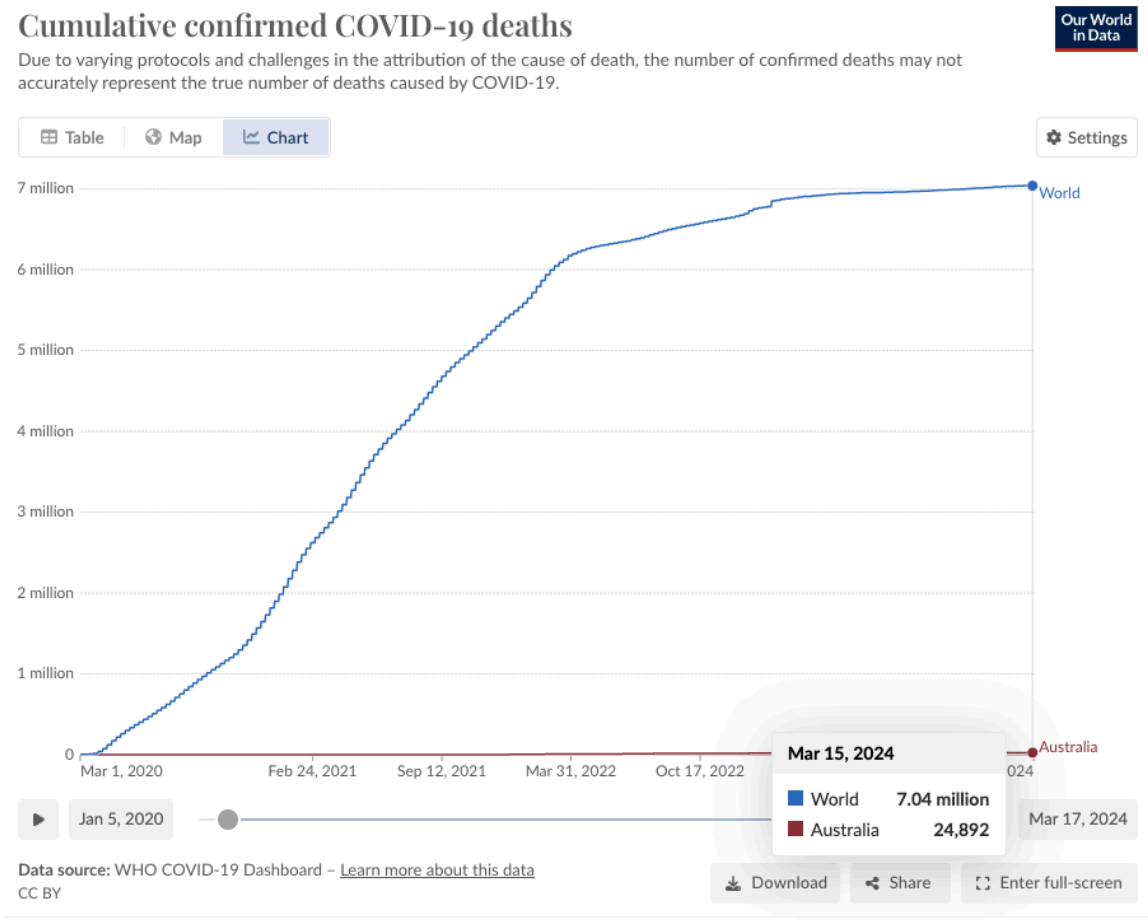
- Infection Prevention and Control (IPC) as key feature in our lives
- Preparation and Paradigm shift in IPC
- Implication of IPC measures and recommendations during the COVID-19 Pandemic
- Lessons learned: how can we increase compassion while keeping people protected?

Context

- What pathogens are we talking about here?
- ”I think isolation is a prudent approach, given that residents in aged care facilities often cannot be relied on to remember not to touch things or each other. So having the infectious patient not roam around the building sounds like a very good idea to me!”

Infection Prevention and Control during COVID

- COVID first reported in December 2019 – To date > 900 million confirmed cases and nearly 9 million million deaths
- High transmissibility
- Changes in healthcare sectors are still around:
- N95 masks and associated PPE became routine wear
- N95 for longer periods of time/full shifts
- In Victoria, some health services still mandate N95
- In Australia, for a long time, less visitors in health settings



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Less liberties for better Infection Prevention and Public Health?

- Virulence and spread of the pandemic has resulted in awareness raising of Infection Prevention and Control in the general population
- Community management strategies implemented that often restricted individual liberties
- Fast evolving recommendations during the pandemic
- Over emphasis on hand hygiene at the detriment of air quality and mask wearing
- **IPC challenged and were we too slow to react or too busy keeping people safe?**

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Recommendations also evolved over time

- COVID-19 has exposed the inadequacies of some recommendations/PPE for healthcare workers and especially nurses
- Nurses have been disproportionately affected, with infections and deaths – probably underreported
- Some IPC guidelines made/make family centred care difficult and have a negative impact on nurses, patients and families
- Were we sufficiently prepared?
- How can we have good **compassionate** IPC measures?

A key prevention measure in Australia: Mandatory Quarantine

- From 2020 to 2022, the New Zealand (NZ) government and the Australian (AU) federal, state, and territory governments used quarantine as a strategic public health transmission control measure while vaccines were being developed and rolled out
- Quarantine programs were rapidly operationalised without a **clear blueprint for managing infection prevention** for thousands of arriving travellers
- Combinations of state government departments and service agencies managed aspects of the quarantine program, including various state health and corrections departments, police services, hospitals and health organisations

ELSEVIER

Journal of Infection and Public Health

Available online 17 October 2023

In Press, Journal Pre-proof What's this?

Original Article

Forecasting pandemic quarantine in New Zealand and Australia: A scoping review of quarantine characteristics and capabilities within preparedness plans and pandemic exercise reports from 2002-2019

Matiu Bush [a], Stéphane L Bouchoucha [b], Ana Hutchinson [b c], Catherine M Bennett [d]

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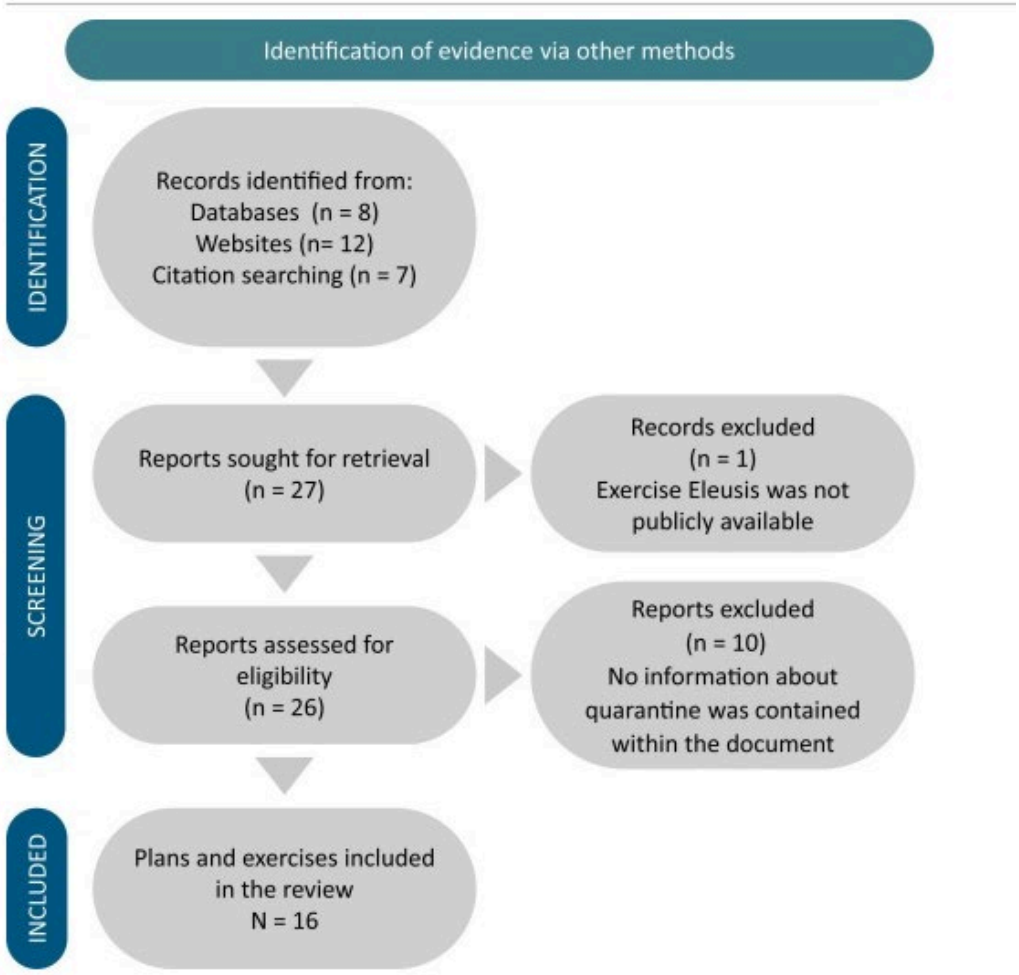
Forecasting Australian and NZ Quarantine



- Aimed to identify preparedness gaps in quarantine capability in the NZ and AU plans and exercises by analysing publicly available pandemic documents that included at least one mention of quarantine

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Forecasting Australian and NZ Quarantine

		New Zealand					Australia (Federal)		
		Exercise Makgill 2006 [23]	Exercise Cruickshank 2007 [24]	Exercise Spring Fever 2008 [25]	**NZ Influenza Pandemic Plan 2017 [22]**	Exercise Pomare 2018 [26]	Exercise Cumpston 2007 [27]	Exercise Sustain 2008 [28]	**AU Influenza Pandemic Plan 2019 [19]**
Quarantine characteristics	Mentions quarantine	●	●	●	●	●	●	●	●
	Voluntary quarantine	●	●	●	●	●	●	●	●
	Involuntary quarantine	●	●	●	●	●	●	●	●
	Home quarantine	●	●	●	●	●	●	●	●
	Hotel quarantine	●	●	●	●	●	●	●	●
	Facility quarantine	●	●	●	●	●	●	●	●
Quarantine capabilities	Workforce	●	●	●	●	●	●	●	●
	Resources	●	●	●	●	●	●	●	●
	Governance	●	●	●	●	●	●	●	●
	Systems	●	●	●	●	●	●	●	●
	Processes	●	●	●	●	●	●	●	●

Information on specific quarantine characteristics and capabilities

● Present

● Absent

Note. NZ Exercise Virex (2002) did not meet the inclusion criteria as it did not mention quarantine.

Analysis of quarantine information in Australian State and Territory plans.

		Australian States and Territories							
		New South Wales Plan 2016 [29]	Northern Territory Plan 2021 [30]	Queensland Plan 2018 [31]	Victorian Plan 2014 [32]	Australian Capital Territory Plan 2007 [33]	Tasmanian Plan 2014 [34]	Western Australian Plan 2014 [35]	South Australian Plan 2018 [36]
Quarantine characteristics	Mentions quarantine	●	●	●	●	●	●	●	●
	Voluntary quarantine	●	●	●	●	●	●	●	●
	Involuntary quarantine	●	●	●	●	●	●	●	●
	Home quarantine	●	●	●	●	●	●	●	●
	Hotel quarantine	●	●	●	●	●	●	●	●
	Facility quarantine	●	●	●	●	●	●	●	●
Quarantine capabilities	Workforce	●	●	●	●	●	●	●	●
	Resources	●	●	●	●	●	●	●	●
	Governance	●	●	●	●	●	●	●	●
	Systems	●	●	●	●	●	●	●	●
	Processes	●	●	●	●	●	●	●	●

Information on specific quarantine characteristics and capabilities

● Present

● Absent

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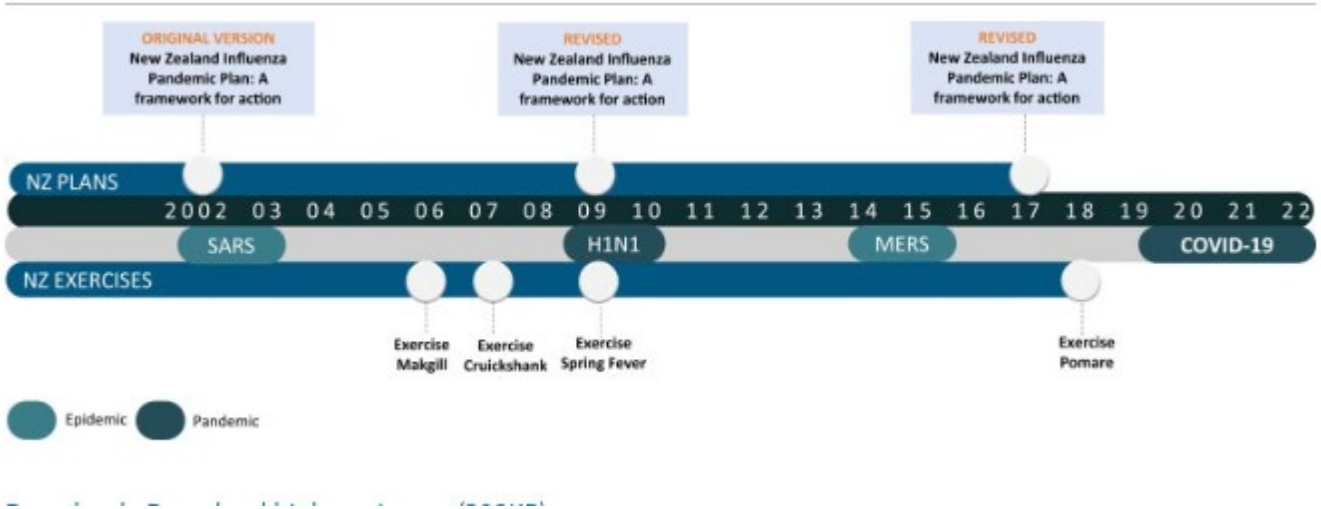
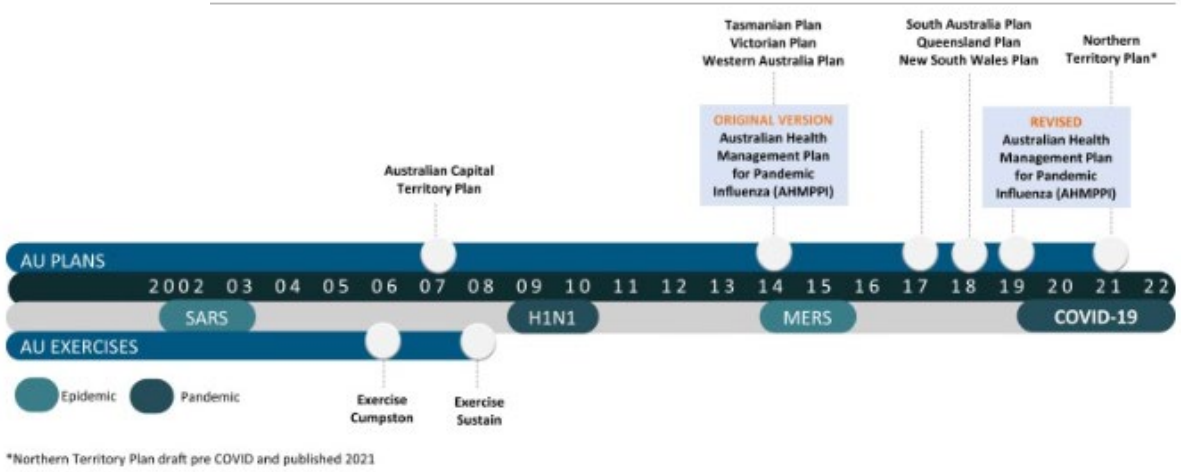
Forecasting Australian and NZ Quarantine





*Northern Territory Plan draft pre COVID and published 2021

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Forecasting Australian and NZ Quarantine

- The AU Influenza pandemic plan (2019) had no dedicated quarantine section.
- In the border measures section, ill travellers advised to undergo voluntary home quarantine
- No detailed consideration was given to the possibility of involuntary quarantine for incoming travellers in locations other than private residences
- Lessons learned from exercises were never incorporated into subsequent plans
- Is preparedness key or can we afford to set up another quarantine system for an unknown pathogen within 36 hours?
- Underlying assumptions proved wrong – Influenza as pandemic agent

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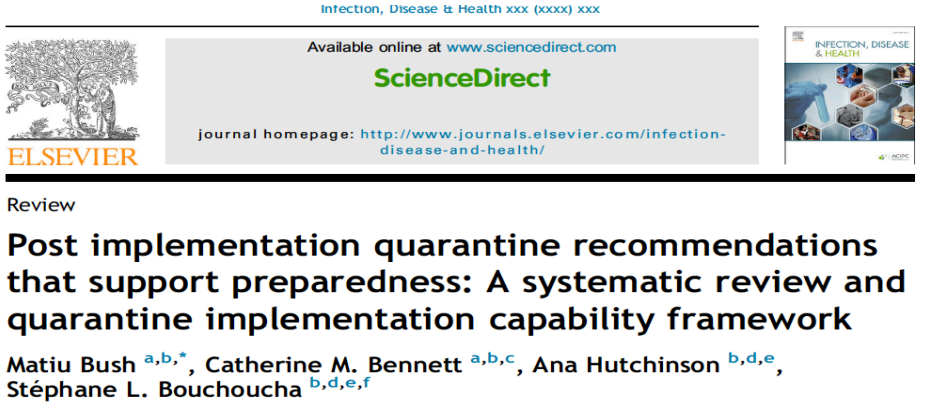
Supporting preparedness

- Reviewed quarantine post implementation recommendations from a whole-of-system perspective
- 449 published articles screened
- 51 articles included
- 156 recommendations extracted.
- Grouped into 15 quarantine capability


Infection, Disease & Health xxx (xxxx) xxx

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Available online at www.sciencedirect.com

ScienceDirect

journal homepage: http://www.journals.elsevier.com/infection-disease-and-health/

Review

Post implementation quarantine recommendations that support preparedness: A systematic review and quarantine implementation capability framework

Matiu Bush [a,b,*], Catherine M. Bennett [a,b,c], Ana Hutchinson [b,d,e], Stéphane L. Bouchoucha [b,d,e,f]

- Further consolidated into:
  - Strategic
  - Structural
  - Operational domains to support the whole-of-system perspective.

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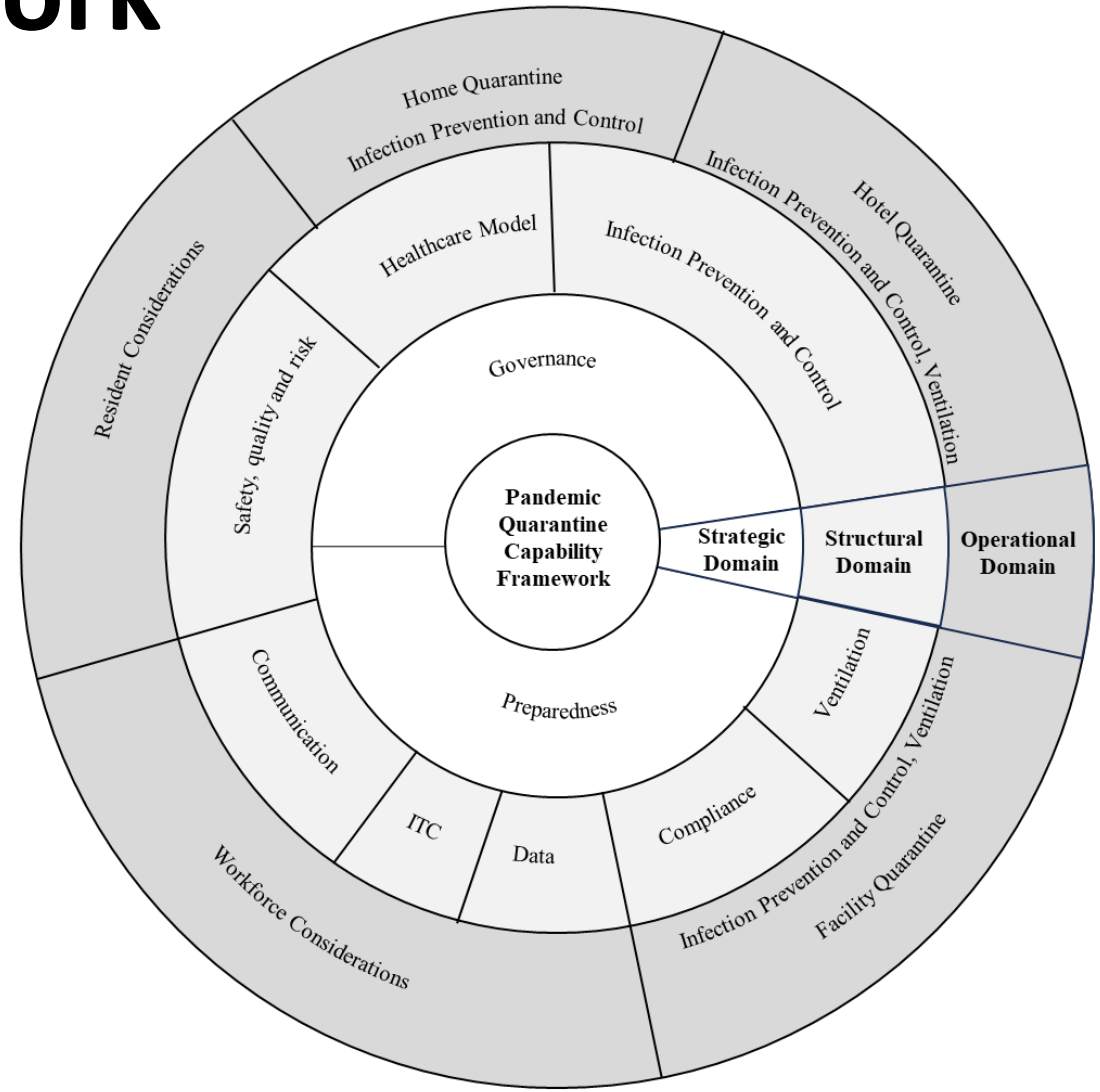
Quarantine implementation capability framework



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Restrictions and care delivery

Nursing & Health Sciences

EDITORIAL | Free Access

Family-centered care during a pandemic: The hidden impact of restricting family visits

Stéphane L. Bouchoucha PhD, MSc, BSc (Hons), Grad Cert (IPC), RN ... See all authors

First published: 13 June 2020 | https://doi.org/10.1111/nhs.12748

- Family-centered approach to care is an important feature of nursing care, grounded in recognition of the family as a social unit connected not just by blood
- COVID-19 IPC measures mean family presence is not possible, opting for other strategies that address family members' need to be close to the dying person should be considered
- Evidence of the adverse impact of working on the COVID-19 frontline are starting to emerge, particularly in relation to the emotional toll of attempting to facilitate family connections to say goodbyes →**in 2023 increased burnout in nurses**
- From what we know about factors that may increase risks of compassion fatigue and burnout, having to limit visits for family members of critical ill and dying patients is likely to also have a negative impact on nurses by **increasing their feelings of providing inadequate family-centered care**.
- We need to use Infection Prevention and Control to facilitate Family visits and take into account all of then patient's thus ensuring **a balance between IPC imperatives and family-centered care**

CIDIR CENTRE FOR INNOVATION IN INFECTIOUS DISEASE AND IMMUNOLOGY RESEARCH

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Restricting visits

Australian Critical Care 34 (2021) 132–134

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Discussion paper

Australian College of Critical Care Nurses and Australasian College for Infection Prevention and Control position statement on facilitating next-of-kin presence for patients dying from coronavirus disease 2019 (COVID-19) in the intensive care unit

Melissa J. Bloomer, PhD, MN(Hons), MPET, MNP, Crit. Care Cert., BN, RN PhD [a, b, c, d, *]
Stéphane Bouchoucha, PhD, MSc (PH), Grad. Cert. IPC, BSc (Hons), RN PhD [a, b, c, e]

[a] School of Nursing and Midwifery, Deakin University, 1 Gheringhap Street, Geelong, Victoria, 3220, Australia
[b] Centre for Quality and Patient Safety Research, Deakin University, 1 Gheringhap Street, Geelong, Victoria, 3220, Australia
[c] Institute for Health Transformation, Deakin University, 1 Gheringhap Street, Geelong, Victoria, 3220, Australia
[d] Research Advisory Panel, Australian College of Critical Care Nurses, Surrey Hills, Victoria, 3127, Australia
[e] Australasian College for Infection Prevention and Control, 228 Liverpool Street, Hobart, Tasmania, 7000, Australia

- Hospital visits were restricted in many countries
- Impact of these restrictions has still not been determined – on patients/relatives and health workers
- Premise on this Position Statement: How can we facilitate safe visits?

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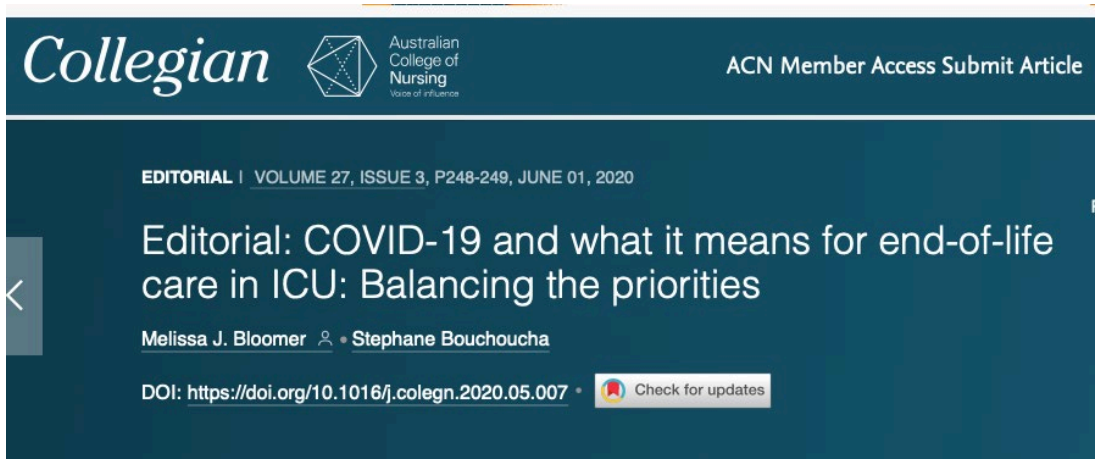

- Need to make sure we include patients on limitations imposed by IPC restrictions in the COVID-19 context
- There is also a need to explore the impact of these restrictions
  - Yes, they might have decreased the risks to health workers and the hospital environment
  - Are they an overreach and we could assist visitors and remain safe?
  - When mapping COVID-19 transmissions to healthcare workers: most were outside the care setting

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Family centred care during COVID

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Perspectives of family-centred care at the end of life during the COVID-19 pandemic: A qualitative descriptive study

Melissa J. Bloomer PhD, MN(Hons), BN, RN, Professor in Critical Care Nursing[1,2,3,4] | Eva Yuen PhD, MSc, Dean's Health Research Fellow[4,5,6] | Ruth Williams PhD, BA, Research Fellow[4,5,6] | Stephane Bouchoucha PhD, RN, Associate Professor of Nursing[4,5] | Peter Poon MBBS, Palliative Care Physician[7,8] | Fiona Runacres MBBS, Palliative Care Physician[7,8,9] | Christine Mooney GD (Cancer), BHSc (Nursing), Palliative Care Nurse Consultant[7] | Alison M. Hutchinson PhD, RN, Professor of Nursing[4,5,10]

- Qualitative descriptive approach based on naturalistic inquiry
- 15 registered nurses who cared for patients who died during restricted visitation associated with the COVID-19 pandemic
- 21 bereaved family members
- Convenience sampling, bereaved family were contacted via next of kin listed in medical records

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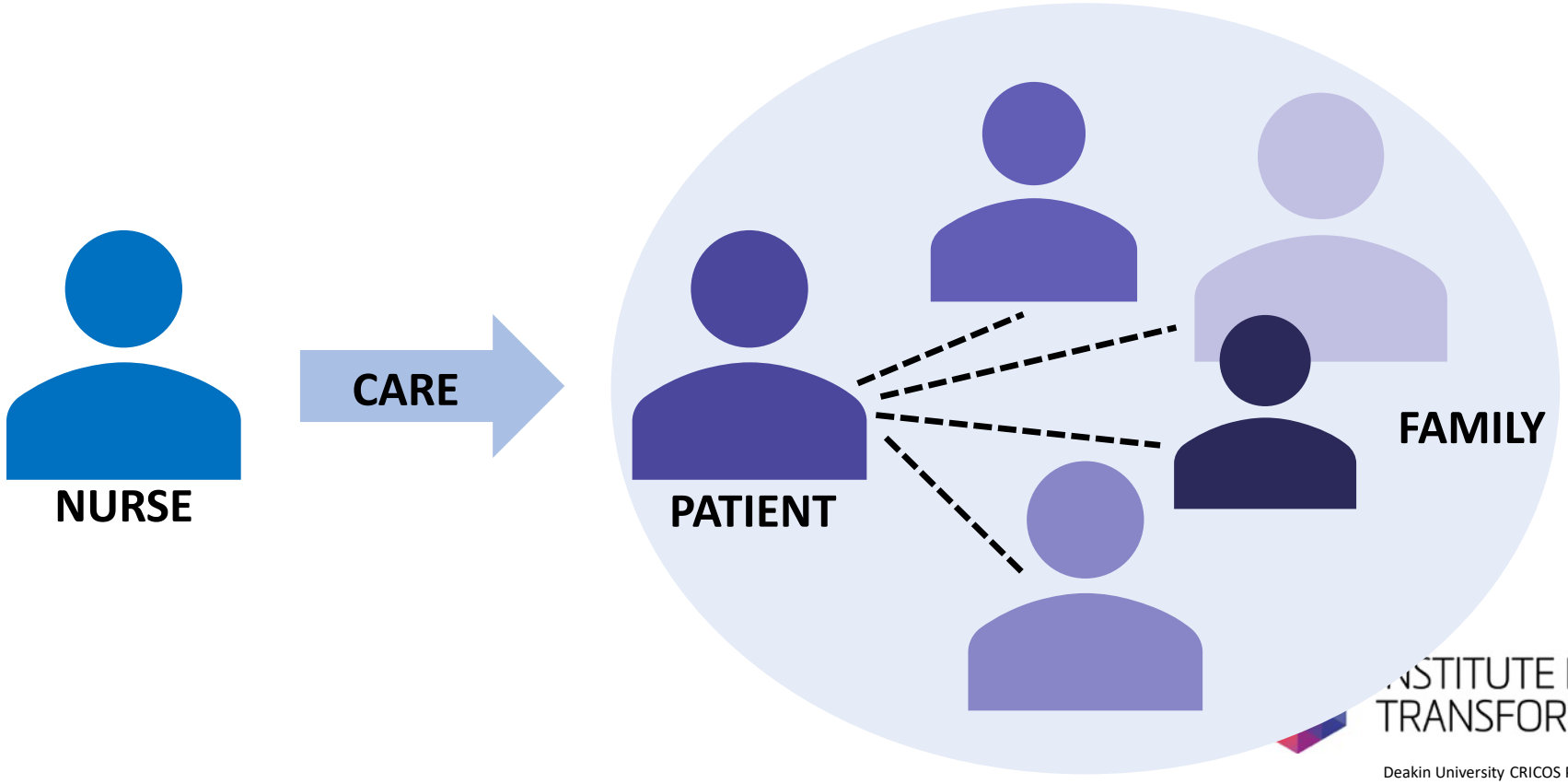
Background

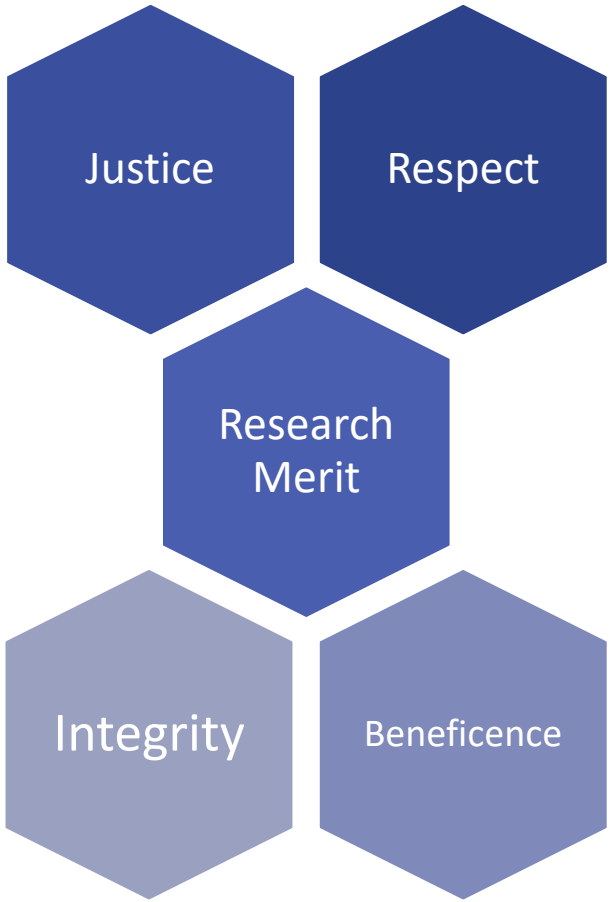
- Visitor restrictions created significant additional challenges for nurses in the provision of family-centred care



Family centred care during COVID

- Nurses: Can you tell me about your experience of providing care to the family of a patient who was critically ill or died during the COVID-19 restrictions?’
- Relative: Can you tell me about your experience when your family member was hospitalised during the COVID-19 pandemic?’

Ethical Considerations



- Timing of the approach to bereaved family (6 months +)
- Hospital's *patient experience team* initiated contact
- Interviewers had expertise in sensitive interviewing with vulnerable people
- Strategies in place to support participants in distress
- Participants were offered a lay summary of the findings
- $40 gift card provided as a gesture of thanks

1. Impact of visitor restrictions on nurses

- Visitor restrictions acknowledged as necessary BUT a source of significant distress

  '…at the start of COVID last year we had three different visitor guidelines in an eight-hour shift' (Nurse 7)

- Variability in how restrictions were interpreted created ambiguity

- Enforcing the rules negatively impacted nurses' interactions with families

  'We became the enemy…even when we knew the families … when we are the ones enforcing the very strict restrictions, we become the enemy' (Nurse 5).

2. Onerous processes, requirements and rules

- Families frustrated with check in processes BUT understood why

'That's the protocols that were in place, and they made perfect sense to me…They ensured the safety of me, the nurses, doctors, other patients of course. I understood that (Family 19).

- Nurses distressed at policing the rules

'we had a lady dying. Her husband was in the room with one daughter, but she had six daughters. The extended family of 30-plus people had to stand outside…they couldn't say their goodbyes together' (Nurse 5)

- Patients died alone

'A lot of us would sacrifice our breaks and go home a little bit later… just to be able to sit with patients so they didn't die alone…we had to just step up…I think we're all a little bit still raw about having people die alone (Nurse 5)

3. Communication

- Visitor restrictions amplified communication needs

'They appreciate honesty…lots of support and reassurance, explanations about what is happening, what could happen and a lot of care' (Nurse14)

- PPE complicated communication

'…they can't see your face, all they can see is your eyes… lends itself to misinterpretation, because you don't have that extra form of communication' (Nurse 9).

- Family frustrations

'Trying to get a hold of the treating doctors was extremely difficult…I'd leave messages with the nursing staff…and they would become irritated because I was calling constantly. They were too busy' (Family 12)

4. Family-centred care

- Nurses reflected on the importance of family

'I think it just highlighted how important [family presence] is' (Nurse 12)

'… the need for involving family a bit more' (Nurse 8)

- Some family members felt cared for

'…they did as much as possible under the circumstances to include us all…They would listen to us, and they were willing to do it, which was lovely' (Family 20).

- *Others felt quite excluded, particularly from decision-making*

They decided, they didn't ask us, they made a decision… and they didn't inform us. That part I'm not happy with at all… we were just getting second-hand information. We couldn't ask questions (Family 18)

5. Interrupted connections

- Missed opportunities to share in-person conversations, to ask questions, receive information, to make a contribution

Janet – Janet and her husband were separated, but she was still his closest relative, and primary support. Their daughter who was 15, was denied visitation because of her age

He's in hospital critically ill…The patient needs connection with family… No one helped me … No one said, 'What would help?… How can we help?' …What's one of the most critical factors to wellbeing and mental health? Connection and relationship. Who's facilitating that? (Family 6)

She could see he was dying. She pleaded with them to focus on what the patient needed, not the rules

I said, 'Should I be bringing my daughter in now?' … I would have liked to be able to myself say goodbye and for my daughter to say goodbye… Nobody listened… (Family 6)

5. Interrupted connections

Diane – Mother of Lenny, a 20 years old man of Māori descent, admitted with headaches, diagnosed with a brain infection and transferred to ICU.

After 7 days in ICU, Diane was notified that her son was brain dead. This was the first time she was granted permission to see her son, but she was unsure if she would be able to physically connect with her son.

'We were met by the nurses there … we weren't questioned at all [about] COVID or if we'd had symptoms. We really wanted to hug him, to rip those masks off and give him a proper kiss and all those things, but we were like, are we doing the right thing?'

They could have put us in a private room … we could have let things spill and really let it out, had we had a bit of privacy… we sit around our sick and we sing songs of praise, a lot of prayer and things like that… we weren't able to do that. My husband – he always says, "If I had been able to give him a blessing," …he kind of feels he failed his son, not being able to do that'

Conclusions

- Participant voices speak for themselves
- Nurses and bereaved family similarly suffered distress and trauma

> *The key is not what we **remember**, but what we **learn***

- We need to
  - promote, support, and protect patient-family connections
  - address logistical challenges through consistent, comprehensive, clear communication

Health care workers’ experience of Personal Protective Equipment (PPE) use during COVID-19 pandemic response in Singapore: adverse-effects, potential exposure to infection, PPE supply and training

- Fazila Aloweni
- Stéphane Bouchoucha
- Ana Hutchinson
- Shin Yuh Ang
- Hui Xian Toh
- Nur 'Azzah BTE Suhari
- Raden Nurheryany BTE Sunari
- Siew Hoon Lim

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Health care workers' experience of personal protective equipment use and associated adverse effects during the COVID-19 pandemic response in Singapore

Fazila Aloweni, Stéphane L. Bouchoucha, Ana Hutchinson, Shin Yuh Ang, Hui Xian Toh, Nur' Azzah Bte Suhari, Raden Nurheryany Bte Sunari, Siew Hoon Lim

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Aim

To examine the prevalence of PPE-related pressure-injuries (PI) and side effects experienced by the HCWs in Singapore. Additionally, we also explored HCWs' perceptions of supply and access to PPE and their concerns regarding the potential for exposure to the COVID-19 infection

What did we want to know?

What is the prevalence of PPE-related pressure-injuries (PI) and side-effects experienced by the HCWs during the COVID-19 outbreak in Singapore?

- Usage frequencies
- PPE related pressure injuries
- Patient care interference

What are HCWs perceptions of access to PPE supply and the potential exposure to infection?

Methods

Descriptive cross-sectional survey study design was used to determine the prevalence of self reported PPE-related side-effects and perceptions on the availability of PPE, potential risk of COVID-19 exposure and infection.

No validated tool – developed through rapid review of the literature and expert review

- Demographic data
- Preexisting conditions
- Frequency of related side effects
- Type of side effects
- Impact of PPE on daily work and patient care and access to PPE

Results

592 healthcare workers completed the survey

81.9% female and under 40

45.4% reported preexisting skin issues (dry skin and eczema most commonly)

PPE usage Mean – 6.14 hours/shift

88% used N95

Table 1 Comparison of demographic, clinical characteristics and hours of PPE use between participants with and without PPE and other medical device related side-effects and hours of PPE use (n=592)

	Experience of PPE and other medical device related side-effects, n=319(53.8%)	No experience of PPE and other medical device related side-effects, n=273(46.2%)	Total (n=592)	χ^{2a}	*p* value
Gender					
Male	42 (13.1%)	59 (21.6%)	101 (17.1%)	7.29	0.03*
Female	273 (85.6%)	212 (77.7%)	485 (81.9%)		
Prefer not to say	4 (1.3%)	2 (0.7%)	6 (1.0%)		
Age					
<21	3 (0.9%)	3 (1.5%)	6 (1%)	16.06	0.07
21-30	130 (40.8%)	91 (33.3%)	222 (37.5%)		
31-40	126 (39.5%)	94 (34.4%)	220 (37.2%)		
41-50	32 (10.0%)	35 (12.8%)	67 (11.3%)		
51-60	20 (6.3%)	30 (11.0%)	50 (8.4%)		
≥61	8 (2.5%)	19 (7.0%)	27 (4.6%)		
Occupation					
Doctor	14 (4.4%)	11 (4.0%)	25 (4.2%)	5.84	0.21
Nurse	282 (88.4%)	235 (86.1%)	517 (87.3%)		
Allied health	8 (2.5%)	6 (2.2%)	14 (2.4%)		
Others	15 (4.7%)	21 (7.7%)	36 (6.1%)		
Work Location*					
Isolation ward for COVID	44 (13.8%)	19 (7.0%)	63	8.47	<0.001*
patients	71 (22.3%)	26 (9.5%)	97	17.93	<0.001*
Acute respiratory infection	76 (23.8%)	134 (49.1%)	210	21.31	<0.001*
ward	126 (39.5%)	84 (30.8%)	210	5.07	0.02*
Non-acute respiratory ward	9 (2.8%)	6 (2.2%)	15	0.34	0.56
Emergency Department	22 (6.8%)	19 (7.0%)	41	0.001	0.98
Operating theatre	45 (14.1%)	10 (3.7%)	55	0.07	0.97
Community isolation facilities					
Others					
(Including outpatient clinics)					
Skin Conditions* (Pre-existing)					
None	185 (58.0%)	138 (50.5%)	323	36.77	<0.001*
Yes	134 (42.0%)	135 (49.5%)	269		
Eczema	64 (47.8%)	28 (10.3%)	92		
Atopic Dermatitis	52 (38.8%)	11 (4.0%)	63		
Heat Rash	46 (34.3%)	6 (2.2%)	52		
Dermatosis	4 (3.0%)	3 (1.1%)	7		
Psoriasis	7 (5.2%)	1 (0.4%)	8		
Dry Skin	104 (77.6%)	52 (19.0%)	156		
Others	21 (15.7%)	7 (2.6%)	28		
(Including Acne, Hives and Keloid)					
Hours of PPE use (hours), mean (SD)	6.80 (0.39)	5.37 (4.21)	6.14 (5.85)	-2.99[b]	<0.003*

*Data expressed denotes multiple responses; [a]Chi-square test; [b]Independent two-sample t-test; *Significant value $p < 0.05$.

Results

- Odds of having PPE associated side effects higher in women working in COVID-19 high risk wards and having pre-existing skin condition

	Adjusted OR (95% CI) #	*p* value
Gender		
Male	Ref	0.003*
Female	2.10 (1.29 – 3.42)	
Age		
≤30	Ref	
31 to 50	0.76 (0.51 – 1.12)	0.16
≥51	0.40 (0.22 – 0.72)	0.002*
Occupation		
Doctor	Ref	
Nurse	0.98 (0.39 – 2.49)	0.97
Allied health	0.96 (0.20 – 4.50)	0.95
Others	0.70 (0.23 – 2.20)	0.55
Work location		
Low risk[a]	Ref	
High risk[b]	3.12 (2.17 – 4.60)	<0.001*
Skin Conditions* (Pre-existing)		
No	Ref	
Yes	0.33 (0.23 – 0.47)	<0.001*

Side effects

- Nurses working the ED were more likely to report side effects (82.4%)
- Most reported:
  - Burning/pain
  - Pressure injuries with N95
- Odds of having PPE associated side effects higher in women under 51 and having history of skin issues

Types of PPE (n=319)		Goggles	Face shield	N95 mask	Surgical/ Reusable Mask	$\chi 2$	*p* value
Side-effects n (%)	Burning/Pain	51 (16.0%)	12 (3.8%)	78 (24.5%)	8 (2.5%)	184.58	<0.001 *
	Pressure injuries	103 (32.3%)	16 (5%)	146 (45.8%)	12 (3.8%)		
	Skin tear	14 (4.4%)	2 (0.6%)	45 (14.1%)	5 (1.6%)		
	Blister	15 (4.7%)	3 (0.9%)	28 (8.8%)	2 (0.6%)		
	Eye protection inducted acne	36 (11.3%)	10 (3.1%)	---	---		
	Mask induced acne	1 (0.3%)	1 (0.3%)	129 (40.4%)	81 (25.4%)		
	Abrasion	25 (7.8%)	10 (3.1%)	51 (16%)	6 (1.9%)		
	Eczema	8 (2.5%)	5 (1.6%)	20 (6.3%)	12 (4%)		
	Allergic reaction	3 (0.9%)	2 (0.6%)	24 (7.5%)	18 (5.6%)		
	Others	24 (7.5%)	13 (4.1%)	22 (6.9%)	9 (2.8%)		
	Headache	18 (5.6%)	8 (2.5%)	4 (1.3%)	---		
	Blurred vision	6 (1.9%)	4 (1.3%)	---	---		
	Giddy	4 (1.3%)	---	1 (0.3%)	---		
	Itchy	---	1 (0.3%)	10 (3.1%)	4 (1.2%)		
	Eye pain	1 (0.3%)	---	1	---		
	Difficulty in breathing	---	---	3 (0.9%)	2 (0.6%)		
	Throat irritation	---	---	1 (0.3%)	---		
	Dry skin	---	---	2 (0.6%)	3 (0.9%)		
Location	Nose bridge	88 (27.6%)	10 (3.1%)	176 (55.2%)	30 (9.4%)	257.22	<0.001 *
	Cheeks	63 (19.7%)	8 (2.5%)	170 (53.3%)	70 (21.9%)		
	Forehead	90 (28.2%)	36 (11.3%)	19 (6%)	7 (2.2%)		
	Top of the ear	35 (11.0%)	14 (4.4%)	76 (23.8%)	16 (5.0%)		
	Behind the ear	30 (9.4%)	9 (2.8%)	42 (13.2%)	17 (5.3%)		
	Eyebrow arch (from wearing goggles)	35 (11%)	---	---	---		
	Others	8 (2.5%)	7 (2.2%)	38 (11.9%)	35 (11.0%)		

PPE interference with patient treatment

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
PPE interferes with my ability to provide patient treatment and/or general nursing care	22 (3.7%)	95 (16%)	246 (41.6%)	168 (28.4%)	61 (10.3%)
Long-sleeved gowns interfere with my ability to provide patient treatment and/or general nursing care	18 (3.0%)	66 (11.1%)	232 (39.2%)	205 (34.6%)	71 (12%)
Discomfort during nursing care	**Yes**		**No**		
Do you experience discomfort wearing full PPE in order to provide patient treatment and/or general nursing care?	163 (27.5%)		429 (72.5%)		
Discomfort that was experienced by participants (qualitative data, from the most reported):	• Glasses/goggles fogging causes poor vision • Hot/Warm, & sweaty/perspire • Interferes with care of patient (including difficulty in palpating vein, performing dressing, auscultation, delay in attending to patient, increase time to complete work) • Difficulty in breathing • Itch • Pain from wearing PPE • Heat rash • Restricted movement from wearing PPE				

- 31.3% stated that adverse events had affected their work:
  - Inability to concentrate due to pain
  - Need for frequent adjustments
  - Poor visibility due to fogging
  - Restricted movement due to PPE

Likelihood of exposure to infection

- Only 13.7% of respondents were highly confident of the PPE protection
- 23.3% felt that some procedures may increase risk of exposure:
  - Airway procedures
  - Attending to patients suspected to have COVID-19
  - Cardiopulmonary resuscitation
- 45.4% reported the presence of spotters but only 16% felt that spotters influenced how they used PPE

Discussion

- Prolonged use of PPE is likely to cause some side effects which in turn might have an impact on adherence to PPE use and create entry portal for SARS-CoV-2 and other pathogens
- Hot and Humid climate probably increased the incidence of reported pressure injuries and skin issues although in China 97% reported side effects – less in our study
- Side effects reported more by female participants

Discussion

- Training provided was rated as adequate
  - Essential to mitigate risks
- Yet only a small portion of healthcare workers reported high confidence of protection afforded - ? Confidence increases with mask fitting
- When study performed, N95 only for high-risk areas, surgical masks for other areas – ? Increase in side effects when using N95 routinely

Conclusions

- PPE is essential protection for patient and staff safety
- Essential to acknowledge impact of PPE on healthcare workers
- Need to factor in frequent breaks, use of spotters and tested mitigation strategies for side effects
- Need to move away from adhoc solutions as they might decrease protection afforded by PPE
- Printed step by step instructions alongside spotters and designated donning and doffing areas needed

Contents lists available at ScienceDirect

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Research paper

Australian emergency nurses' experiences of working with personal protective equipment during the COVID-19 pandemic. A qualitative study

Penelope Dempster [a,c,*], Ana Hutchinson [a,b,d], Elizabeth Oldland [a], Stéphane L. Bouchoucha [a,d]

[a] School of Nursing and Midwifery, Centre for Quality and Patient Safety Research in the Institute for Health Transformation, Deakin University, Geelong, Australia
[b] Centre for Quality and Patient Safety Research, Epworth Healthcare Partnership, Deakin University, Geelong, Australia
[c] Holmesglen Institute of TAFE
[d] Centre for Innovation in Infectious Disease and Immunology Research (CIIDIR), Deakin University, Geelong, Australia

Australian emergency nurses' experiences of work, using personal protective equipment during the COVID-19 pandemic

- **Design:** A qualitative explorative descriptive (QED) design.
- **Sample:** 26 Registered Nurse (RN) participants, consisting of clinical RNs (n=18) and leadership RNs (n=6).
- **Semi-structured, in-depth interviews**, conversational style
  - one on one interviews (n=21) via Zoom
  - one focus group interview,
  - Interviews between Jan to April 2022.
  - experiences 2020, 2021, 2022
- **Thematic analysis:** Braun & Clarkes' Six Steps (2019) as guiding framework.

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Themes Identified from Data

Major themes	Sub-theme 1	Sub-theme 2	Sub-theme 3	Sub-theme 4	Sub-theme 5
1. The shifting ground of the COVID-19 pandemic response	What's the go with PPE today?	In the beginning we were scrambling for masks.	Emergency is the true frontline		
2. Sustainability of the Pandemic response and heightened activity	Facing the fear of exposure	By the end of the shift I'm just absolutely spent.	Discomfort of wearing PPE impacts on compliance		
3. Changed Emergency Department team identity and dynamics	PPE is a barrier to team camaraderie	Outsiders versus Insiders - Ambivalence to PPE spotter role	Personal safety comes first in a pandemic	IPC is a priority over comprehensive patient care	Using PPE depersonalises the whole patient experience
4. This pandemic caught everyone off guard	People outside ED have no understanding of what it has been like.	COVID-19 is here to stay - Permanent changes to care delivery and nursing practice	Tenacity of a true profession	It breaks my heart thinking of the wastage	

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The shifting ground of the COVID-19 pandemic response

In the beginning *….“no-one knew what they were doing”* (LRN1).

Bank nurse speaking about their experience in a major Public ED:

With this isolated patient in the negative pressure room, ***myself and the consultant emergency physician were required to actually look up policies that would best protect us from very contagious respiratory illnesses****…for that we actually had to refer to the US Navy medical bio-safety hazards for managing Anthrax and Measles and the SARS CoV-1 from the prior pandemic in Asia, 2004.* (CRN 4)

- *It would change from day–to-day, so you [would] have to ask someone* ***at the start of the shift so you know, what’s the go with PPE today?*** *(CRN7)*
- *We didn’t have enough PPE in the beginning, we were scrambling for masks. The government won’t give us any because they were just given to public hospitals and although we were streaming, we were already a COVID streaming hospital, we still weren’t getting that many masks. (LRN3)*

Sustainability of the Pandemic Response and Heightened Activity

It was frightening to think about: "**Getting sick while unvaccinated, it was a terrifying time**" (CRN2).

Unless you have experienced it you don't know how exhausting that is. The fatigue, the dehydration and exhaustion, you feel hung over the next day. (CRN9)

Also with the face shield and goggles, ***they fog up and then you actually can't see what you are doing sometimes, which is dangerous****. (CRN13)*

But a lot of the time, the more uncomfortable ones (masks), ***you kind of need to take them off every now and then to give you a nose a bit of a break or just to get a little bit of oxygen in, so that's been a real struggle for me*** *[…] But when they (patients) are being made to wear the N95, a lot of the time they just don't wear it properly because it's just so uncomfortable. (CRN7)*

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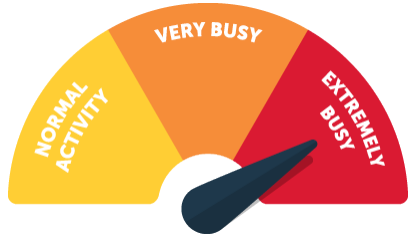
Changed Emergency Department Team Identity and Dynamics

- ***I have heard it said that: 'there is no emergency in a pandemic'.*** (CRN 11)

- *Then the unwell patient goes into the isolation area […] if they deteriorate and need more airway support […] the main aim is to limit the number of persons who look after the patient […] we don't need to rush things because its all about protecting ourselves […]* ***When you initiate intubation during pre-COVID years, everyone can just help and circulate […] but during COVID, you just limit the number of people around the patient…it's not a simple procedure.*** (CRN6).

- *Every now and then I'll see someone outside […] and I realized that I actually didn't know what they look like […].* ***One of the best things about nursing is that camaraderie with your colleagues. I think [PPE use] is a barrier to that****. (CRN5)*



Impact on Person-Centered Care

- ***It has been challenging in regard to communication…with the elderly in particular, due to not being able to use your facial expressions to communicate with them.*** *(CRN9).*

- ***they can't build that rapport with you…. Especially the oldies […]*** *You know when we used to walk in and you smile and they can know who we are. But I feel like* ***when HCWs are in masks and PPE they have no idea if it's a Dr, if its' a nurse, if its' a radiologist taking them for a scan, we all look the same to them so they can't actually familiarise themselves.*** *(CRN14)*

This pandemic caught everyone off guard

*"**A lot of nurses are starting to burnout. There is a large mass exodus of nursing staff,** very highly skilled and highly trained nursing staff are leaving these high acuity areas which does compromise patient safety".* (CRN4)

I remember when AIDS first came out […] So out of that or the whole concept of universal precautions, which was a great thing you know, so you presume everybody has it until proven otherwise, which is what we should have always been doing […].

***And in some ways, this pandemic,** […] **its going to change our practice.** (CRN1)*

It breaks my heart thinking of the wastage

As an organisation [we] don't recycle well at all, and ***this is just a whole other level of non-environmentally friendly products****. (***LRN5**)*

Again, staff are very concerned about the environmental impact of PPE. *Everybody is concerned about it. (***LRN5**)*

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Discussion

Challenges –

- Balancing adverse effects of PPE and being exposed to an unknown pathogen.
- Working in PPE disrupted delivery of person-centred care
- Physical and emotional exhaustion associated with working in PPE

Silver linings –

- ED team worked cohesively to respond to the challenges of the pandemic
- ED nurses demonstrated their adaptability and innovation
- Despite the adversity there was an underlying tone of pride in the nursing profession and their role in their response to the pandemic

CIDIR CENTRE FOR INNOVATION IN INFECTIOUS DISEASE AND IMMUNOLOGY RESEARCH

INSTITUTE FOR HEALTH TRANSFORMATION

DEAKIN UNIVERSITY

Where is Compassion in all that?

- Can we deliver IPC and remain compassionate?
- What does compassion in Infection Prevention and Control look like?
- Do we need compassion in IPC? – Isn't just about protecting people at all costs?

- We need to be able to tailor IPC to facilitate compassionate care – positive impact on patients/residents/clients and healthcare workers – It is probably more difficult than using the most restrictive approach "just in case"
- "I think isolation is a prudent approach, given that residents in aged care facilities often cannot be relied on to remember not to touch things or each other. So having the infectious patient not roam around the building sounds like a very good idea to me!"

Psychosocial Impact - The utility of framing using the Terror Management Theory (TMT)

J-STAR
Journal of Stress, Trauma, Anxiety, and Resilience

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Home / Archives / Vol. 1 No. 2 (2022): Journal of Stress, Trauma, Anxiety, & Resilience / Brief Articles

Using the Terror Management Theory to understand health workers burnout in response to the COVID-19 pandemic

Stephane Bouchoucha
Deakin University

Ana Hutchinson
Deakin University

.pdf

Published
2022-09-29

DOI: https://doi.org/10.55319/js.v1i2.18

- Concerns about impact of COVID-19 on healthcare workers stress levels, burnout and the sustainability of the healthcare workforce
- The TMT posits that controlling death anxiety is a driving force behind many aspects of social behaviour (Solomon et al., 2004)
- According to the TMT, 'mortality salience' is the state in **which awareness of one's own mortality increases anxiety and can cause unbearable terror or internal conflict**
- When facing death, individuals often seek to follow **culturally endorsed worldviews: affords reassurance that the individual is making a social contribution that can have lasting significance and thus gives meaning to life**

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TMT and the COVID-19 Pandemic

- ? exposure to death both clinically and also through constant reports on the pandemic in the media has raised mortality salience and elevated their concerns about exposure and infection
- Especially pertinent when:
  - There was disruption in supply chains and inadequate access to PPE
  - Lack of knowledge about viral transmission and exposure risks.
  - Whether public health actions taken to “flatten the curve” such as widespread lockdowns have also inhibited individual responses to mortality salience such as cultural worldview defence, or affirming close relationships (Pyszczynski et al., 2021) need to be investigated.

Resilience as a “buzz” word – It is not compassion!

- Have we failed to implement meaningful interventions?
- We have come short in the pandemic response planning – exacerbated pre-existing challenges
- Nurses labelled as heroes, applauded in the streets, free food delivered to healthcare settings – the few months later vilified when on strike for pay rise
- Are these just tokens - what are we doing now?
- The pandemic caused very deep changes in health care workers’ experiences of work
- Delivery of care difficult and **causing negative impacts on patients’ outcomes.**
- Interventions to support staff need to focus not just on general well-being measures but also need to provide opportunities for clinical staff to address their core values, and motivators for entering clinical professions.

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What does the future of nursing look like?

- The TMT can be a useful tool to determine how stress and burnout have been exacerbated during the COVID-19 pandemic
- It may be that further than the work pressures widely described, such as overwhelmed intensive care units and emergency departments and increase in death toll, some actions taken by governments have reduced healthcare workers coping abilities.
- Future research is urgently needed to examine the underlying root causes of increased burnout and stress, to enable development of meaningful interventions to support healthcare workers in the workplace.
- Such initiatives are urgently needed to prevent critical workforce shortages that cripple capacity to provide health care services and the ability to respond to future emergencies

Continuing Advocacy for Patient and Community Safety

Vaccination, testing, clean air: COVID hasn't gone away – here's where Australia needs to do better

Published: February 12, 2024 6.05am AEDT

JOEL CARRETT/AAP

Email
X (Twitter)
Facebook 296
LinkedIn
Print

In May 2023 the World Health Organization (WHO) declared COVID was no longer a public health emergency of international concern. For many, this signalled the pandemic was over.

But the virus continues to infect millions of people globally and the WHO recognises COVID as an ongoing pandemic.

In Australia, more than 50,000 infections have been reported so far in 2024. And this is likely to be a significant underestimate, as we are testing much less than we used to. As of February 1 there were 287 outbreaks in residential aged care homes, and people are still dying from the virus.

Although we've come a long way since earlier in the pandemic, as we enter its fifth year, COVID continues to have negative effects on individuals, health services and

Authors

Stephane Bouchoucha
Associate Professor in Nursing and Associate Head of School (International), Deakin University

Matt Mason
Lecturer and Academic Lead for Work Integrated Learning, University of the Sunshine Coast

Peta-Anne Zimmerman
Senior Lecturer/Program Advisor, Griffith Graduate Infection Prevention and Control Program, Griffith University

Sally Havers
Conjoint Nurse Researcher, School of Nursing, Midwifery and Social Work, The University of Queensland

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Thank you
Questions?

s.bouchoucha@deakin.edu.au

CIDIR CENTRE FOR INNOVATION IN INFECTIOUS DISEASE AND IMMUNOLOGY RESEARCH

iht.deakin.edu.au

Suzie Hammouche

Influencing for Impact: Effective Stakeholder Communication in Healthcare Settings

Influence

Suzie Hammouche, IPC Tour

gama healthcare

Why?

gama healthcare

Shortcuts

Our brain has hardwired shortcuts in place

The Photocopier Example

- “Excuse me, I have 5 pages. May I use the Xerox machine?” – 60%
- “Excuse me, I have 5 pages. May I use the xerox machine, **because** I'm in a rush?” - 94%
- “Excuse me, I have 5 pages. May I use the xerox machine, **because** I have to make copies?” – 93%

Our brain is hardwired to comply when given a reason to, no matter the reason

Langer, 1997

Commitment

We want to stay true to our word

A study conducted at a beach in 1975 showed that only 20% of bystanders intervened when a theft occurred at a neighbouring beach towel.

However, if the owner first asked people to watch their belongings, then 95% of bystanders were more likely to notice the theft, and among those noticing, more likely to intervene.

Moriarty, 1975

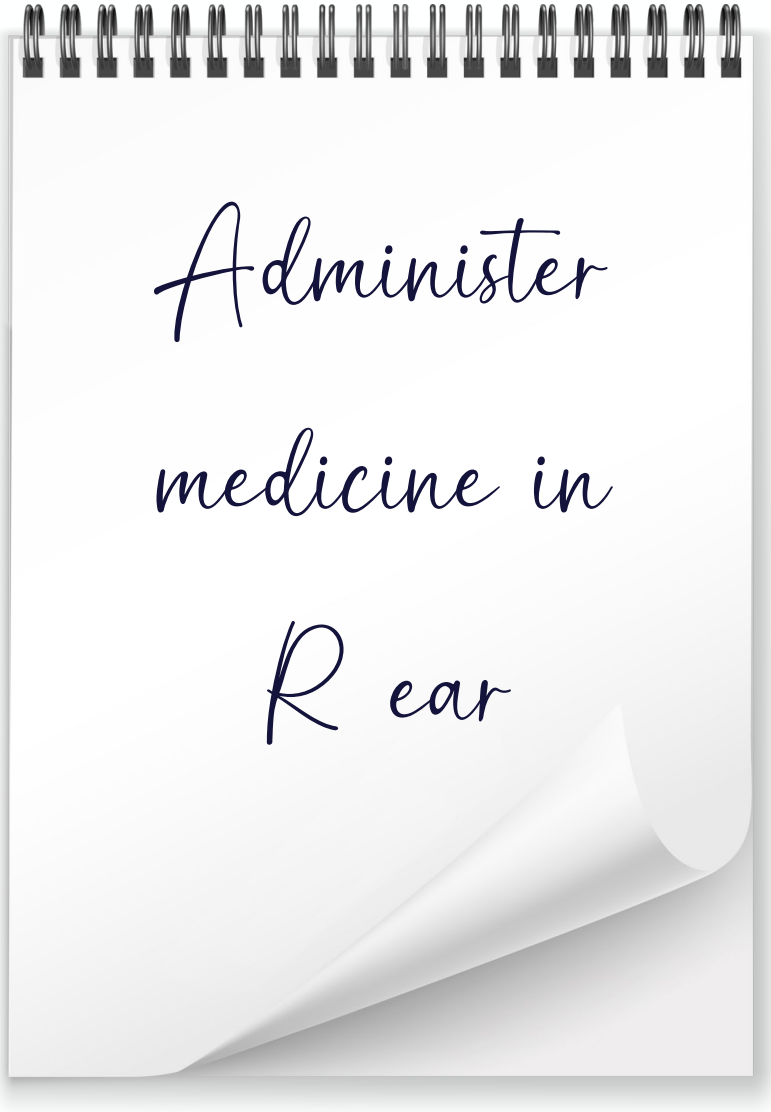
Cialdini, 2016

Authority

You can be in a position of authority or are an authority.

Authority often negates independent thinking

If you are not in a position of authority, how can you ensure people know you are an authority?



Cialdini, 2016

Social Proof, Liking, Unity

We look to others on how to behave

We are more compliant to people we like

Does flattery get you everywhere?

Are we part of the same team?

Cialdini, 2016

Example from Fiona Stanley

Goals and Focus

Set a goal and make it specific and measurable

To make headway on your goal, ruthlessly focus on the behaviours that will get you there.

> *Thailand reduced HIV infection rates by focusing on influencing a sex-worker's decision to whether or not to use a condom*

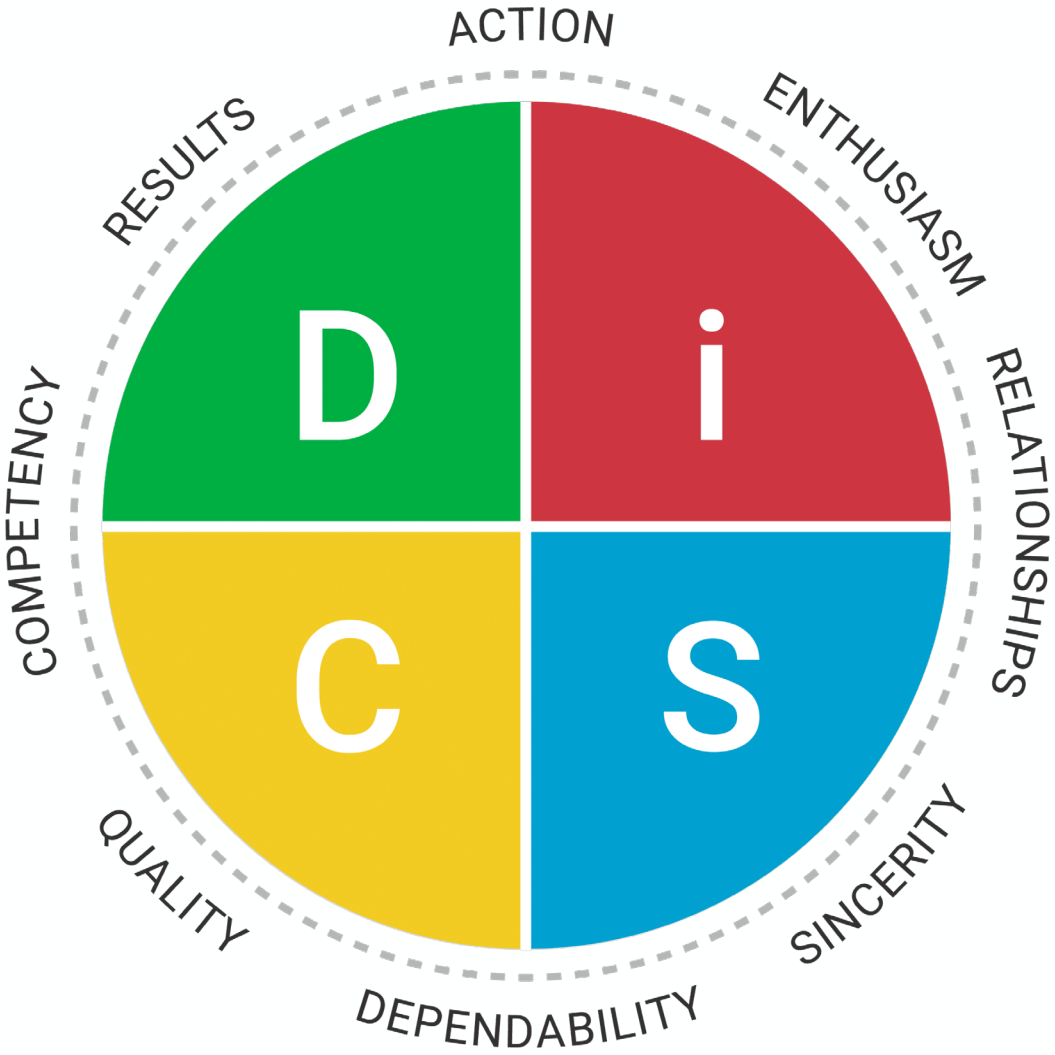
Grenny et al, 2007

COMMUNICATION

DiSC Profile

Big picture
Direct / Blunt
Results oriented
Demanding
Confident

Analytical
Reserved
Precise
Private
Systematic



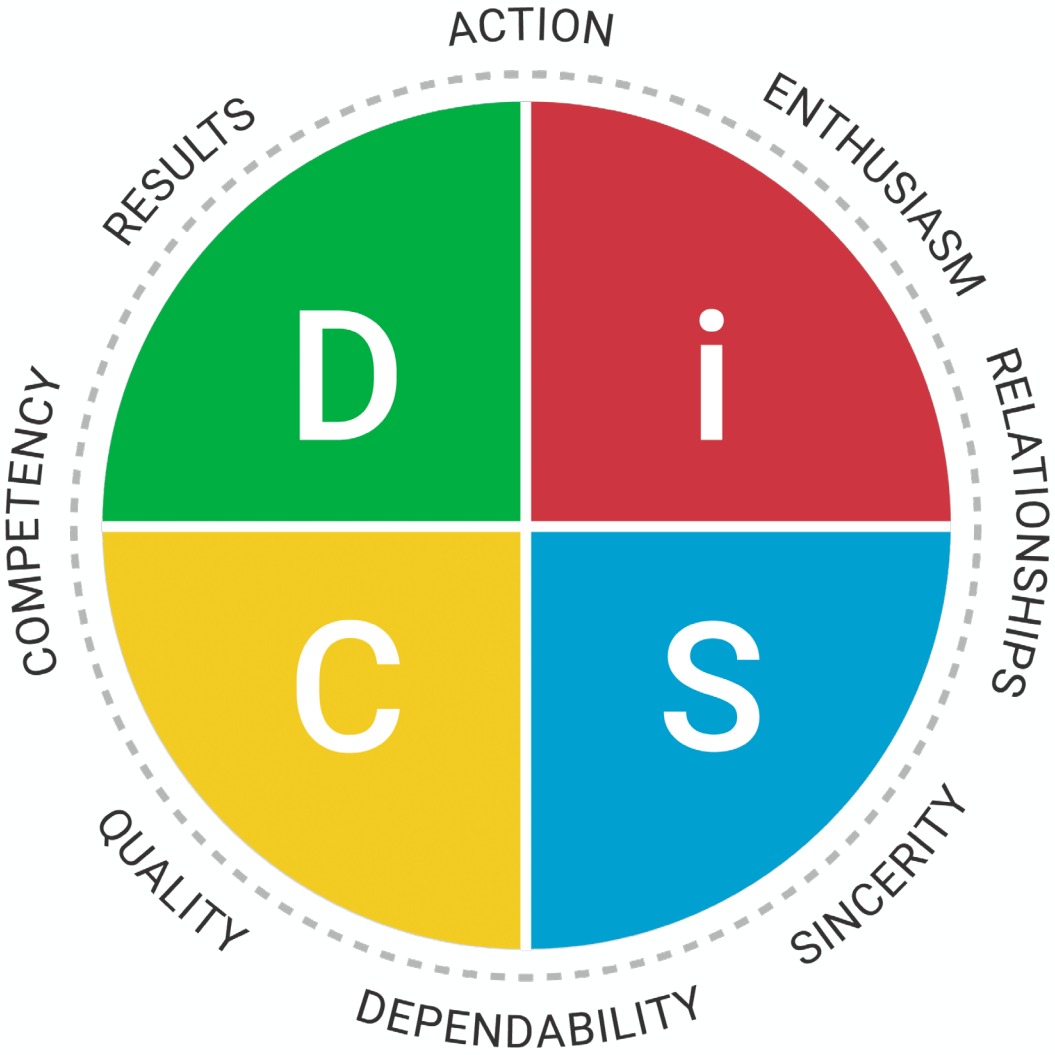
Outgoing
Enthusiastic
Optimistic
Trusting
Energetic

Cooperation
Accommodating
Calm
Dependable
Loyal

My style

Direct
Results oriented
Firm
Strong Willed
Forceful

Analytical
Reserved
Precise
Private
Systematic



Outgoing
Enthusiastic
Optimistic
High-spirited
Lively

Even-tempered
Accommodating
Patient
Humble
Tactful

Using profiles to help communicate

It is our responsibility as the communicator, to adapt our style, dependent on our audience or target.

How?

- D — Concise, to the point
- i — Energetic, attention holding
- S — Even tempered, thoughtful approach
- C — Data ready

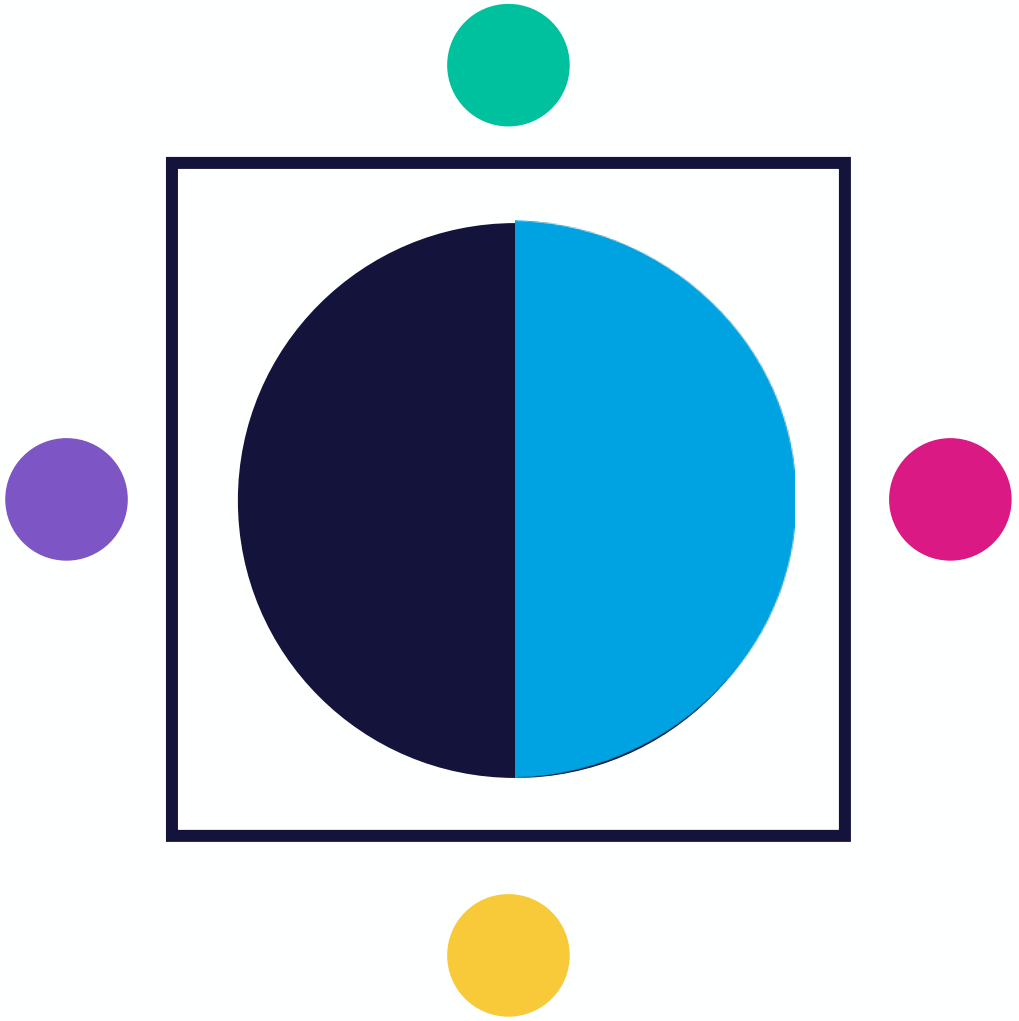
Healthcare examples

“The clarity of the message delivered by nurses to physicians was frequently obscured by two factors: the tendency of many nurses to provide information but not request that a specific action be taken and nurses use of indirect language in communicating with physicians.”

Manojlovich, 2021.

The request for a specific action lessens the cognitive burden

What does each person see?



Seek first to understand then to be understood

gama healthcare

Thank you.

Dr Jon Otter

What’s next for IPC? Winter 2024 and beyond

What's next for IPC? Winter 2024 and beyond: setting priorities and scanning the horizon

Jon Otter PhD FRCPath
Director of Infection Prevention and Control & Consultant Clinical Scientist
Guy's and St Thomas' NHS Foundation Trust / Imperial College London
@jonotter
j.otter@imperial.ac.uk
Blog: www.reflectionsIPC.com
Slides: www.jonotter.net

Priorities

What’s hot in IPC

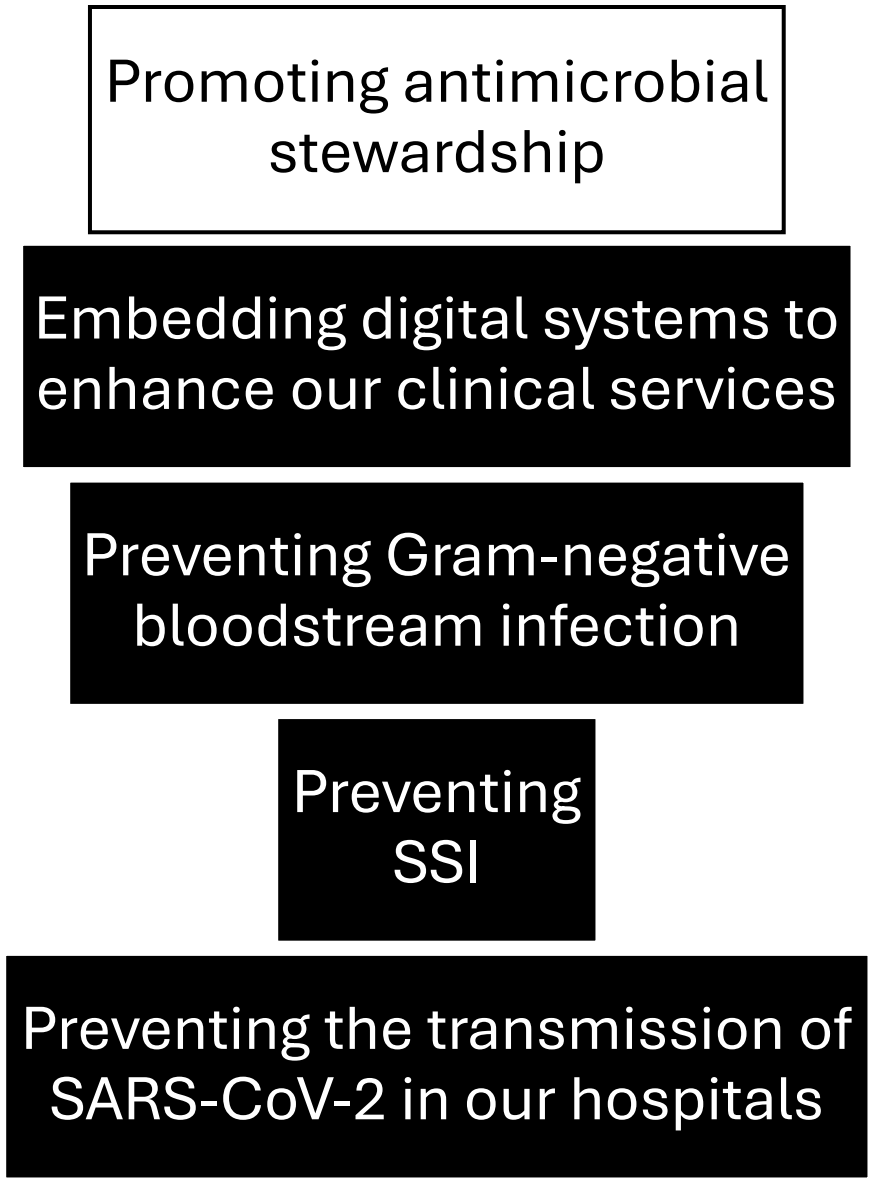
Promoting antimicrobial stewardship

Embedding digital systems to enhance our clinical services

Preventing Gram-negative bloodstream infection

Preventing SSI

Preventing the transmission of SARS-CoV-2 in our hospitals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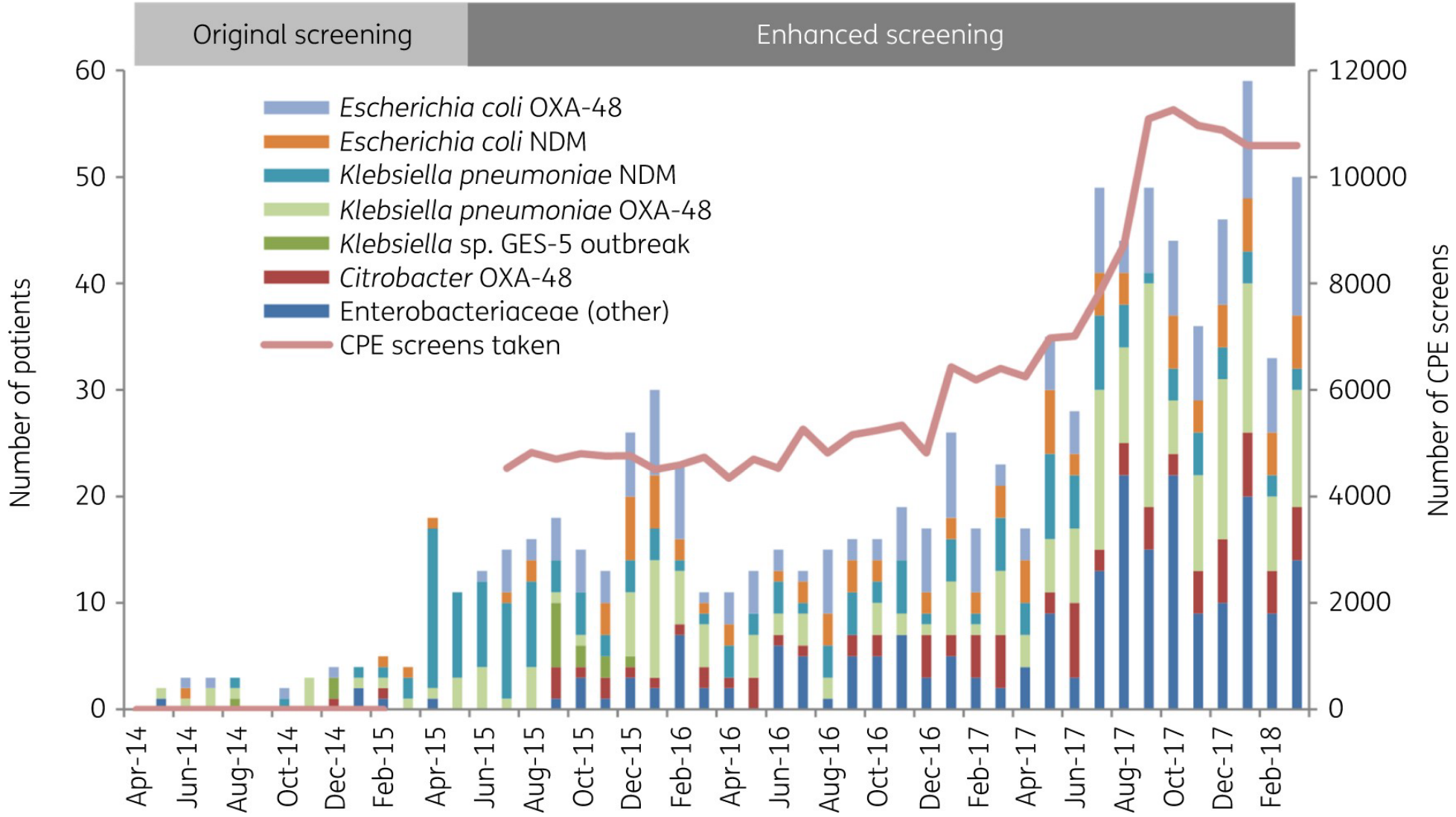
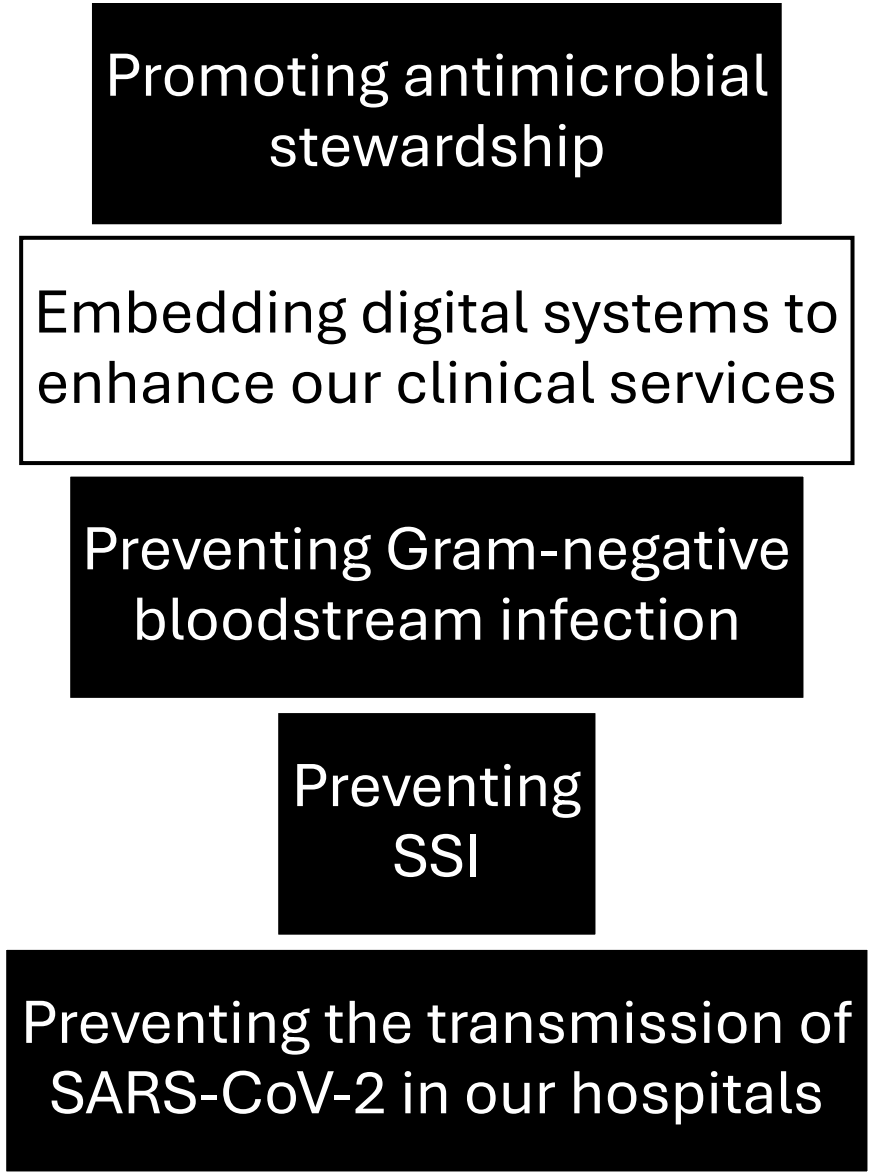
CPE: seek and ye shall find?

Overall trend in CPE detected at Imperial, by bacterial species and mechanisms, deduplicated by patient



Otter et al. J Antimicrob Chemother 2020.


Promoting antimicrobial stewardship
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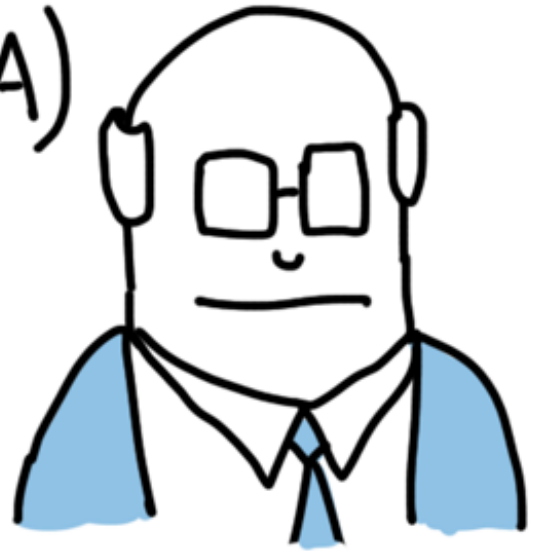
WHO LED THE DIGITAL TRANSFORMATION OF YOUR COMPANY ?

A)

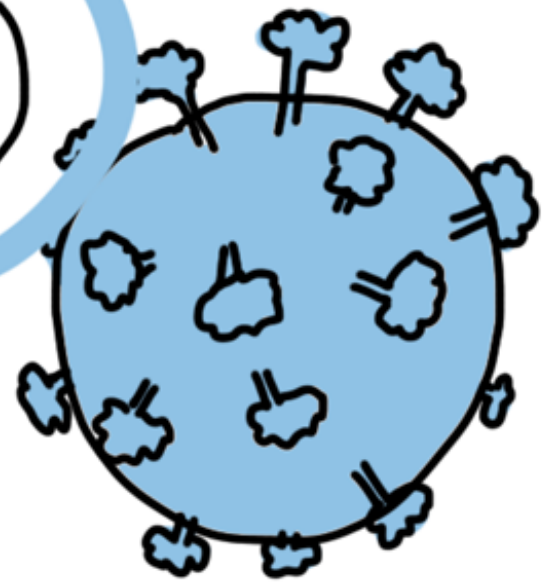


THE CEO

B)

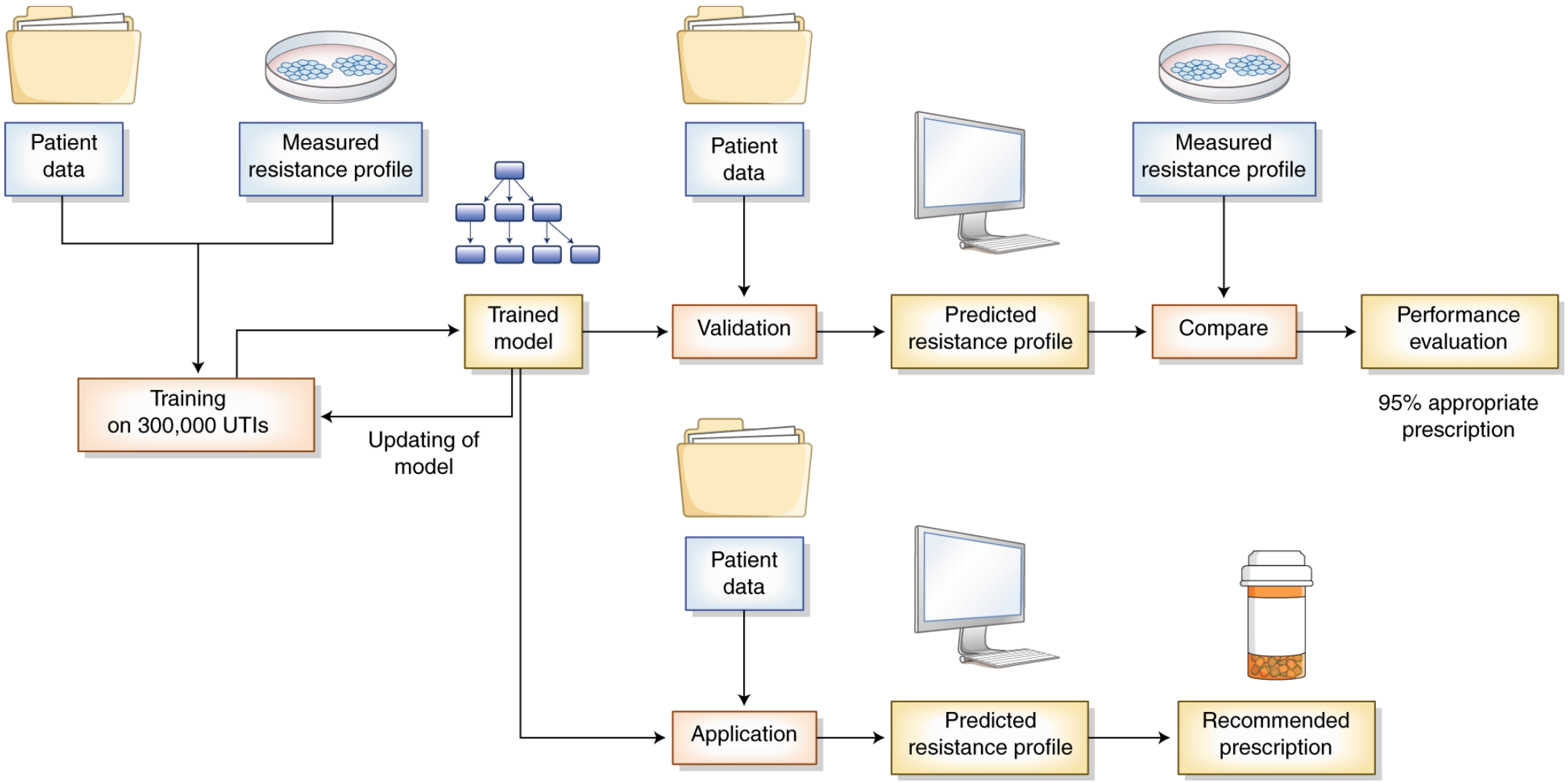
THE CTO

C)



COVID-19

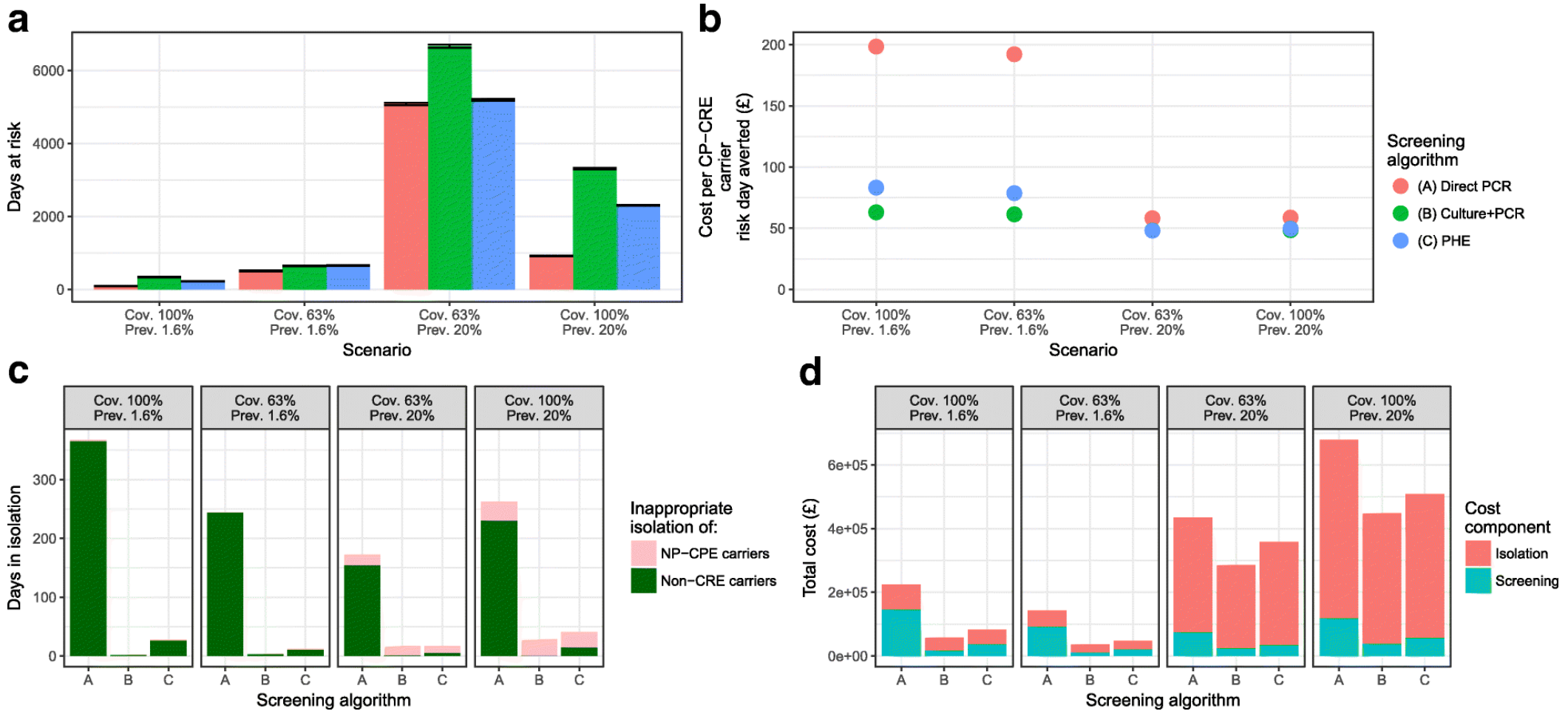
Machine learning / AI: antimicrobial prescribing decision support



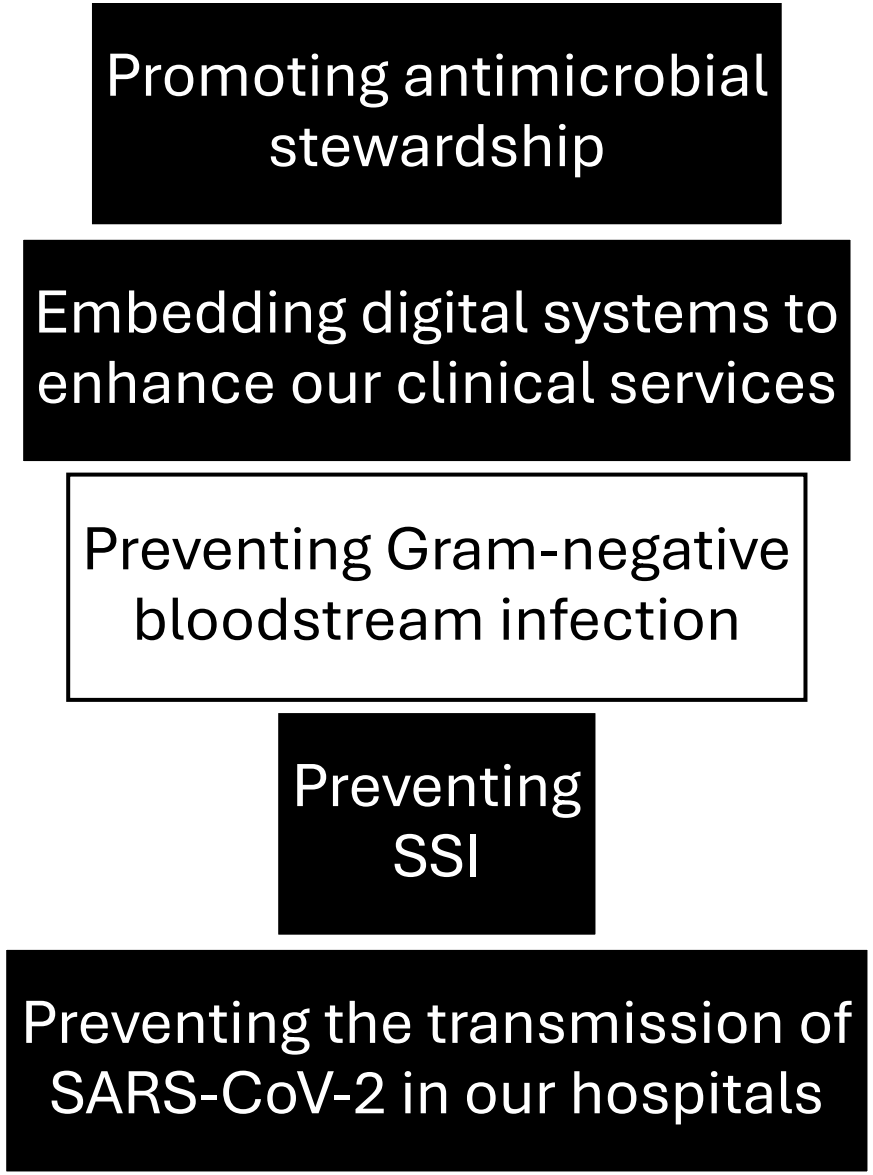
Didelot et al. Nature Medicine 2019.

Modelling

Fast and expensive (PCR) or cheap and slow (culture)? A mathematical modelling study to explore screening for carbapenem resistance in UK hospitals



Knight BMC Medicine 2018.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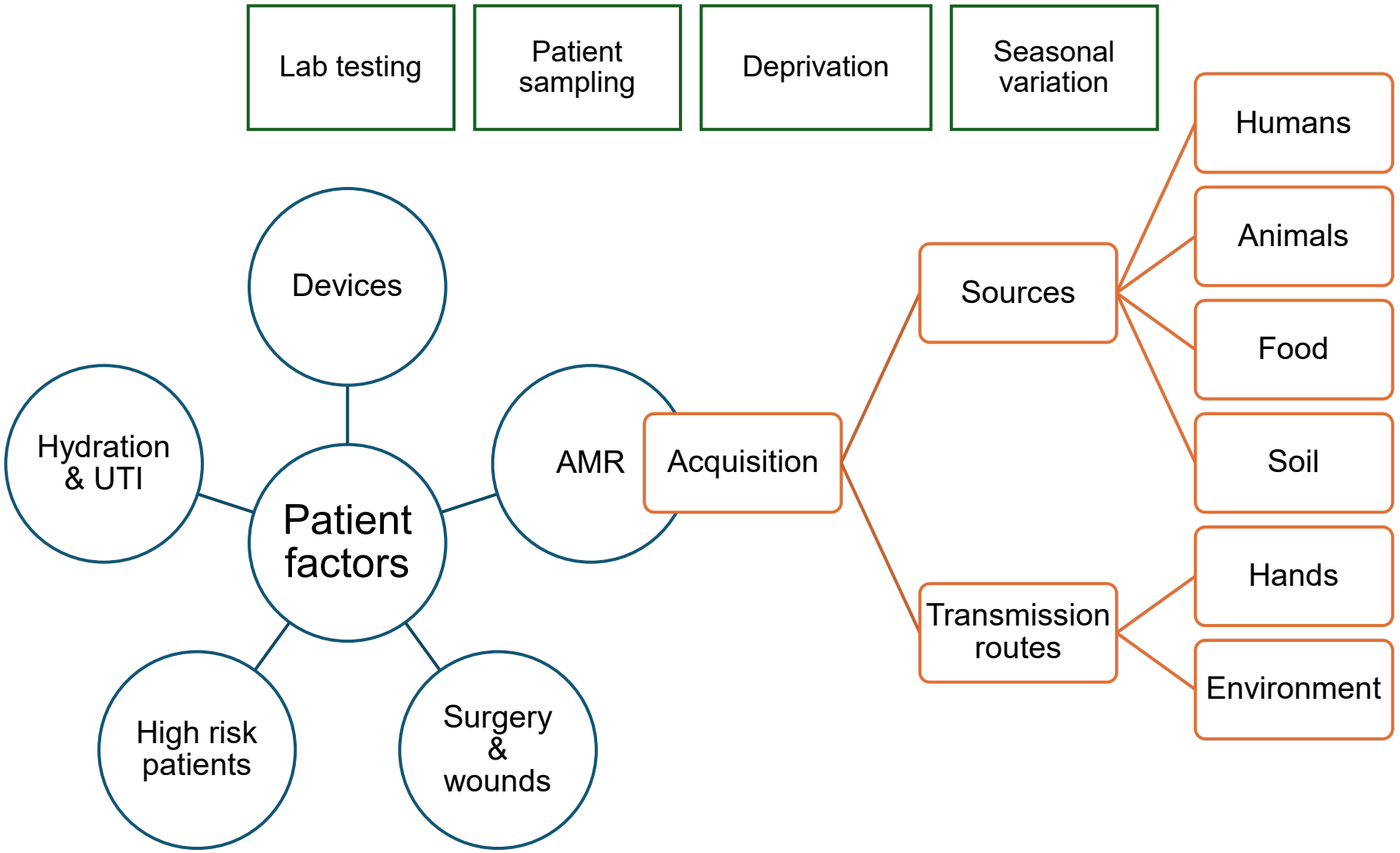
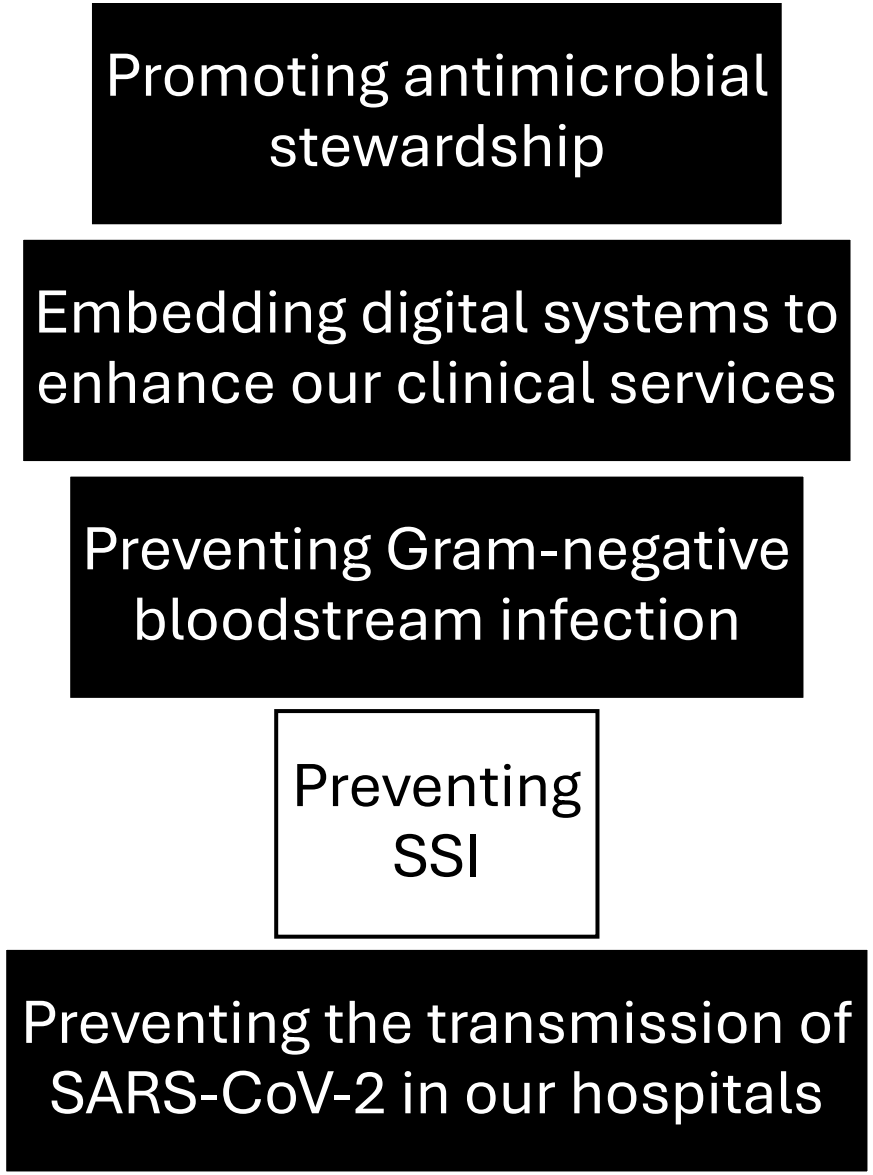
Drivers of Gram-negative BSI

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Patient experience

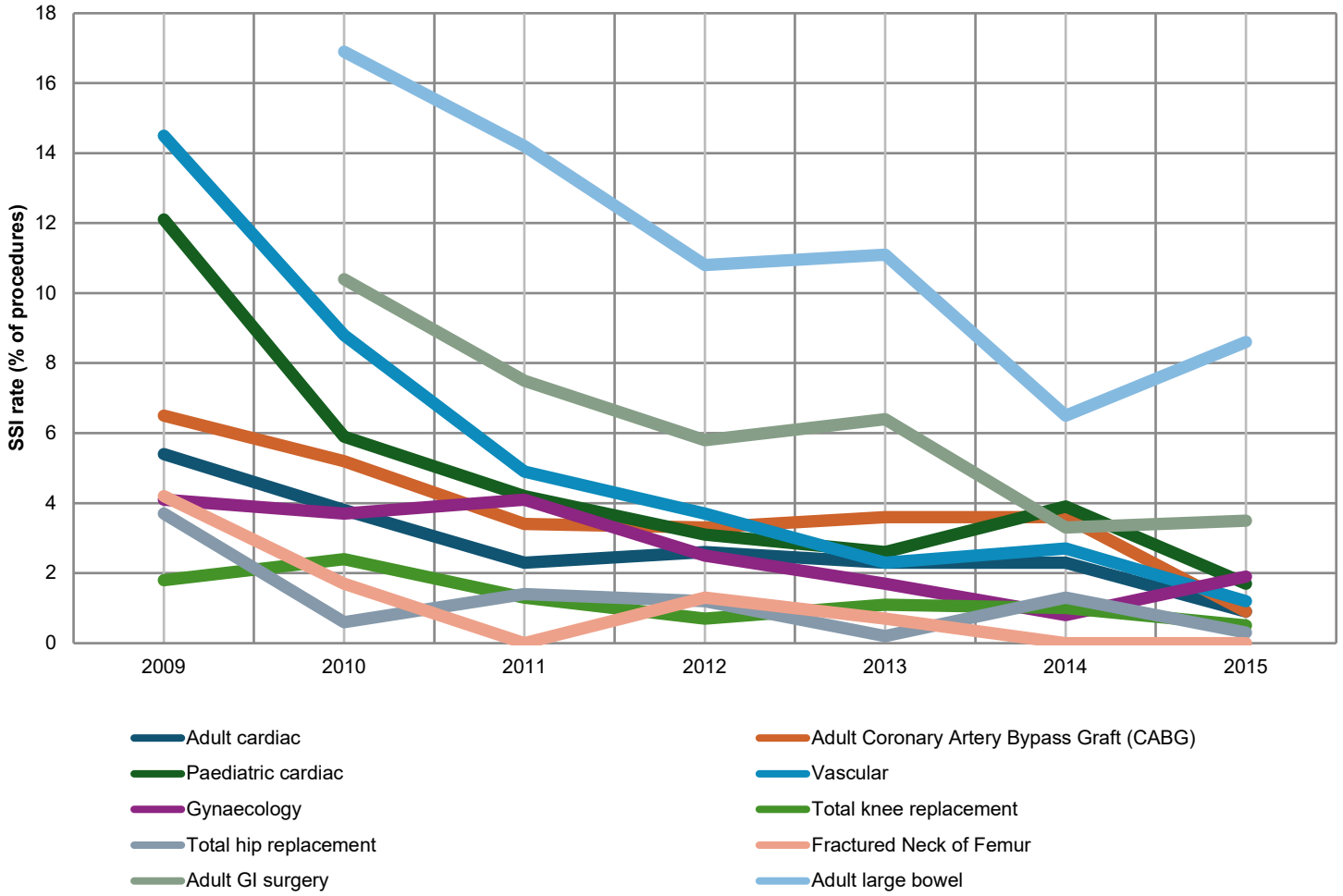
17 patients who had suffered an SSI were enrolled into a semi-structured interview

‘I was crying, I was just not well at all. I couldn’t keep a drink down. The GP came and said what do you expect, you’ve had major surgery. I started to think I was going mad, perhaps you are supposed to feel like this. My husband was at his wits end, he didn’t know what to do. He called the NHS helpline and they said to buy some anti-sickness tablets from the chemist but they didn’t work. He rang the hospital and they weren’t very helpful, he rang the ward and they said she has been discharged so there is nothing we can do. Then after three or four days I was getting terrific pains in my stomach and I felt like I had wet myself, there was a lot of blood just gushing out of me.’

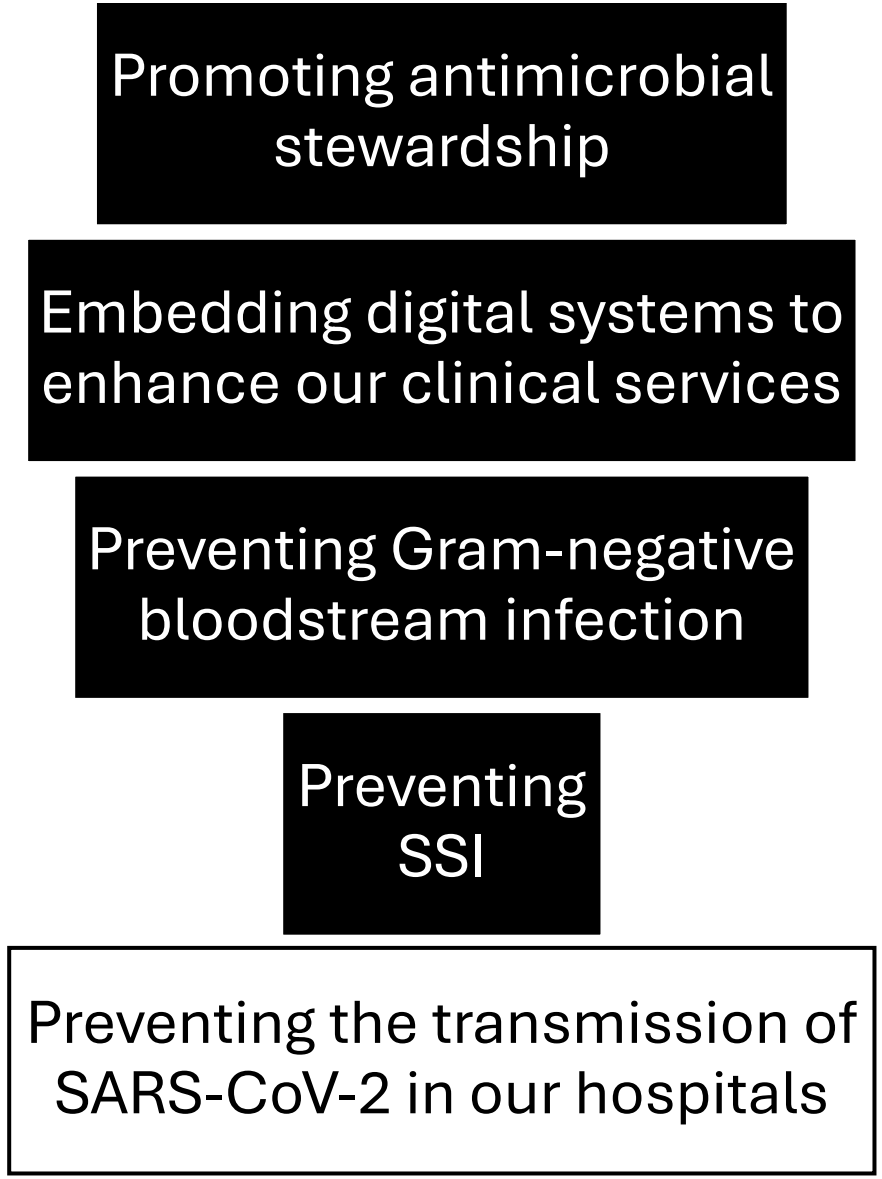
Tanner et al. J Infect Prevent 2012

SSI prevention: a success story

SSI surveillance at GSTT began to be enhanced in January 2009. The Trust now performs SSI surveillance in 12 surgical specialties. Assuming that the latest and lowest rate of SSI was achievable from the start of the programme, the reductions achieved suggest that 774 SSIs have been prevented. Assuming each SSI costs £5,239, this has resulted in savings of £4,056,443 over 6 years.



Unpublished data, with permission from GSTT.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PPE	Transmission routes	Testing and laboratory factors	Vaccination
Organizational transformation	Guidelines and policy development	Regulatory framework	Outbreaks
Non-COVID pathogens	Antimicrobial stewardship	Digital transformation	Applied research

Promoting antimicrobial stewardship

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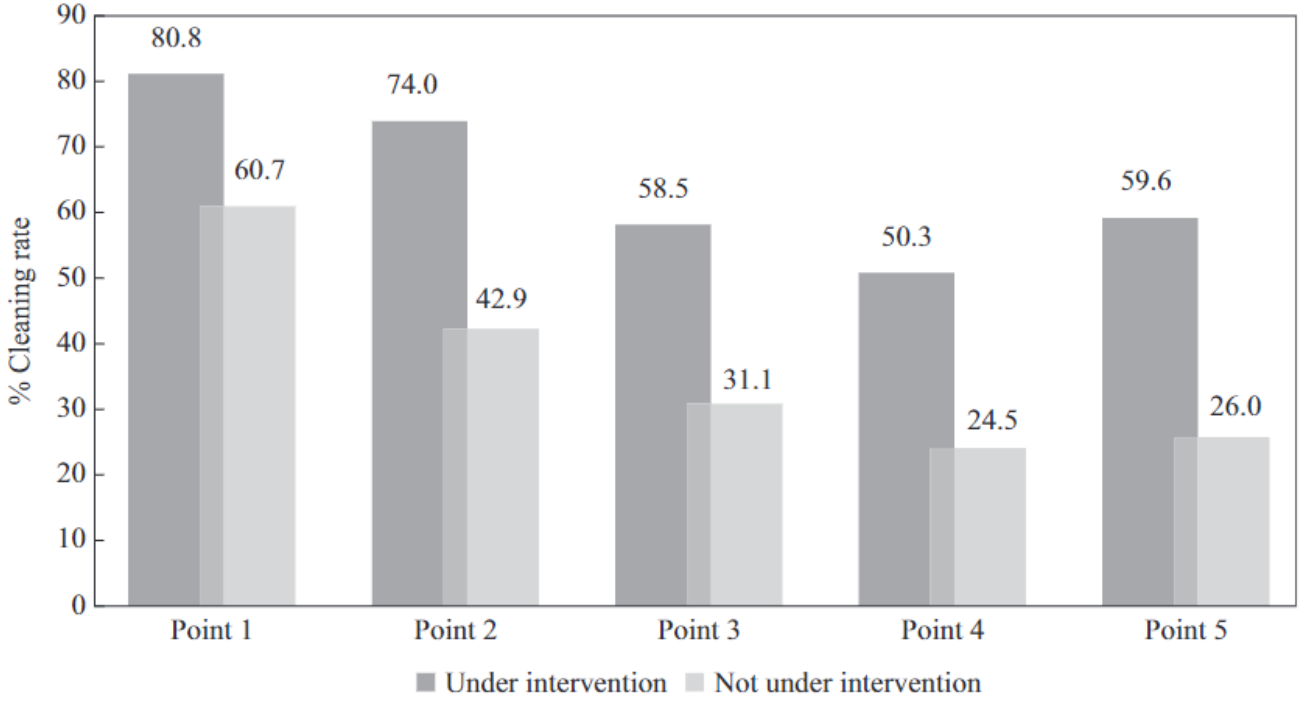
Priorities

What’s hot in IPC

More effective surface disinfection improves patient outcomes

- Prospective intervention cluster cross-over study in Israel.
- Performed over 15 months, including 7,725 patients.
- Intervention was a switch from “bucket-based” chlorine disinfection to routine use of QAC-based wipes.

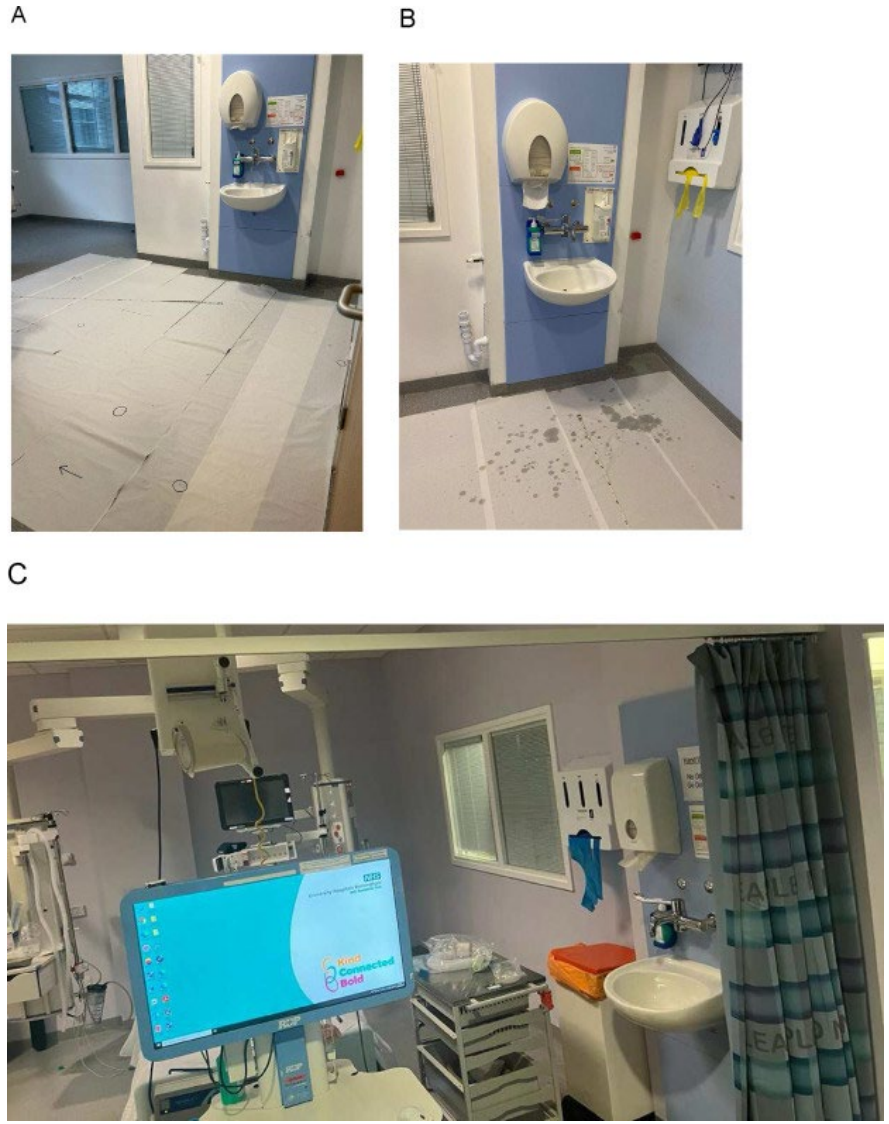


Outcome	Effect (95% CI)	*P*-value
CLABSI/CAUTI[a]		
IRR	1.6 (0.7, 3.5)	0.3
IRD	12.2/100,000 person-days (−9.7, 34.2)	0.3
CLABSI[a]		
IRR	2.0 (0.5, 8.0)	0.3
IRD	5.2/10,000 person-days (−5.4, 15.7)	0.3
CAUTI[b]		
IRR	1.4 (0.8, 2.4)	0.2
IRD	6.7/10,000 person-days (−4.2, 17.7)	0.2
MDRO contamination[c]		
OR	0.7 (0.5, 1.0)	0.06
Predicted probability difference	−7.0% (−13.6%, −0.5%)	0.04
MDRO acquisition[d]		
HR	0.4 (0.2, 1.0)	0.04
Risk difference	−7.6% (−7.7%, −7.4%)	NA
In-hospital mortality[e]		
IRR	0.8 (0.7−1.0)	0.03
IRD	−19.8/10,000 person-days (−37.9, −1.6)	NA

Dadon et al. J Hosp Infect 2023.

“Gonna take you right in to the sink splash zone” (duh duh duh)

Category	Examples	Prevalence
A	Vascular access equipment	65%
Bi	Ventilator equipment	18%
Bii	Respiratory equipment	27%
C	Haemofiltration / dialysis	12%
D	Personal care items	68%
E	Nutrition / enteral care	33%
F	Alcohol gel / PPE	57%
G	Housekeeping / cleaning	5%
H	Patient skin contact items	43%
I	Medicines / infusion pumps	32%
J	Negatinve pressure wound care	5%
K	Patients with IV devices	12%
L	Patinets with urinary catheters	18%
M	Invasive monitoring equipment	5%
N	Patinet admission packs	5%
O	Computers on wheels	48%



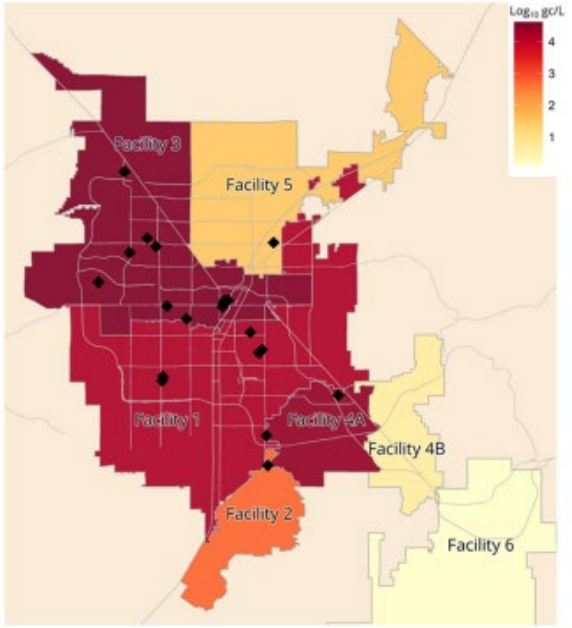
The sink splash zone. Panel A: after running the tap. Panel B: after hand hygiene. Panel C: equipment in the sink splash zone.

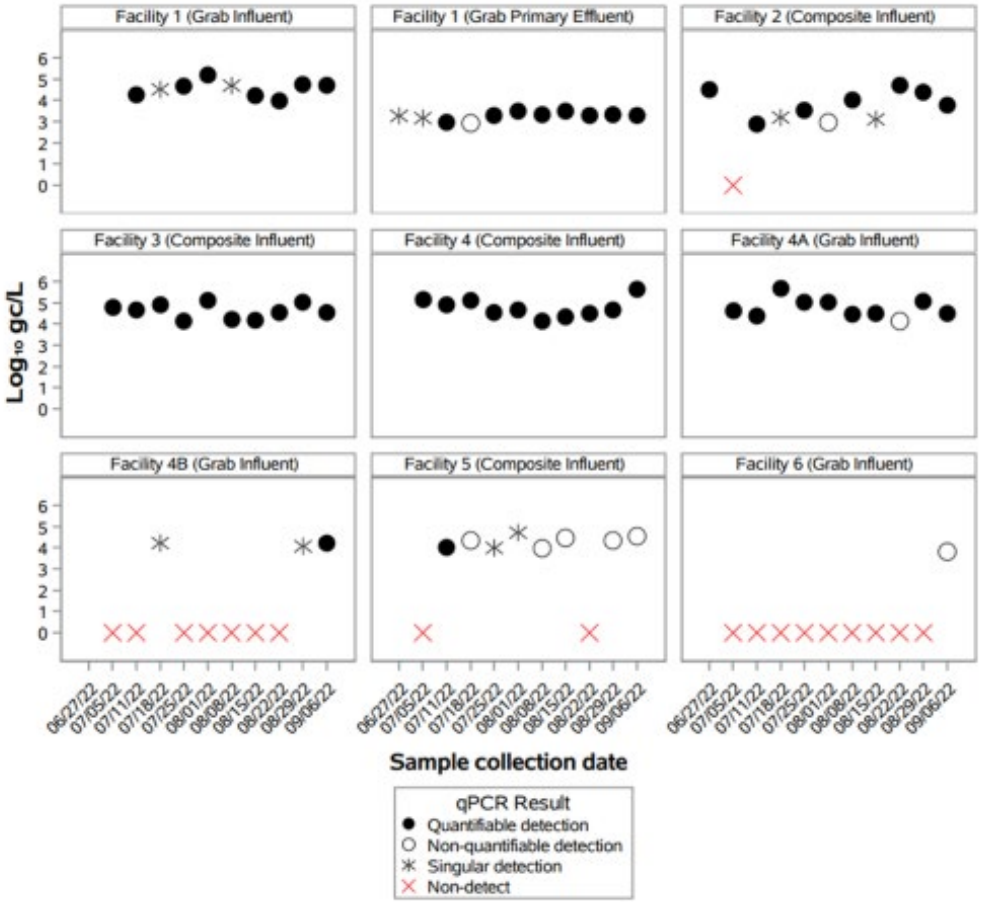
Garvey et al. Infect Prevent Practice 2023.

Candida auris: coming to a hospital near you…(& wastewater surveillance is pretty cool)

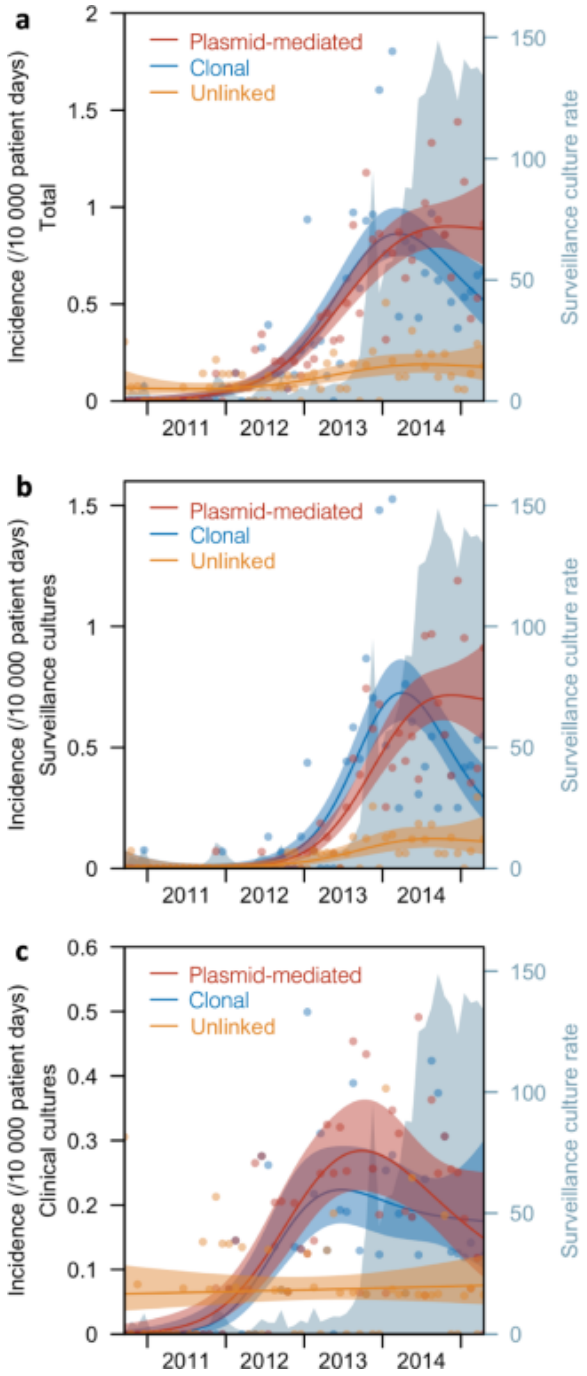
Positive detection 72 of 91 samples (79%); higher detection frequencies in sewersheds serving healthcare facilities involved in the outbreak (94 vs 20% sample positivity)

	number of state-licensed healthcare facilities, Las Vegas metropolitan area[a]		
facility/sewershed	hospitals[b]	skilled nursing facilities	number of hospitals or skilled nursing facilities with reported *auris* clinical or colonization cas
1	17	12	7
2	4	2	2
3	13	17	11
4A	2	3	1
4B	0	1	0
5	2	2	1
6	1[c]	2	0
total	39	39	22





Barber et al. Env Sci Tech 2023.



Horizontal plasmid transfer is a key driver of CPE transmission

Genomic analysis of 1312 CPEs submitted to government ref lab in Singapore between 2010 and 2015.

Significant risk factors for clonal spread of CPE:

- direct or indirect ward-level contact;
- direct or indirect hospital-level contact;
- bacterial species (*Klebsiella* and *Enterobacter* a higher risk of spread than *E. coli;*
- carbapenemase type (NDM and OXA-type a higher risk of spread than KPC)

Significant risk factors for plasmid-mediated spread of CPE:

- **none**

Marimuthu et al. Nat Comm 2022.

Water-free care demands our attention

Retrospective cohort study including 552 German ICUs, comparing HCAI prevalence in patients cared for in rooms with or without sinks.

Parameter	Category	aIRR	95% CI	*P*-value (type III)
Presence of sink in patient room	Sink group	1.21	(1.01–1.45)	0.039
	No-sink group	1=reference		
Type of ICU	Interdisciplinary in hospital <400 beds	1.001	(0.83–1.21)	0.004
	Interdisciplinary in hospital ≥400 beds	1.278	(1.04–1.57)	
	General surgical	1.255	(1.00–1.59)	
	Special surgical (neurosurgical, cardiovascular)	1.335	(1.00–1.78)	
	Paediatric	2.133	(1.14–4.01)	
	Weaning	0.952	(0.60–1.53)	
	Others	2.11	(1.44–3.10)	
	Medical/neurological	1=reference		
Length of stay (days)	Risk increase per day	1.01	(1.00–1.02)	0.016
Invasive ventilation use	Risk increase per 1%	1.009	(1.00–1.01)	0.001
Urinary tract catheter use	Risk increase per 1%	1.014	(1.01–1.02)	<0.001

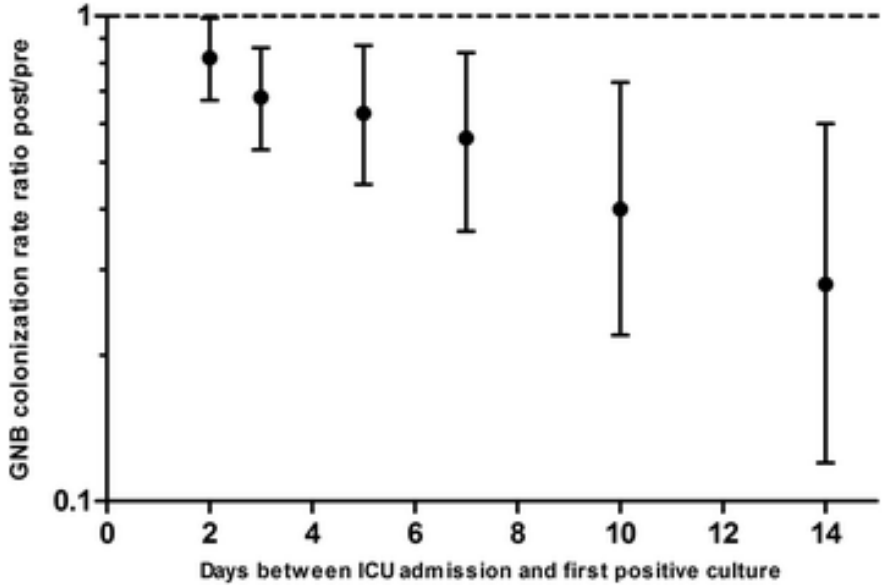
CI, confidence interval.

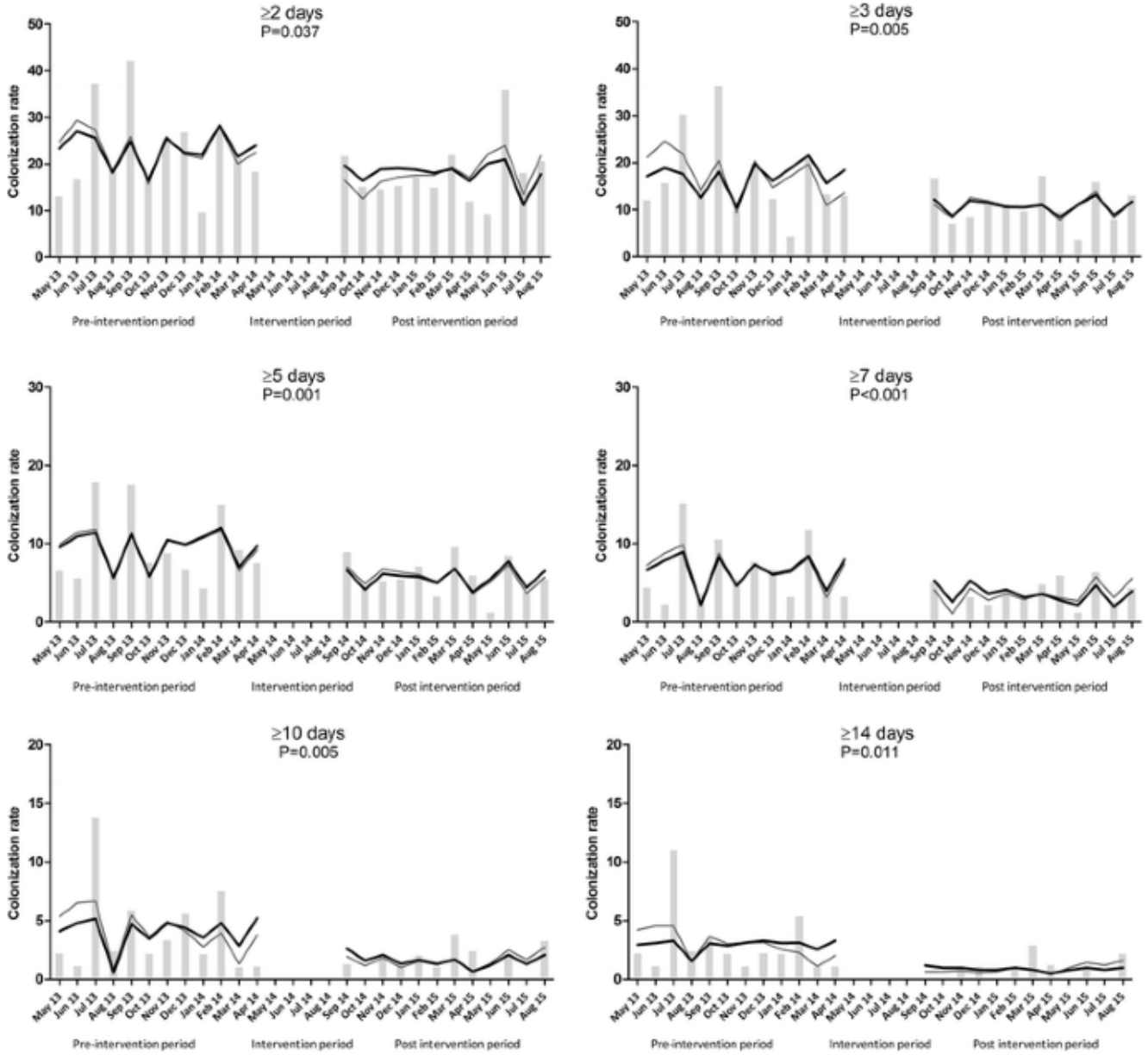
Multivariable analyses identified sinks as a risk factor for BSIs and UTIs

Fucini et al. J Hosp Infect 2023.

Water free critical care

Overall rate of Gram-negative rod colonisation rate: were 26.3 GNB/1000 ICU admission days pre-intervention and 21.6 during the intervention (rate ratio 0.82; 95%CI 0.67–0.99; P = 0.02).





Hopman et al. Antimicrobial Resistance & Infection Control 2017;6:59

What's next for IPC? Winter 2024 and beyond: setting priorities and scanning the horizon

Jon Otter PhD FRCPath
Director of Infection Prevention and Control & Consultant Clinical Scientist
Guy's and St Thomas' NHS Foundation Trust / Imperial College London
@jonotter
j.otter@imperial.ac.uk
Blog: www.reflectionsIPC.com
Slides: www.jonotter.net

STAY A STEP AHEAD

of winter infections

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Scan the QR code to register for the IPC webinar **"Winter Preparedness & the Hidden Threats".**

23rd April 2024 at 7pm AEST

Lunch

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Dr Jon Otter

Surface disinfectants in healthcare: when to use them and how to choose them and their contribution to AMR

Surface disinfectants in healthcare: when to use them, how to choose them, and their contribution to AMR

Jon Otter PhD FRCPath
Director of Infection Prevention and Control & Consultant Clinical Scientist
Guy's and St Thomas' NHS Foundation Trust / Imperial College London
@jonotter
j.otter@imperial.ac.uk
Blog: www.reflectionsIPC.com
Slides: www.jonotter.net

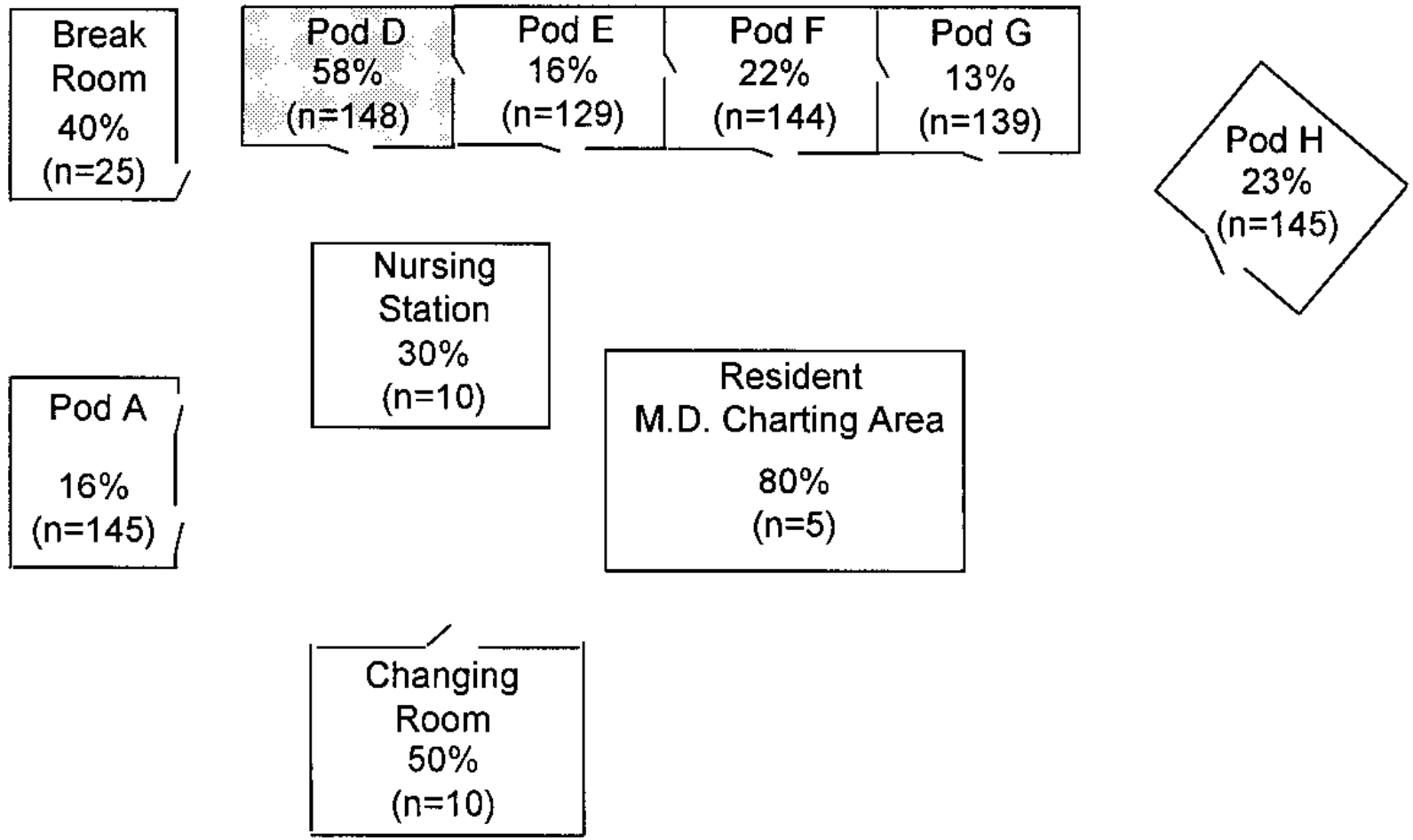

NHS
Guy's
Hospital
Main Entrance and Urgent Care Centre


St Thomas' Hospital
Guy's and St Thomas'
NHS
St Thomas' Hospital
KING'S HEALTH PARTNERS


Welcome to
Royal Brompton
Hospital

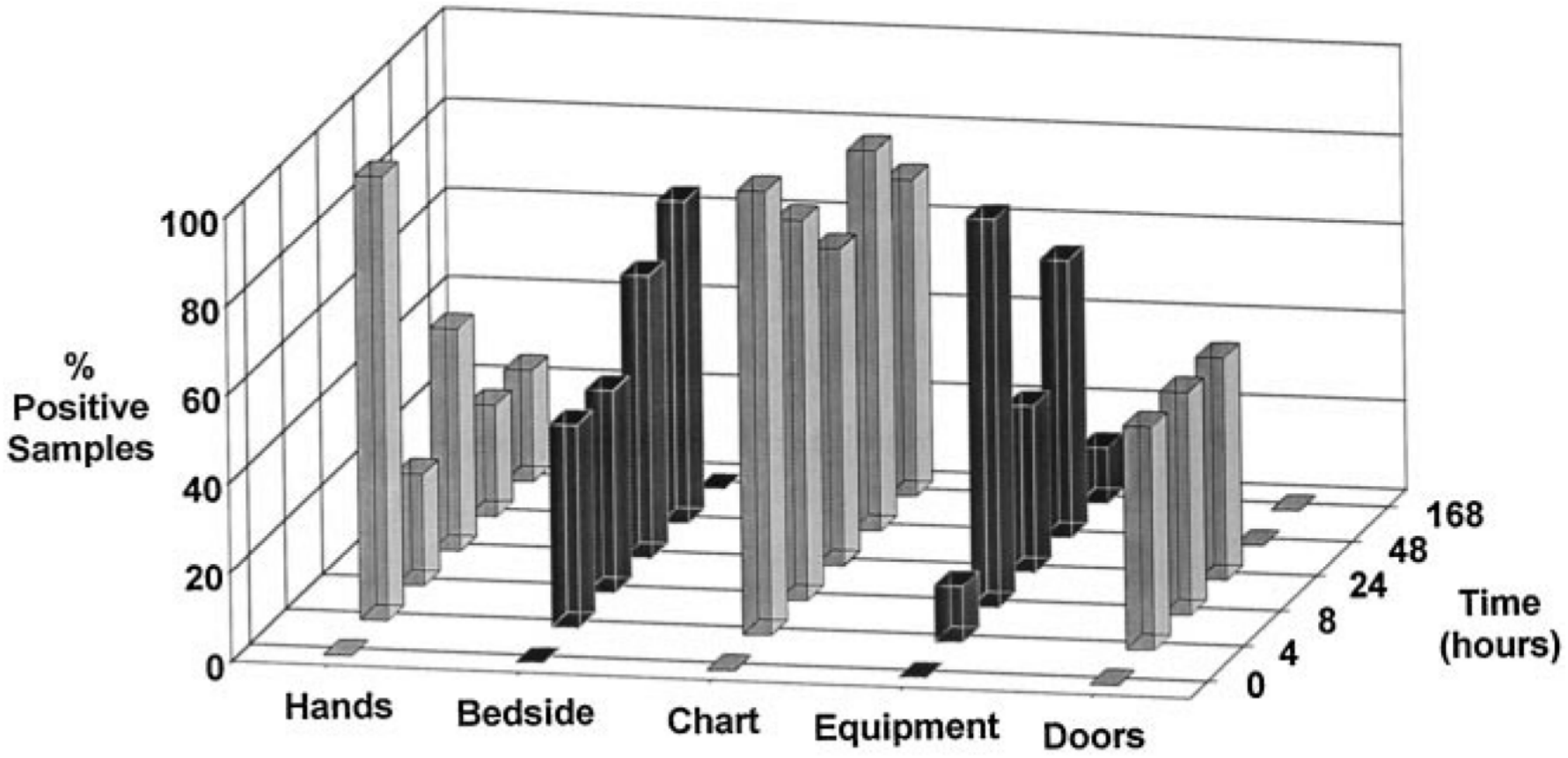

Harefield Hospital

Transfer of a surrogate marker in a NICU

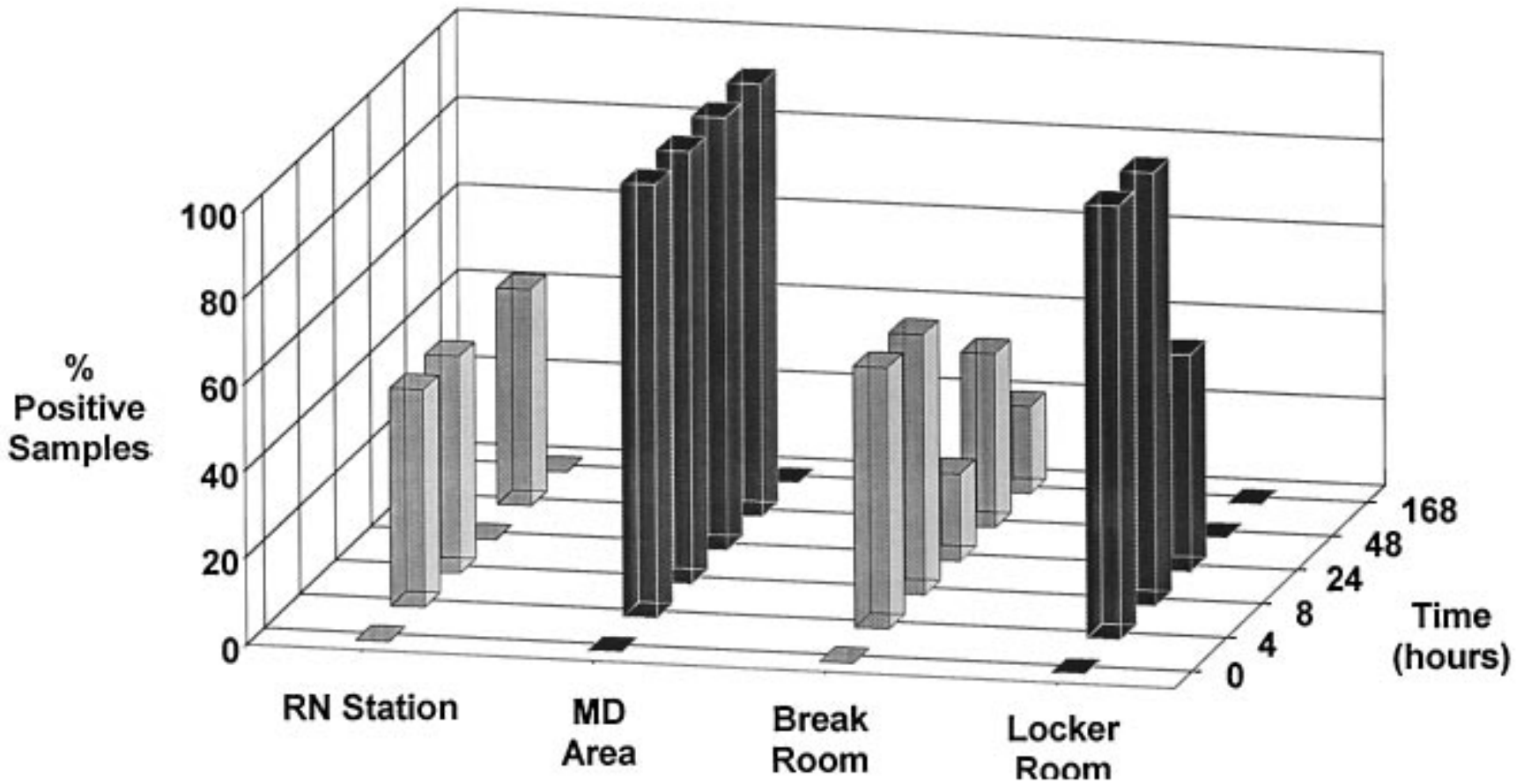


Oelberg *et al*. *Pediatrics* 2000;105:311-315.

Transfer over time: inoculated pod



Contamination over time by location



- Importance of surface contamination for HCAI and AMR
- Current approaches to cleaning and disinfection
- Surface disinfectant overview
- Possible contribution of surface disinfectants to AMR

Importance of surface contamination for HCAI and AMR

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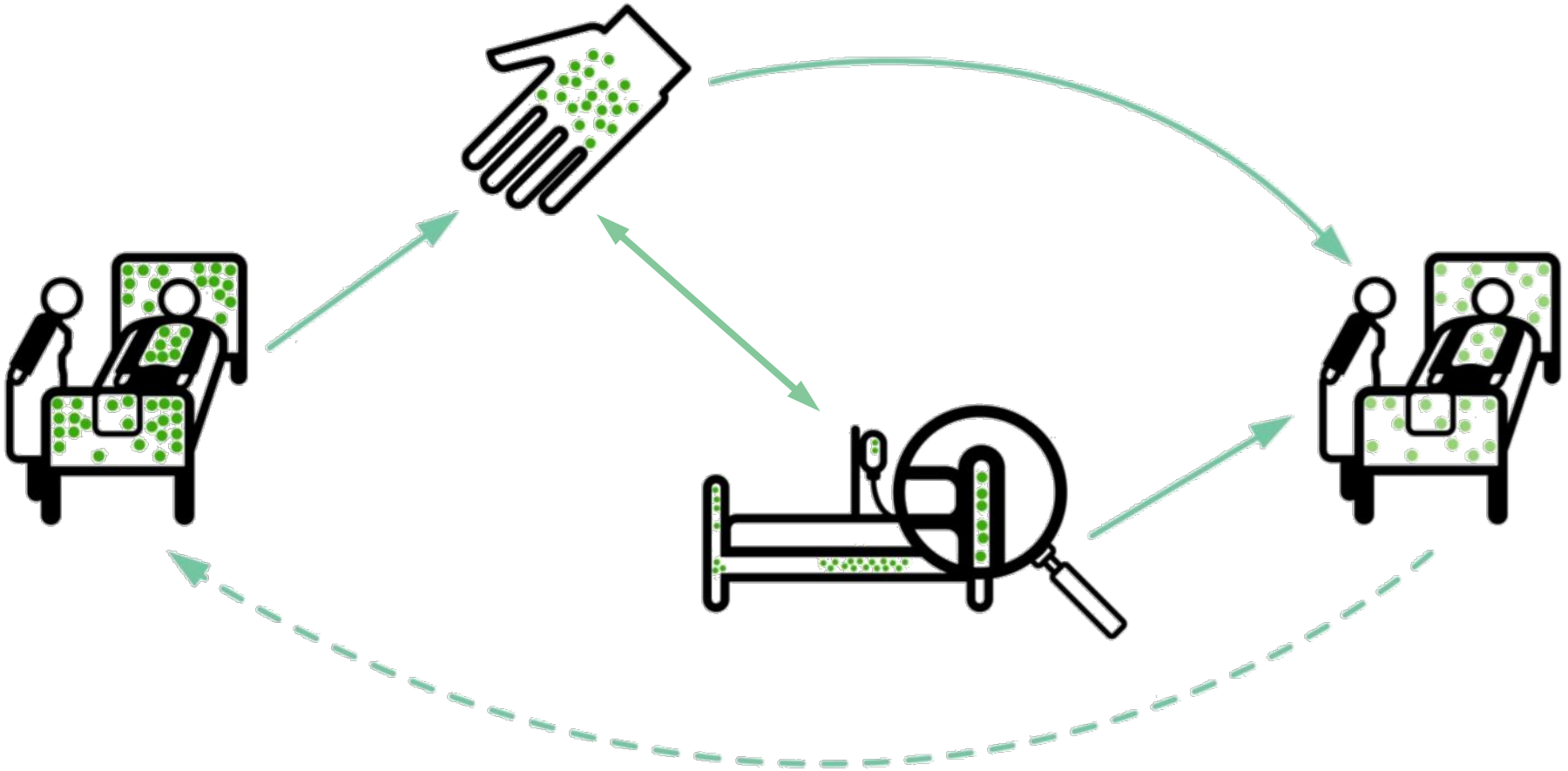
Transmission routes



Otter *et al. Infect Control Hosp Epidemiol* 2011;32:687-699.

French *et al. J Hosp Infect* 2004;57:31-37.

Surface <> Hand <> Patient

Pathogens can be transferred from surfaces to HCW hands without direct patient contact[1-2]

52% of 23 HCW acquired VRE on their hands[3]	Contact with patient **or** surface = ~10% risk of acquiring VRE[3]
45% of 50 HCW acquired MRSA on their hands[4]	**40%** of 50 HCW acquired MRSA on their hands[4]
50% of 30 HCW acquired *C. difficile* on their hands[5]	**50%** of 30 HCW acquired *C. difficile* on their hands[5]
Compliance with hand hygiene: **50%**[6]	Compliance with hand hygiene: **80%**[6]

1. Boyce *et al. Infect Control Hosp Epidemiol* 1997;18:622-627.
2. Bhalla *et al. Infect Cont Hosp Epidemiol* 2004;25:164-167.
3. Hayden *et al. Infect Control Hosp Epidemiol* 2008;29:149-154.
4. Stiefel *et al. Infect Control Hosp Epidemiol* 2011;32:185-187.
5. Guerrero *et al. Am J Infect Control* 2012;40:556-558.
6. Randle *et al. J Hosp Infect* 2010;76:252-255.

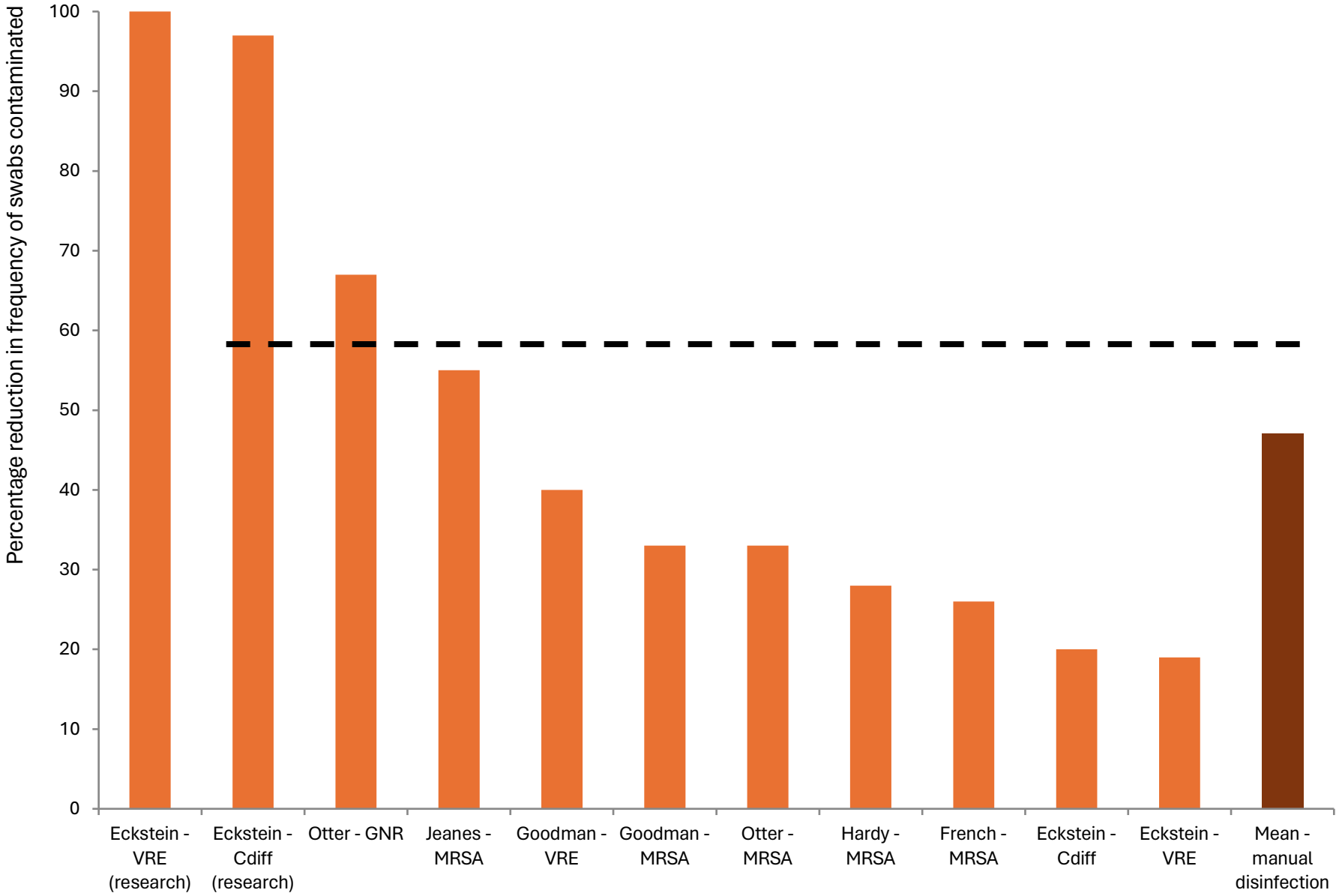
Surface survival

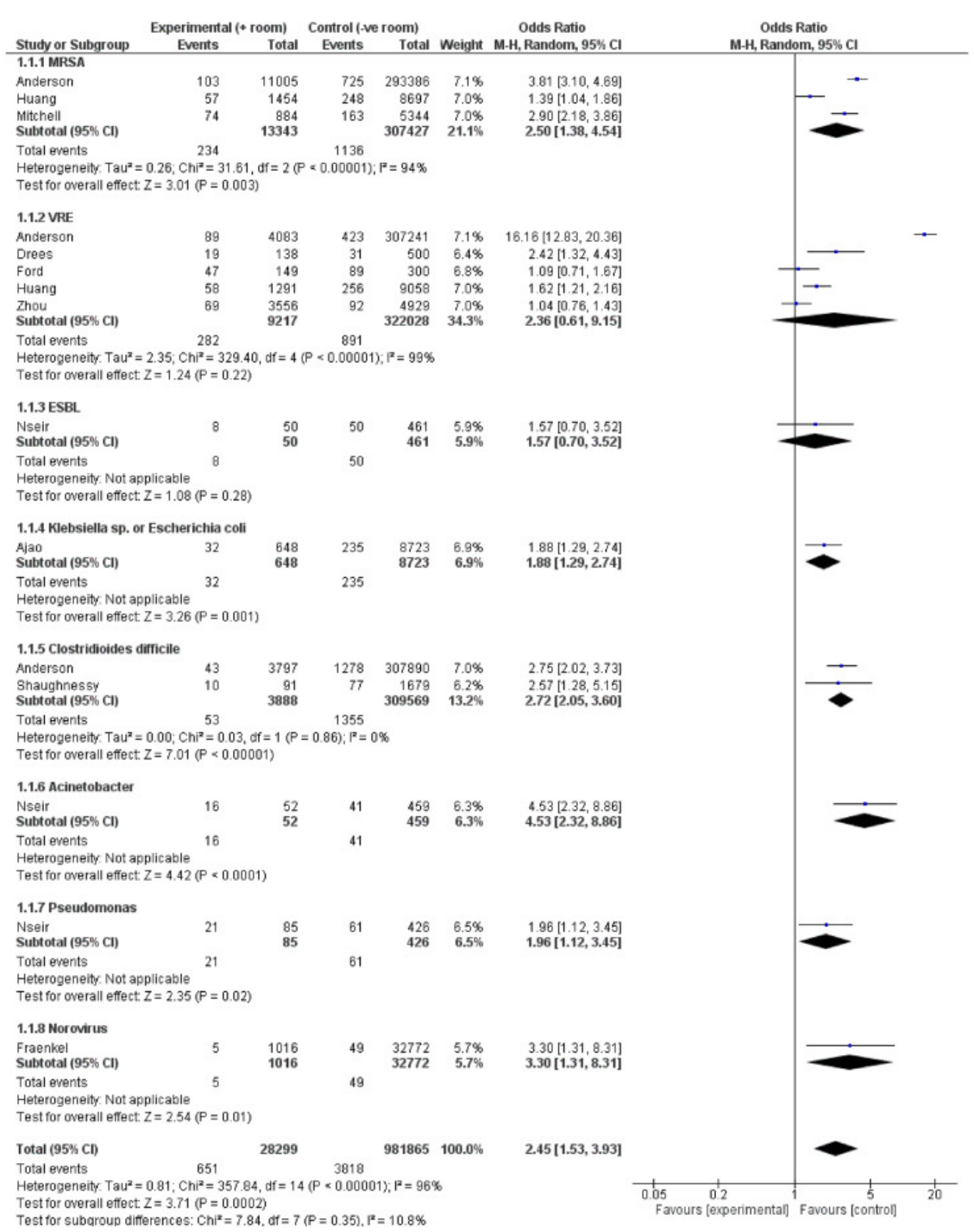
Organism	Survival time
Clostridium difficile (spores)	5 months
Acinetobacter spp.	3 days to 5 months
Enterococcus spp. including VRE	5 days – 4 years (!)[1]
Pseudomonas aeruginosa	6 hours – 16 months
Klebsiella spp.	2 hours to > 30 months
Staphylococcus aureus, inc. MRSA	7 days – 7 months
Norovirus (and feline calicivirus)	8 hours to > 2 weeks[2]
SARS Coronavirus	72 hours to >28 days[3]
Influenza	Hours to several days[4]

Adapted from Kramer *et al. BMC Infect Dis* 2006;6:130.

1. Wagenvoort et al. J Hosp Infect 2011;77:282-283.
2. Doultree *et al. J Hosp Infect* 1999;41:51-57.
3. Rabenau *et al. Med Microbiol Immunol* 2005;194:1-6.
4. Bean *et al. J Infect Dis* 1982;146:47-51.

Conventional terminal decontamination





The MDRO status of the prior room occupant influences acquisition risk

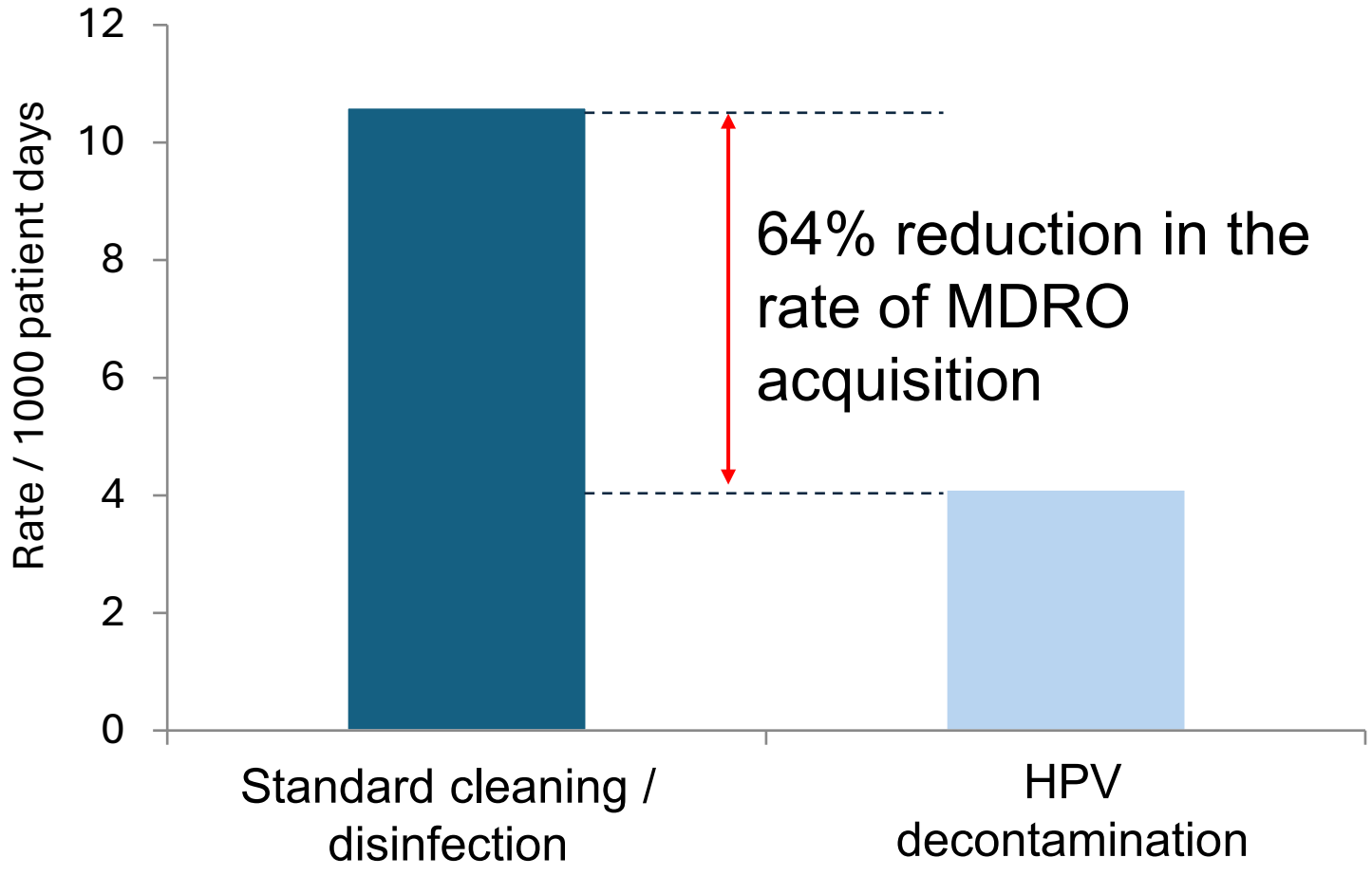
Meta-analysis of studies evaluating the risk of MDRO acquisition for the incoming occupant based on the status of the prior room occupant.

	OR	95% CI
Acinetobacter	4.5	2.3-8.9
Norovirus	3.3	1.3-8.3
C. difficile	2.7	2.0-3.6
MRSA	2.5	1.4-4.5
VRE	2.4	0.6-9.1
Pseudomonas	2.0	1.1-3.4
Klebsiella or *E. coli*	1.9	1.3-2.7
ESBL	1.6	0.7-3.5
Total	2.5	1.5-3.9

Mitchell et al. Infect Dis Health 2023.

Hydrogen peroxide vapour: clinical impact

30-month prospective cohort intervention study performed on 6 high-risk units (5 ICUs) including 8813 patients at Johns Hopkins Hospital.



Passaretti *et al. Clin Infect Dis* 2013;56:27-35.

Hospital cleaning and disinfection works

Key studies illustrating the impact of improved cleaning and disinfection

Author/year	Design	Result
Dancer et al. 2009	Cross-over study of extra ward cleaner	27% reduction in MRSA infection
Datta et al. 2011	Cohort intervention study of enhanced disinfection	Significant reduction in VRE acquisition from the prior room occupant
Anderson et al. 2017	Cluster RCT of UVC room disinfection	Significant reduction in MDRO acquisition from the prior room occupant
Mitchell et al. 2019	Cluster RCT of cleaning bundle	Improved rate of cleaning high touch items and reduced incidence of VRE
Dadon et al. 2023	Cross-over study of switching from chlorine “bucket” method to disinfectant wipes	Significant reduction in surface contamination, MDRO acquisition, and in-hospital mortality

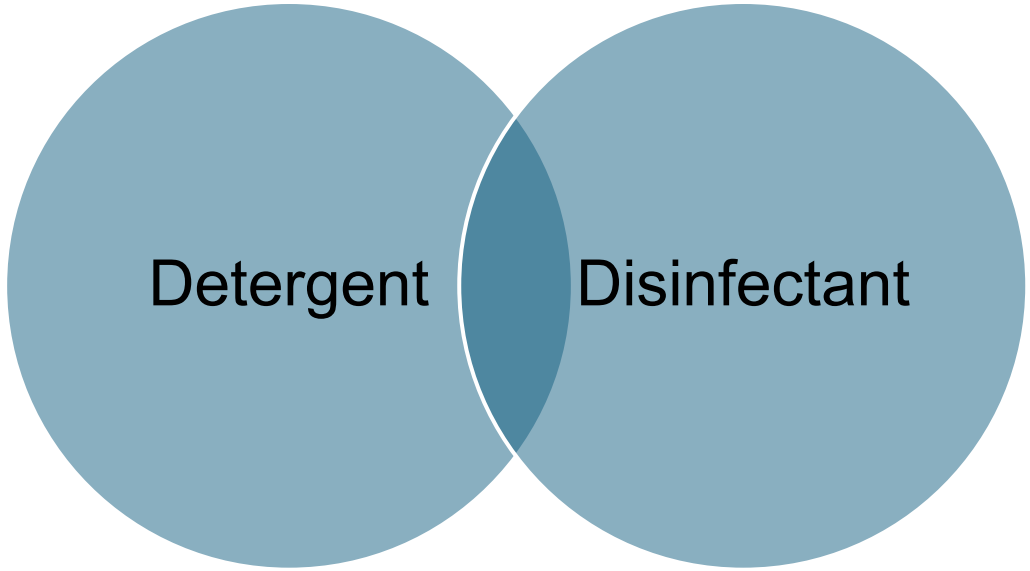
Importance of surface contamination for HCAI and AMR

Current approaches to cleaning and disinfection

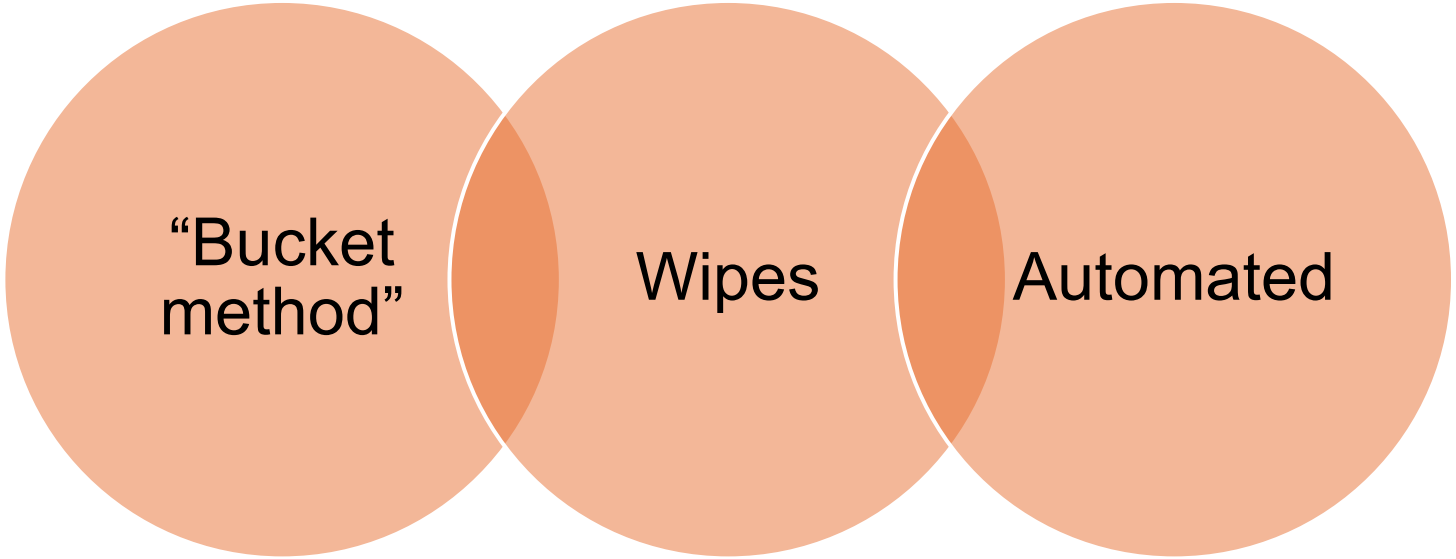
Surface disinfectant overview

Possible contribution of surface disinfectants to AMR

PRODUCT



PROCEDURE



What is the protocol for surface cleaning and disinfection in your hospital?

- Combined cleaner/disinfectant for all cleaning and disinfection
- Routine detergent cleaning; cleaner/disinfectant when known infection risks
- Detergent cleaning only

English cleaning / disinfection recommendations

- Under *Standard Infection Control Precautions*, routine disinfection of the environment is not routinely recommended in the manual, aside from routine disinfection of sanitary fittings using chlorine.
- Under *Transmission Based Precautions*, disinfection of hospital surfaces during the stay of the patient and at the time of their transfer or discharge is recommended.
  - The manual makes a specific recommendation that chlorine should be used for daily and discharge surface disinfection.

National Infection Control Policy Manual

Limitations of a “detergent only” approach

- Patients with unidentified infection risks
- Challenges of cleaning complex and intricate environment
- Dry surface biofilms
- Limited reduction in pre-post studies
- Evidence that they spread contamination around
- Emerging evidence of detergent-related surface damage
- Evidence that moving to routine disinfection reduces transmission risk

Kiernan et al. J Hosp Infect 2024 (accepted)

Limitations of a chlorine-based disinfectants

- Many are not sporicidal when tested correctly
- Inactivation when exposed to soiling
- Poor environmental profile
- Material compatibility
- Staff exposure
- Majority of patients on TBPs don’t require chlorine

Kiernan et al. J Hosp Infect 2024 (accepted)

Chlorine may not be as effective as you think..

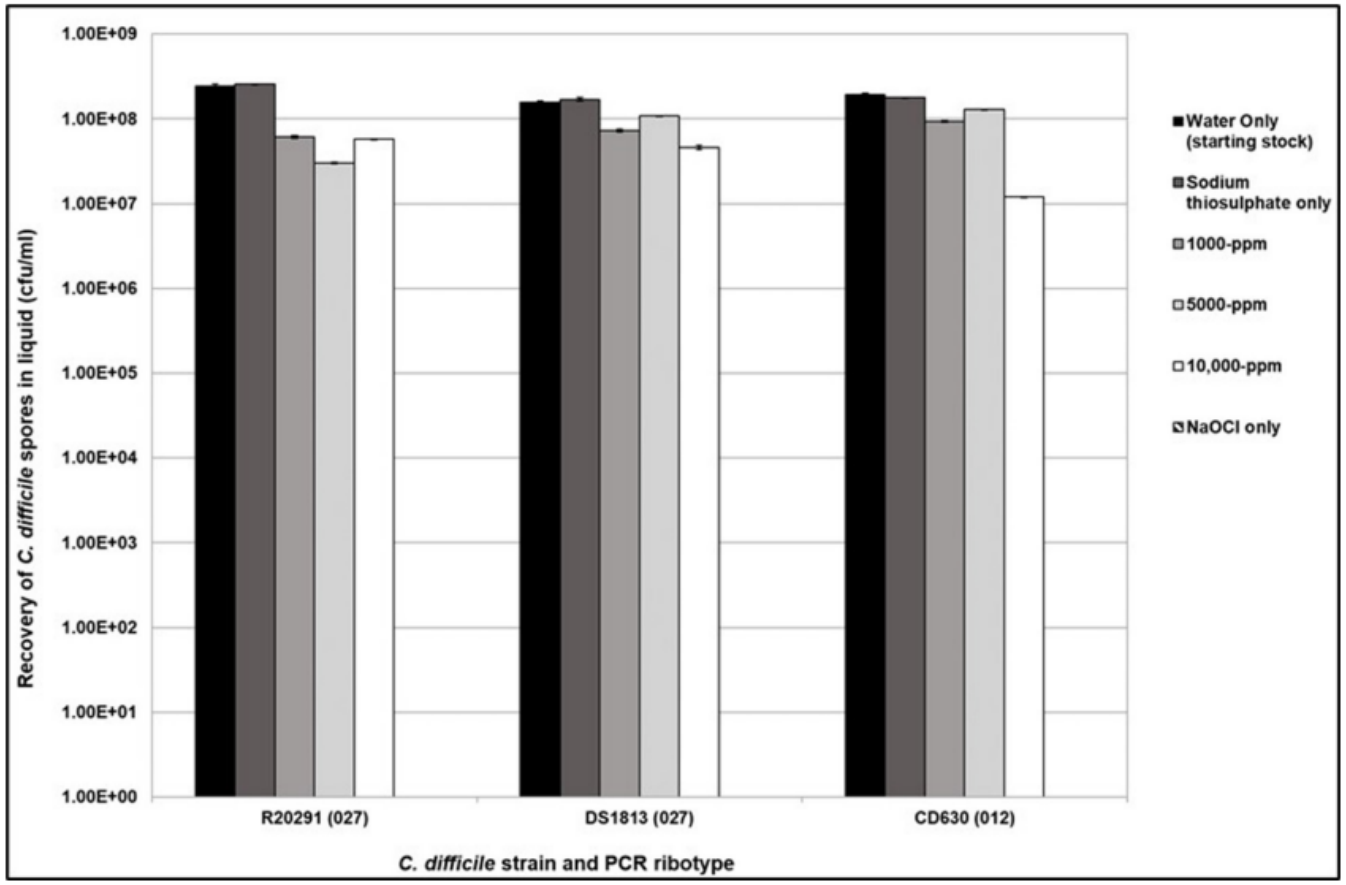
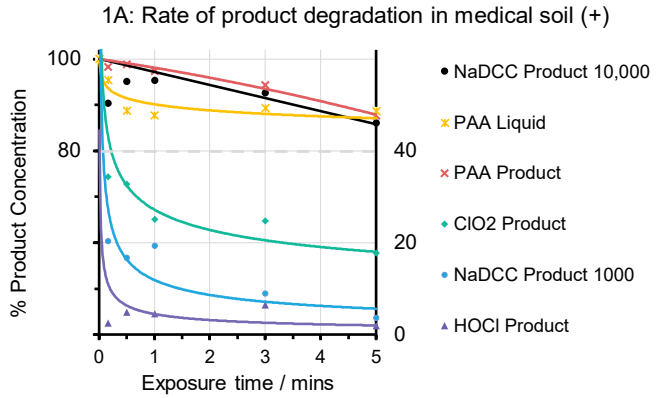
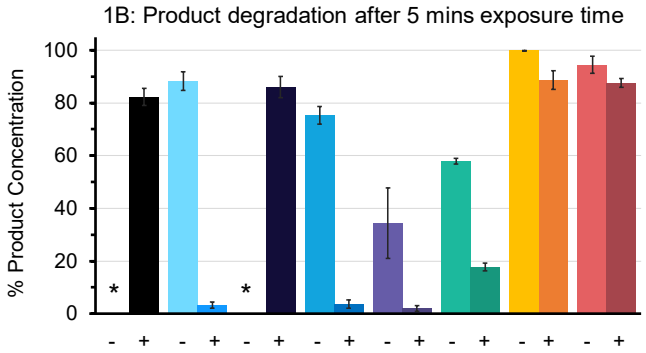


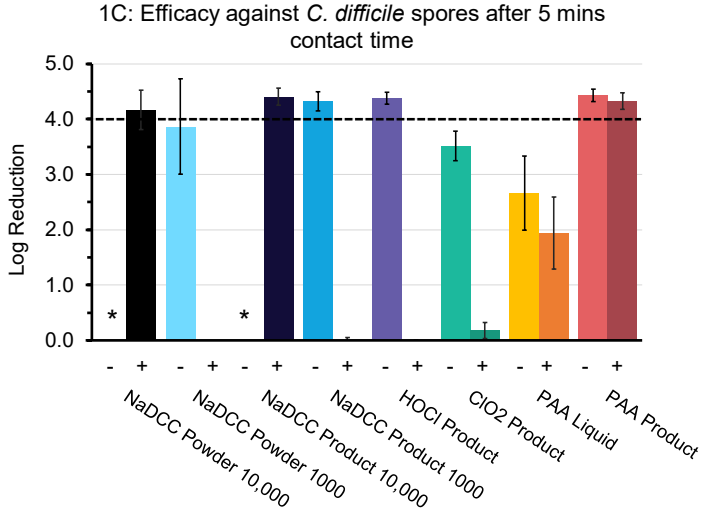
Fig. 1. Recovery of purified *C. difficile* spores following exposure to NaOCl at 1000, 5000 and 10 000 p.p.m. in liquid for 10 min. The spore inoculum was at 10^8 c.f.u. ml^{-1}. The inoculum was used as the positive control (water only) and was also suspended in sodium thiosulphate to ensure no cross-reactivity. Plots represent means±SEM (n=3).

Ahmed & Joshi. Microbiology 2023.

Impact of soiling







Brown et al. J Hosp Infect 2024 (accepted)

* = not tested

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Types	Mechanism of action	Examples of chemistry	Application and areas of use
Highly reactive biocides — strong interactions through chemical or ionic binding			
Alkylating agents	Reacts with amino acids to form crosslinks and fix proteins	Glutaraldehyde, formaldehyde, ortho-phthalaldehyde	Disinfection of surfaces, materials, equipment Disinfection of materials and surfaces associated with the housing or transportation of animals
Oxidizing agents	Oxidation of macromolecules (proteins, lipids and nucleotides), while causing nonspecific damage to the cytoplasmic membrane	Sodium hypochlorite, peracetic acid, hydrogen peroxide, ethylene oxide	Disinfection of surfaces, materials, equipment Disinfection of materials and surfaces associated with the housing or transportation of animals Disinfection of drinking water
		Povidone–iodine	Disinfection of skin, scalps, surfaces, materials and equipment
Less-reactive biocides — weak physical interaction			
Cationics	Positively charged, hydrophilic region interacts with negatively charged cell surface. Hydrophobic region partitions into membrane, disrupting intermolecular bonds and leading to loss of intracellular contents	Quaternary ammonium compounds (for example, benzalkonium chloride)	Disinfection of skin and scalps Disinfection of surfaces, materials and equipment Incorporated in textiles, tissues, mask, producing treated articles with self-disinfecting properties
		Biguanides (for example, chlorhexidine, polyhexamethylene biguanide)	Antisepsis of skin and scalps Disinfection of surfaces, materials, equipment and swimming pools
		Diamines and amine oxides	Disinfection of surfaces, materials and equipment
Phenolics	Protonophore that targets the cytoplasmic membrane, causing loss of membrane potential. At low concentrations, triclosan inhibits fatty acid synthesis	Triclosan	Disinfection of surfaces, materials and equipment Incorporated in textiles, tissues, mask, producing treated articles with disinfecting properties
Alcohols	Permeabilization of the cytoplasmic membrane, denaturation of proteins and dehydration of exposed bacteria	Ethyl alcohol (ethanol) and isopropyl alcohol	Disinfection of skin and scalps Disinfection of surfaces, materials and equipment
Weak organic acids	Uncoupling of proton motive force; acidification of bacterial cytoplasm, leading to inhibition of enzyme activity and biosynthesis while exerting osmotic stress	Citric acid and benzoic acid	Disinfection of skin and scalps Disinfection of surfaces, materials and equipment
Metal ions	Redox active. Interacts with thiol groups and generates reactive oxygen species that damage macromolecules	Silver and copper	Antimicrobial surfaces, textiles and wound dressings
Antimicrobial dyes	Intercalation with DNA. Production of singlet oxygen (photosensitizers)	Methylene blue, toluidine blue and crystal violet	Wound dressings, photodynamic therapy (photosensitizers)

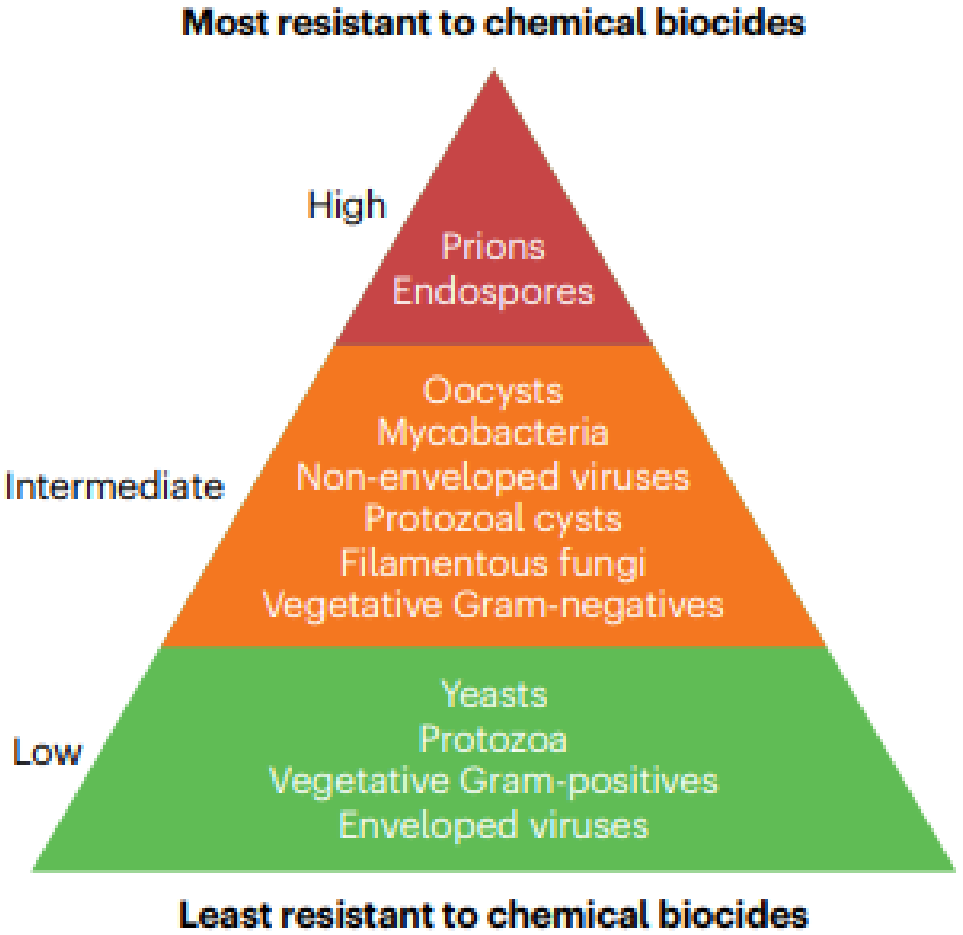
Maillard & Pascoe. Nature Rev Microbiol 2024.

Examples of bacteria

- *Bacillus subtilis* spores
- *Clostridioides difficile* spores
- *Mycobacterium chelonae* environmental isolates
- *Mycobacterium massiliense* environmental isolates

- *M. chelonae* standard culture collection
- *Pseudomonas aeruginosa*
- *Staphylococcus aureus* environmental isolates

- *B. subtilis* (vegetative)
- *S. aureus* standard culture collection



Examples of biocides

- Ethylene oxide (sterilant)
- Peracetic acid
- ClO_2
- Hydrogen peroxide
- Aldehydes
- Sodium hypochlorite

- Povidone–iodine
- Phenolics
- Complex QAC formulations
- Biguanides-based formulations

- 70% IPA/ethanol
- Simple QAC solutions
- Simple biguanide solutions
- Antimicrobial dyes

Maillard & Pascoe. Nature Rev Microbiol 2024.

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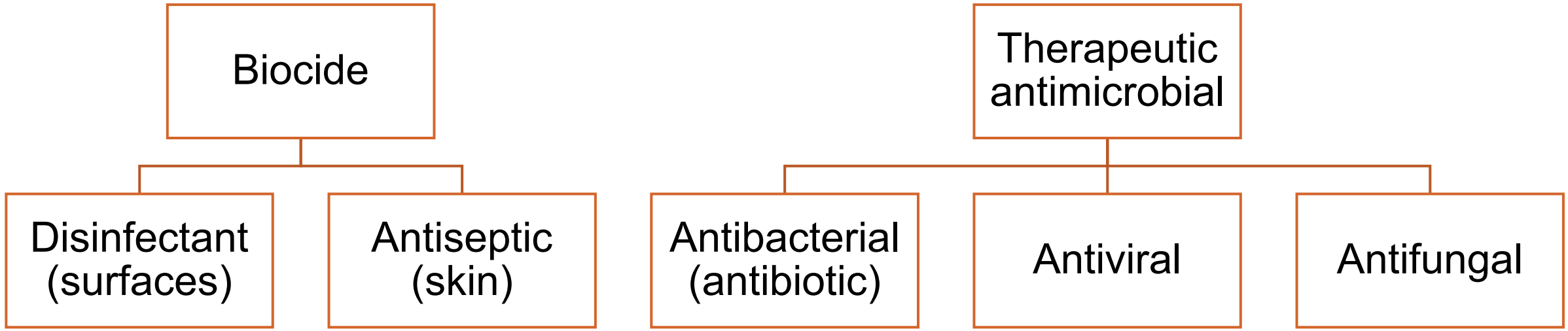
Biocide
Disinfectant (surfaces)
Antiseptic (skin)
Therapeutic antimicrobial
Antibacterial (antibiotic)
Antiviral
Antifungal

Biocides vs. therapeutic antimicrobials

Feature	Biocide	Therapeutic antimicrobial
Mechanism of action	Multiple cellular targets	Single process or structure
“Resistance”	Tolerance or reduced susceptibility	Resistance halts therapy
Measurement of “resistance”	No agreed methodology or breakpoints	Defined methodology and breakpoints
Mechanism of “resistance”	Intrinsic or acquired	Intrinsic or acquired

Factors affecting biocide effectiveness

Biocide

- Type / mechanism of action
- Concentration
- Formulation

Application

- Dilution
- Delivery method
- Contact time
- Soiling
- Surface type
- Interactions

Microbe

- Structure (e.g. spores)
- Reduced susceptibility
- Metabolic state (e.g. VNC)
- Community (e.g. biofilm)

Maillard & Pascoe. Nature Rev Microbiol 2024.

The importance of formulation

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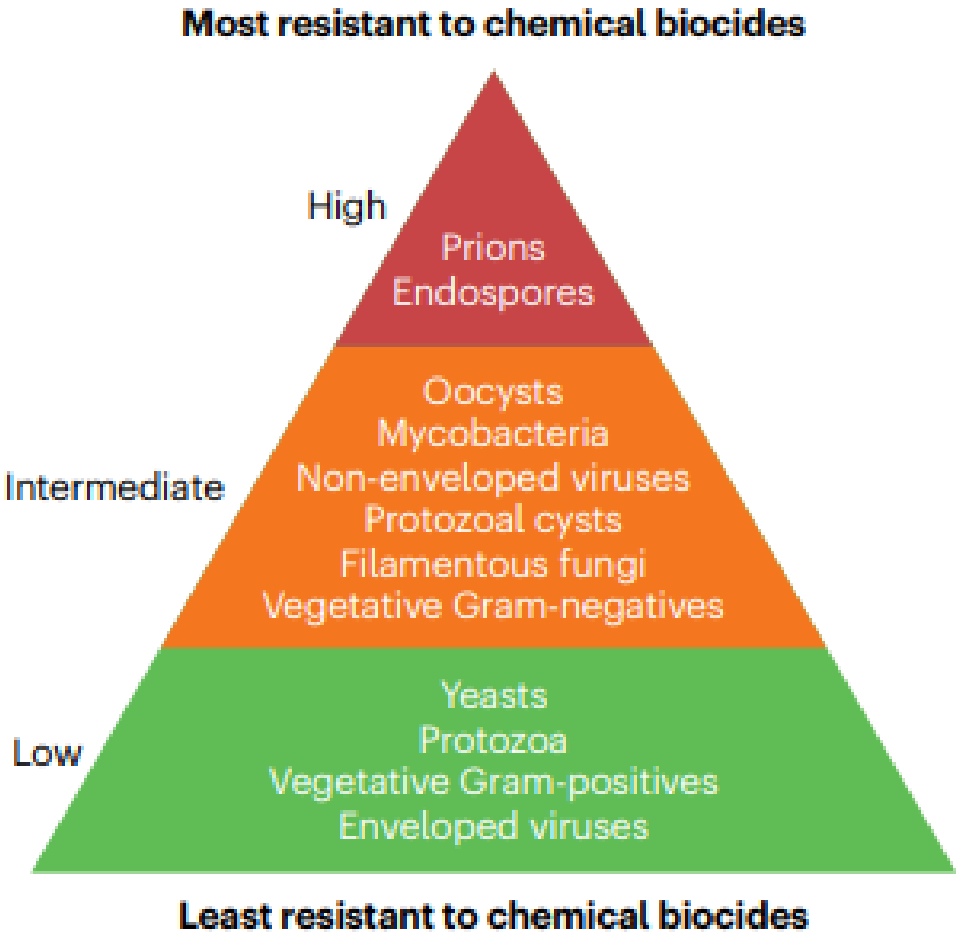

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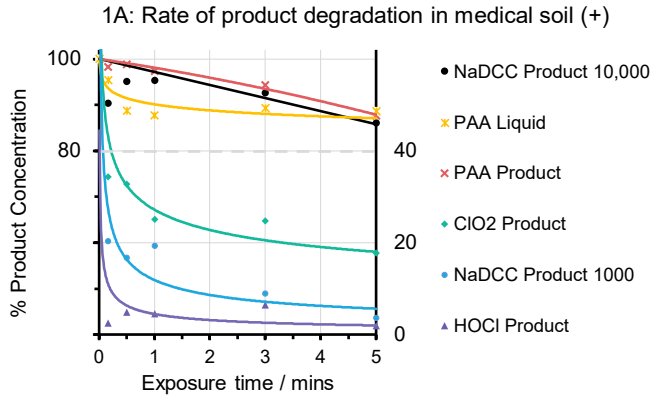
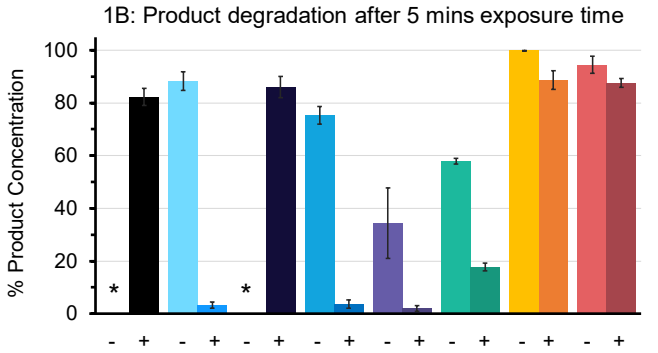
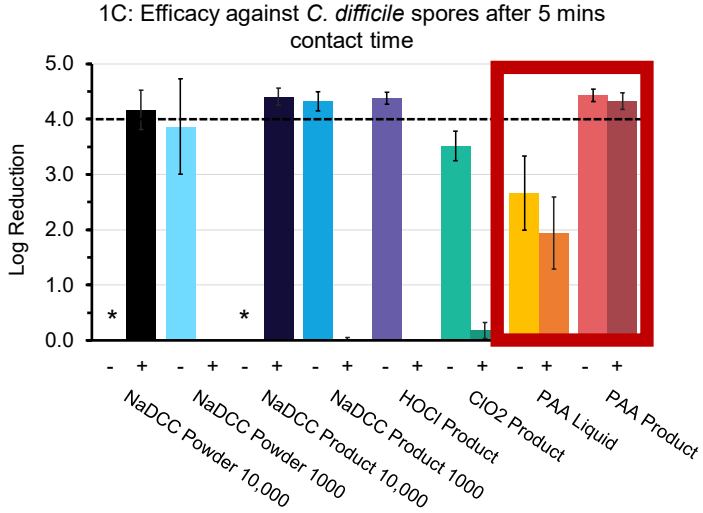
Maillard & Pascoe. Nature Rev Microbiol 2024.

Importance of formulation



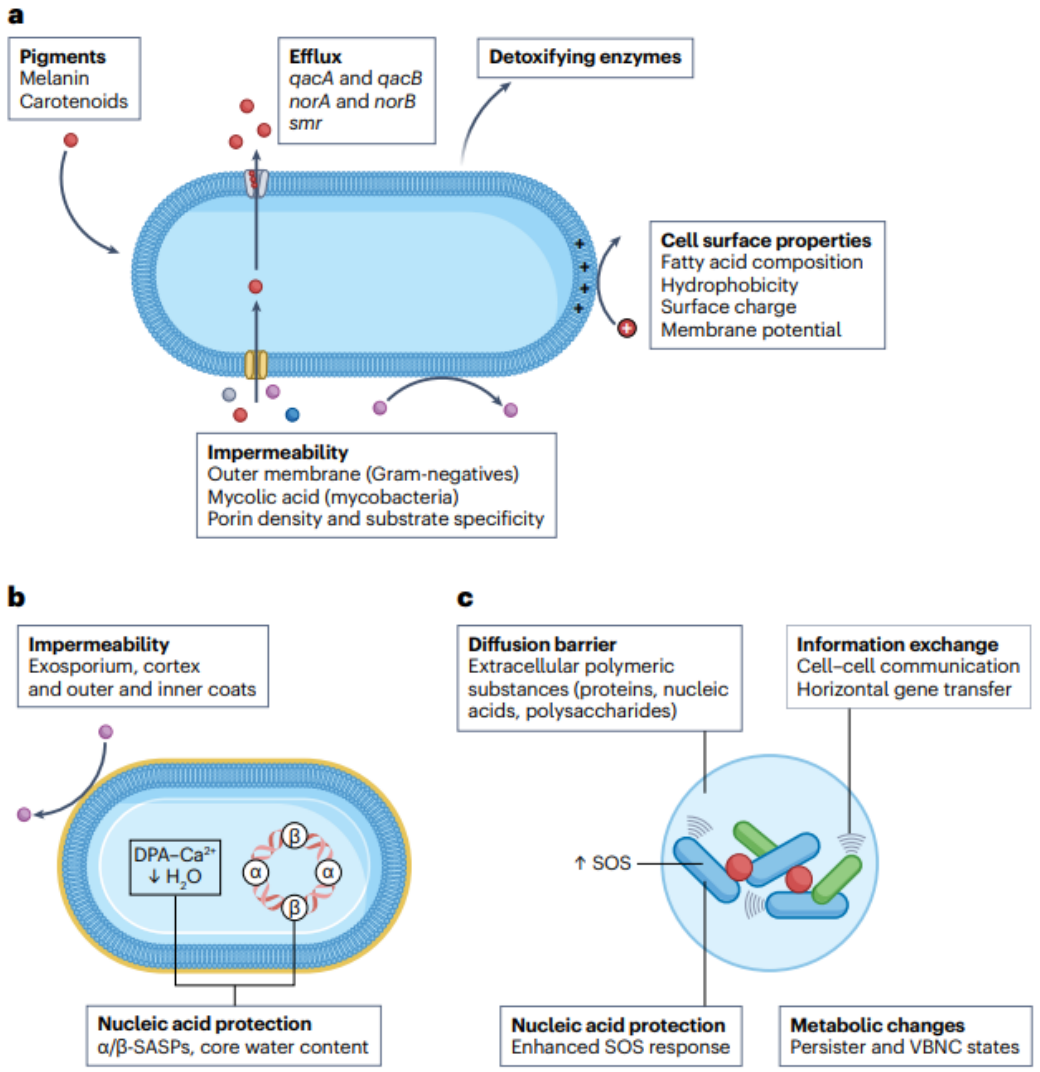




Brown et al. J Hosp Infect 2024 (accepted)

* = not tested

Intrinsic reduced susceptibility to biocides



Maillard & Pascoe. Nature Rev Microbiol 2024.

Acquired reduced susceptibility to biocides

General mechanism	Organism	Biocide (test concentration)	Change in biocide susceptibility	Antibiotic resistance	Specific mechanism	Ref.
Efflux	Mixed waterborne community	Copper (8–500 mg l^{-1})	NA (environmental isolates only)	Clarithromycin; tetracycline	CusA, CusB CusS, CutE	163
	Acinetobacter baumannii	Triclosan (128 mg l^{-1})	2–32-fold increase in MIC	Trimethoprim	FabI, AdeIJK	164
	Pseudomonas aeruginosa	BZC (12.5 mg l^{-1})	12-fold increase in MIC	Ampicillin; cefotaxime; ceftazidime	MexAB–OprM; MecCD–OprJ	165
	Campylobacter spp.	BZC; chlorhexidine; cetylpyridinium chloride	Twofold to fourfold increase in MIC	Erythromycin; ciprofloxacin	Not established (confirmed with efflux inhibitors)	166
	P. aeruginosa	Sodium hypochlorite (100 mg l^{-1})	Approximately 2.5-fold increase in MIC	Ampicillin; tetracycline; chloramphenicol kanamycin	MuxABC–OpmB[a]	134
Porins	*Mycobacterium chelonae*	Glutaraldehyde (0.2–2%)	>6 $\log_{10}$ survival of resistant strain in 2% glutaraldehyde	Rifampicin, vancomycin, clarithromycin, erythromycin	Msp	80
	Escherichia coli	Chlorophene (0.5–2.49 mM) Povidone-iodine (67–111 µg ml^{-1})	Increased growth in twofold to fivefold higher concentrations of biocide after 500 generations	Ampicillin; chloramphenicol; norfloxacin	OmpR; EnvZ	82
Metabolic changes	*E. coli*	Hydrogen peroxide (200 µM)	Increased growth in approximately twofold higher concentration after 500 generations	Ampicillin; chloramphenicol	RNA polymerase (*rpo*)	82
	Mycobacterium smegmatis	Triclosan (0.8–1.6 mg ml^{-1})	Fourfold to sixfold increase in MIC	Isoniazid	Lipid metabolism (InhA)	112
	Listeria monocytogenes	Triclosan (1–4 µg ml^{-1})	No change in MIC	Aminoglycosides	Heme metabolism (*hemH*, *hemA*)	111
Modifications of surface change	*P. aeruginosa*	BZC (50–1600 mg l^{-1})	7–25-fold increase in MIC	Polymyxin B	*pmrB*	67
Extracellular metal-binding protein	*Klebsiella pneumoniae*	Silver (≤64 µM)	NA (clinical isolates only); resistance to silver based on literature values	β-Lactams, fluoroquinolones, aminoglycosides (plasmid-encoded)	SilE	167

BZC, benzalkonium chloride; MIC, minimum inhibitory concentration; NA, not applicable. [a]Induction of SOS response and antioxidant enzymes also noted.

Maillard & Pascoe. Nature Rev Microbiol 2024.

Biocide and therapeutic antimicrobial cross-resistance

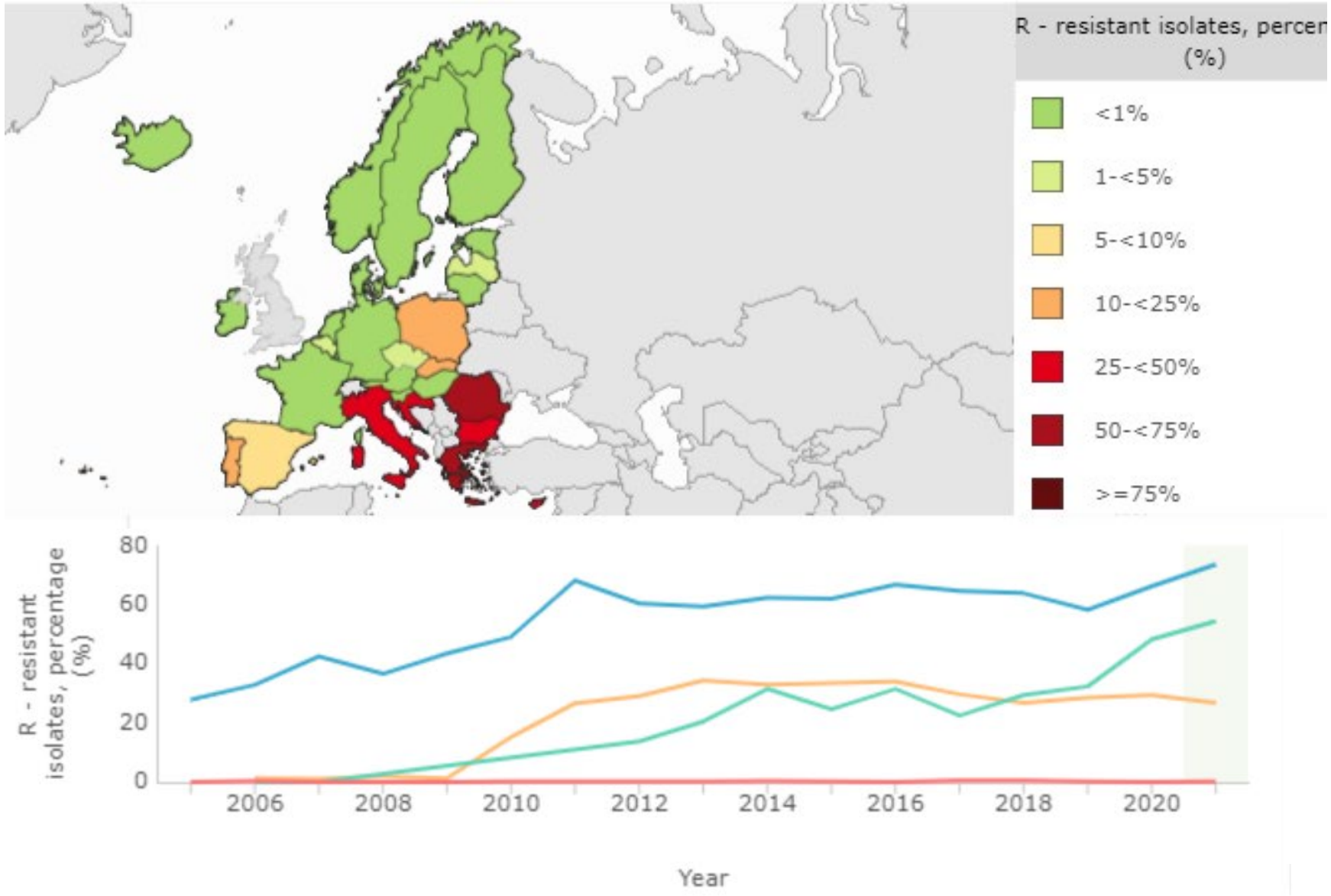
- Direct – shared mechanism for reduced susceptibility to biocides and resistance to therapeutic antimicrobials
- Indirect
  - Exposure to biocides can “switch on” AMR
  - Co-selection of resistance genes on the same mobile genetic element
- Cross-resistance to other biocides can occur
- Risk of cross-resistance varies by biocide
  - Oxidising agents less prone to cross-resistance
- Limited evidence of “real world” impact

Why I’m not too worried about reduced susceptibility to biocides

Biocide reduced susceptibility	Therapeutic antimicrobial resistance (AMR)
Subtle and difficult to measure	Barn door
Few examples of clinically significant issues	We are running out
Have been using for decades without “failures”	New therapeutic antimicrobials don’t last long
We can “formulate our way out”	Formulation isn’t a way out

Why I'm <u>really</u> worried about resistance to therapeutic antimicrobials (aka AMR)

% invasive K. pneumoniae isolates resistant to carbapenems (CRE)



ECDC 2023.

Surface disinfectants in healthcare: when to use them, how to choose them, and their contribution to AMR

Jon Otter PhD FRCPath
Director of Infection Prevention and Control & Consultant Clinical Scientist
Guy's and St Thomas' NHS Foundation Trust / Imperial College London
@jonotter
j.otter@imperial.ac.uk
Blog: www.reflectionsIPC.com
Slides: www.jonotter.net

Panel Discussion

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Scan the QR code to download winter campaign resources.