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and nature of identified needs, extracting their root cause, and assessing them from both a clinical and cost perspective to determine the priority for investing resources. Problem solving involves collaboratively brainstorming around these needs to identify more effective or completely new solutions, and prioritising those with the best business case to put forward.

Results: The result is a set of cost-effective and valuable interventions, potentially involving new clinical programs or technologies, and a documented trail of decisions, from initial conversations through to the final outcome. When these tools are applied by manufacturers in collaboration with healthcare professionals, manufacturers can ensure new products are designed and implemented, with the appropriate data required to inform purchasing decisions.

Conclusion: Approaching infection control from different angles may lead to disruptive interventions that change the face of patient care.

FROM UNCONSCIOUS INCOMPETENCE TO CONSCIOUS COMPETENCE – LEARNINGS FROM A LEGIONELLA OUTBREAK

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The Wesley Hospital, Toowong, Australia

Introduction: In June 2013 the Wesley hospital made the national news because of a Legionella outbreak. The 524 bed private hospital reported two immune-compromised patients had contracted pneumonia whilst they were inpatients at the facility. Investigations revealed the Legionella was in the potable water system of the hospital.

Methods: Initially there was a lack of guidelines for the management of legionella in potable or drinking water systems, there were many guidelines for managing legionella in cooling towers, but not a lot of guidance for remediation of a drinking water supply that was infected by Legionella bacteria.

External experts were sought to assist the Wesley work towards a safe water supply for the complex water systems within the hospital. There are approximately 3,000 water outlets and 16 kilometres of pipes within the building complex, so initially the remedial work was done with the approach of "curing" the water system of legionella.

Results: Australian guidelines for Legionella control in the operation and maintenance of water distribution systems in health and aged care facilities were published in January 2016. Queensland parliament will make compliance with the enhealth guidelines compulsory for all healthcare facilities in Queensland. Part of this compliance is having a Water Quality Risk Management Plan (WQRMP) in place.

Conclusion: A multi-level strategic approach is needed for managing Legionella and other water born bacteria within a water distribution network and these strategies now form the basis of the WQRMP for the Wesley.

GENOTYPING AND GENOME SEQUENCING FOR HOSPITAL OUTBREAK SURVEY AND INVESTIGATION

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Introduction: Prospective surveillance for methicillin-resistant Staphylococcus aureus (MRSA) using rapid, discriminatory binary typing is routinely conducted in a Sydney tertiary public hospital. This surveillance indicated an outbreak of the MRSA sequence type (ST) 239 in three surgical wards, spanning a one-year period. We assessed the role of whole genome sequencing (WGS) as a tool that could complement binary typing in outbreak investigations.

Method: We retrospectively performed WGS on MRSA isolated from 48 patients from the outbreak and compared them with an Australasian ST239-MRSA database. We selected patients that were admitted to surgical wards during the outbreak, who were included in MRSA colonisation point prevalence surveys, who were considered to be involved in MRSA transmission based on limited epidemiological information, and who carried a prevalent ST239 binary type.

GET THE JAB DONE

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Introduction: A government funded healthcare worker influenza vaccination program has been implemented for many years in Victorian public hospitals and data has been collected since 2005. The Department of Health and Human Services (DHHS) increased the vaccination target rate to 75 percent in 2014. The Royal Children’s Hospital aims to increase the uptake of the influenza vaccination to 90 percent with a nurse immuniser managed program.

Method: Healthcare workers and other hospitals were consulted to identify improvements to facilitate vaccination. Strategies to enhance the campaign included increased access to the vaccine with streamlined sessions, local nurse immunisers, education and communication. Nurse immunisers were supported in their role with education and resources. An education campaign targeting myths was updated. Communication included lift screens, intranet messages and customised emails to managers and individuals.

Results: The program commenced with daily sessions for four weeks. The percentage of staff vaccinated in the first four weeks exceeded the target of 75 percent. Drop in sessions continued with nurse immunisers roaming in offices hours and local nurse immunisers providing afterhours vaccination. The combination of education, individual reminders and providing access to the vaccine has resulted in a high vaccination rate early in the campaign. Final results will be available in August.

Conclusion: Vaccine campaigns require time to succeed. Support from leaders, continuous education and communication to healthcare workers is essential in increasing uptake across staff categories. Acting on feedback from healthcare workers, increasing access and supporting the local nurse immunisers resulted in a high vaccination rate.

GETTING IT RIGHT: PPE DEMONSTRATION VIDEOS

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Introduction: Personal protective equipment (PPE) is used to protect healthcare workers (HCWs) and patients from healthcare associated infections. Protection afforded by PPE relies on the application and removal techniques.

Outbreaks of infectious diseases such as Severe Acute Respiratory Syndrome, H1N1 influenza and Ebola Virus Disease have highlighted how poor PPE removal technique exposes HCWs to infectious agents.

To address this risk a portion of the Tasmanian state PPE stockpile funding was allocated to develop resources to demonstrate the correct use of PPE.

Method: Tasmanian Infection Prevention and Control (TIPCU) teamed with a local production company to produce demonstration videos for the correct technique for putting on and removing items of PPE. TIPCU minimised costs by using local resources.

Results: The 48 isolates were of two binary types and differed by 384 single nucleotide polymorphisms (SNPs). Four distinct clusters or groups of isolates were identified. These clusters had formed after gaining or losing an arginine catabolic mobile element, which is considered to be a determinant for virulence or colonisation. The clusters, while genetically similar, were not always linked in time or by location. One cluster involved isolates of both binary types.

Conclusion: While prospective binary typing is suitable for rapidly detecting suspected nosocomial outbreaks, WGS provides more definitive descriptions of outbreaks and clinically relevant strains. It can identify clusters occurring within an outbreak, exclude cases, and link others that differ in strain subtype or that are distant in time or location.
Conclusion: Our videos are distinct from other PPE videos as they demonstrate the individual items of PPE required for standard and transmission-based precautions and incorporate the timing of hand hygiene to ensure HCWs are not exposed to infectious agents.

HAND HYGIENE AWARENESS: FROM THE INSIDE LOOKING IN
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Abstracts
Introduction: Medical officer (MO) hand hygiene (HH) compliance has historically been below the national threshold of 70% and 17-18 percentage points lower than nursing staff. Routine HH audits have an external reporting focus and do not collect results by individual, team or practitioner level. This MO hand hygiene initiative aimed to improve HH compliance by focussing on awareness and barriers to compliance at Redcliffe Hospital.

Methods: Interns were trained and rostered to audit MO HH compliance for 1 hour during a two-week period in ward, emergency department and theatre settings. Interns did not audit their own team and used a photo-board to identify individuals. The audit was conducted in 2015 and 2016. Results were presented to medical staff. Monthly compliance was monitored by routine audit.

Results: Twenty interns audited 284 moments (72 MOs) in March 2015. Overall compliance was 69%; highest compliance was observed after a procedure (74%) and for registrars/principal house officers (71%). Barriers included accessibility of hand rub (n = 32) and use of gloves without hand washing (n = 9). In April 2016, 22 interns audited 333 moments (94 MOs). Overall compliance was 80% with highest compliance amongst interns (94%) and after touching a patient or procedure (87%). Inaccessibility of hand rub was low (n = 4); gloves were used without hand washing in 6 cases. Mean compliance in the 14 months prior to each MO audit increased from 62% to 69% (p = 0.021).

Conclusion: MO involvement in training and peer review, combined with individual/team accountability, may contribute to improved HH compliance.

HAND HYGIENE MONITORING IN RESIDENTIAL AGED CARE: NATIONAL AND INTERNATIONAL PERSPECTIVES WITH RELEVANCE TO AUSTRALIAN FACILITIES
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Abstracts
Introduction: Situated on the Randwick Campus are the Prince of Wales Hospital (PoWH), Royal Hospital for Women (RHW) and the Sydney Children’s Hospital (SCH). The SCH is not networked to the PoWH & RHW. In 2008 PoWH, RHW & SCH collaborated to start influenza vaccinations for Healthcare Professionals (HCP) with a ‘blitz’ clinic. This event is now run annually as a mass Campus drop-in clinic at the start of the influenza season. The aim is to provide the opportunity for a large cohort of HCPs to be vaccinated early against a vaccine-preventable disease and to deliver the service in a fast, efficient and effective way.

Method: Organisation for these clinics require collaboration and support. Preparation and logistics include: obtaining Standing Orders from each Network, staff rostering, adherence of the cold chain, and equipment for twelve vaccination stations. These clinics are followed by ongoing influenza vaccination clinics both in CHESS and roaming across POW & SCH. Additionally this approach continues to give us guidance for pandemic vaccination planning.

Results: In 2008 a total of 777 HCP were vaccinated, and for 2016 a total of 2,376 influenza vaccinations were administered on the mass clinic days.

Conclusion: The mass influenza clinics have been running for 8 years. The ongoing nature and HCP expectation of this annual clinic ensures “word of mouth” advertising & fosters goodwill with staff. We continue to improve upon the initial pilot programme and sustain an effective annual Influenza vaccination programme.

HEALTHCARE PROFESSIONALS ANNUAL INFLUENZA VACCINATION: SUSTAINING AN INNOVATIVE & COLLABORATIVE APPROACH IN NON-NETWORKED HOSPITALS
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Abstracts
Introduction: Any approach promoting a culture of safety and the prevention of healthcare associated infections (HCAIs) should involve all stakeholders, including by definition the patients themselves. This qualitative study explored the knowledge and attitudes of healthcare workers and patients towards the concept of patient empowerment focused on improving infection control practices.

Methods: In-depth interviews were undertaken with patients and staff members from a surgical department of a large tertiary hospital in Sydney, Australia. Thematic analysis was conducted.

Results: There was virtually unanimous agreement amongst the participants that patients should be thought of as a ‘stakeholder’ and should have a role in the prevention of HCAIs. However, the degree of responsibility and or level of system/staff engagement that the patient could have varied across the responses. While very few of the staff members or patients interviewed had previously been exposed to the concept of empowerment, they were accepting of the idea and were surprised that hospitals had not yet adopted the concept. Staff members expressed astonishment that it has taken hospitals so long to move away from the “traditionally patriarchal model” of health care. However, they felt that a lack of hospital support, time and staffing would be key barriers to the implementation of any empowerment programs.

“I JUST DON’T WANT TO CAUSE FIRES”: THE ATTITUDES OF HOSPITAL PATIENTS AND STAFF TOWARDS PATIENT EMPOWERMENT STRATEGIES TO REDUCE HEALTHCARE ACQUIRED INFECTIONS
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Abstracts
Introduction: The mass influenza clinics have been running for 8 years. The ongoing nature and HCP expectation of this annual clinic ensures “word of mouth” advertising & fosters goodwill with staff. We continue to improve upon the initial pilot programme and sustain an effective annual Influenza vaccination programme.

Conclusions: Recommendations and models for assessing HH compliance within RACFs are not uniform. Observational auditing in these settings may be unjustified given the opportunity cost of resourcing. Although CDC prefers monitoring may be less resource-intensive, limited data are provided for quality improvement. Looking ahead, a range of methods should be piloted for acceptability/sustainability within Australian RACFs.