

IHEA Healthcare Facilities Management Conference 2017

PULLMAN MELBOURNE ALBERT PARK
11-13 OCTOBER 2017



ABSTRACT EXTRACTS

ORAL PRESENTATIONS

Stream: Building Code of Australia including occupancy certificate, essential services, statutory & regulatory maintenance

THURSDAY 12 OCTOBER, 10.15AM

Beyond compliance: meeting the indoor environmental needs of the occupants in hospital buildings

Prachi Garnawat, RMIT University

Abstract:

The assessment and management of indoor environmental quality (IEQ) in hospital buildings is a challenging task. The diverse needs of the building occupants in hospitals, including patients, staff and visitors are often regarded to be similar with the provision of uniform indoor conditions. IEQ management in healthcare facilities is generally based on complying with standards set for certain parameters of IEQ such as temperature set-points and ventilation rates. However, compliance with the standards and regulatory measures might not always result in occupant satisfaction of indoor environments. There is limited information on IEQ management practices and the impact on building occupants in Australian healthcare facilities. The aim of this paper is to review and investigate the IEQ assessment and management practices of a regional hospital in Victoria and compare these with current IEQ management standards. Further, an online staff survey was conducted to evaluate the satisfaction level of building occupants with the hospital indoor conditions. The analysis of hospital IEQ management practices, when compared with IEQ management standards, suggest the need to incorporate the feedback of occupants in the assessment and management of the quality of indoor environments.

THURSDAY 12 OCTOBER, 10.35AM

Epworth Hospital Richmond: making the spectacular safe and easy to maintain

Carl Sachs, Workplace Access & Safety

Abstract:

The view across the city from Epworth Hospital's new 430 private rooms in Richmond is spectacular.

So was the challenge facing the hospital's engineers; the thousands of square metres of glass sheathing the 2016 redevelopment could not be cleaned. At least, not in compliance with Australian safety laws.

Workers would have to traverse rooftops just 2.5 metres wide en route to the façade and, even then, the building's parapets were unable to support an abseiler's rope.

Conventional guardrails were ruled out due to aesthetic considerations.

The only option appeared to be portable ladders spanning three storeys, which was quickly rejected on safety and compliance grounds.

The solution was a combination of invisible permanent fall prevention equipment that minimises the load on the building's structure while meeting Australian safety benchmarks.

CodeMark approval provided evidence of compliance with Australia's National Construction Code.

The result is an access system that is compliant with OHS laws and the NCC while being manageable for Epworth's engineers to maintain.

Stream: Department of Health and Human Services building design requirements

THURSDAY 12 OCTOBER, 11.25AM

How can this happen to me?

Mark Hooper, ECHUCA Regional Health

Abstract:

Two fundamental elements critical to compliance in hospitals are Fire compartmentation and Electrical compliance.

Both elements are key life safety systems and with some luck should never be required to prove their worth in anger.

This paper articulates the requirements expected of facilities managers in meeting the Australian standards, Building code and Construction codes relevant to fire and smoke compartmentation penetrations and electrical compliance in hospitals.

I have not yet commissioned a building where there has not been an issue with compliance in either of these two areas. This should be somewhat surprising given the numerous requirements for compliance statements from trades and builders, inspection from consultants, and independent inspections from system certifiers.

Together we will explore the end to end transition from building design through to occupation, the interaction of each party in their space of responsibility and the opportunities that exist in contracts to ensure effective compliance during construction to avoid costly remediation works.

A broad review of current changes in some of the responsible standards will be undertaken ensuring that our healthcare facility professionals can be upskilled and feel empowered to engage the players in industry to meet the standards required to ensure the healthcare built environment is safe and compliant.

A paradigm shift is required to move from “how can this happen to me” to “together we can achieve compliance”. Lets get the ball rolling....

THURSDAY 12 OCTOBER, 11.55AM

Regulatory Compliance of Healthcare Facilities

Cameron Milne, Amec Foster Wheeler

Abstract:

In addition to the Department of Health and Human Services building design requirements and the Building Code of Australia/National Construction Code requirements, specialised areas and facilities within health care facilities such as pharmacies, pathology departments, research & testing laboratories, animal facilities and cleanrooms for the manufacture of radiopharmaceuticals, cytotoxics, therapeutic human blood and blood components etc., need to satisfy other regulatory bodies to achieve accreditation or compliance requirements. These bodies include individual state pharmacy authorities, the Office of the Gene Technology Regulator (OGTR), the Department of Agriculture and Water Resources (formerly AQIS), the National Association of Testing Authorities (NATA), the National Pathology Accreditation Advisory Council (NPAAC) and the Therapeutic Goods Administration (TGA). This presentation will discuss some of these regulators and their requirements as they relate to the design and construction of facilities for safe and compliant operation using experience gained during the design and construction of the new Royal Adelaide Hospital and the Victorian Comprehensive Cancer Centre (new home of the Peter MacCallum Cancer Centre) amongst others that contain specialised facilities with regulators such as those described above.

Stream: Health Service Compliance, including OH&S, infection control, waste and pollution and energy management

THURSDAY 12 OCTOBER, 1.30PM

The implications of the Climate Change Act 2017 on the health and human services sector

Tiernan Humphrys, Department of Health and Human Services

Abstract:

The Climate Change Act 2017 sets a long term emissions reduction target for Victoria to have net zero carbon emissions by 2050. The Act places requirements on government departments, public entities and the health and human services sector in respect to emissions reduction and climate change adaptation.

The presentation will go through the implications of the Act on the health and human services sector, how the department is responding and any compliance requirements arising from the Act for public health services. The presentation will also go through any changes to existing public health service environmental compliance requirements, such as environmental public reporting, environmental management planning and reporting environmental data to the Department of Health and Human Services.

THURSDAY 12 OCTOBER, 1.50PM

Facility Design and Complying with AS/NZS 4187:2014

Andrew Gay, Sterilizer Validation Australia

Abstract:

Health service facilities are continually being challenged by a plethora of applicable standards and their new requirements. Innovative design solutions that rationalise capital expenditure and ongoing operational costs, in an ever-changing environment is an exciting challenge. To meet these challenges, a key goal for any design, review or compliance assessment is to unveil the return on investment options coupled with opportunities to provide future proofing alternatives as well as assured stringent business continuity measures. Most often this can all be about engineering out the risks through evidence-based designs, systems and processes. However, this can be quite confronting for services that have not been privy to the developments in new practices and technical solutions. Engagement with operational staff is paramount to owning the options and solutions you want to test or push in the marketplace. Embracing change is critical to ensure antiquated practices do not creep back into designs and solutions. So, while the standards may change, seizing the opportunity to implement changes well means all standards, including those set by healthcare clients are not only met, but exceeded.

THURSDAY 12 OCTOBER, 2.10PM

Infection Prevention and Workplace Safety in Operating Rooms by Airborne Particles and Bacteria Dictate Changes in Existing Standards

Rupert Mack, Weiss Klimatechnik GmbH

Abstract:

World Health Organization (WHO) is warning about a tremendous increase of antibiotic resistance bacteria. Numerous studies show the health threats related to surgical smoke. The issues related to particles in high risk areas historically are taken into account in the industrial cleanroom business represented by ISO EN 14644. In cleanrooms as in critical areas in hospitals, particularly in operating rooms, it is always about protecting people and material. The focus is to protect people from hazardous substances as well as surgical instruments from contaminants. There is no doubt air is a transmitter of particles and bacteria. Worldwide we differentiate two types of airflow: Laminar or Unidirectional Flow and Mixed Flow. Compared to Mixed Flow Laminar Flow assures more than 90 % of reduction in terms of airborne bacteria in the protection zone in the operating room. That is a major advance in keeping surgical instruments clean. Clean instruments prevent infections. Furthermore, only Laminar Flow prevent inhalation of surgical smoke by the surgeons. These new findings require a change in existing national standards for airborne particles. That's why a new European standard is now being developed.

THURSDAY 12 OCTOBER, 2.40PM

Modern asset management thinking applied to hospital facilities

David Wiley, AMCL

Abstract:

Hospital facilities have been managed for many years so it is not a new discipline. But how is modern asset management thinking influencing the way we should be looking at the management of these important assets?

We all know that failure of assets is inevitable, so how do we practically plan for this to ensure all important performance expectations are met?

Maintenance has evolved over the years from a 'fix it when it breaks' regime to a more proactive approach that enables improved patient experience, satisfaction and clinical outcomes. Do relatively new techniques have a place in optimising these important objectives? And how are these applied in practice to quantitatively demonstrate that the right balance between performance, cost and risk has been achieved?

Does the introduction of ISO 55001 have any relevance in hospital facilities management? If so, how can the principles and requirements be embedded in the way we manage these critical assets in a practical way?

This paper provides the answer to these questions through the exploration of examples based on experience helping facilities managers better align their activities to support facility objectives.

THURSDAY 12 OCTOBER, 3.45PM

National legislative requirements for the maintenance of essential safety measures

Tony Stokes, Stokes Safety

Abstract:

Stokes Safety provides multi-disciplinary services to building owners and agents Australia wide. Being one of the founding members of the profession we have practiced in this field for over 30 years. Our aim is to provide a single source of compliance services and advice to our clients, enabling them to save time, money and simplify their responsibilities relating to building operation, maintenance and occupiers safety.

The team at Stokes Safety has provided essential safety measures, asbestos and other health and safety consultancy services to a range of organizations across Australia and has undertaken many large scale projects including hospital developments, multi-storey apartment buildings, and large distribution warehouses for both private and Government organizations.

Stokes Safety's Directors Tony Stokes and Patrick Stokes are both experienced building surveyors. Tony is highly experienced in all facets of Building Regulations and works on multiple hospital and Aged Care related projects every year. Patrick is experienced in all facets of Building Surveying and Building Compliance.

Over time Stokes Safety has evolved into a company that today specializes in consulting on Building Regulations, HAZMAT, Occupational Health and Safety, Dangerous Goods, Fire Engineering, Essential Safety Measures, and Contractor Compliance Management. Stokes Safety employs specialist, experienced consultants in each of these fields so their clients are assured they are dealing with an experienced, conscientious team whose aim is to protect their clients' businesses by providing peace of mind.

Stokes Safety will discuss at the Institute of Healthcare Engineering, Australia conference the following items as this relates to the maintenance of essential safety measures:

- National legislative requirements for the maintenance of essential safety measures
- The BCA and national compliance framework
- The Australian Standards and delineation of performance and maintenance standards and how
- this relates to occupation certificates and the annual fire safety statement.
- Risk mitigation methods
- Annual survey and annual condition report responsibilities
- Expectations for compliance for the maintenance of essential safety measures and who is responsible
- Developing service contracts for maintenance of essential safety measures
- Authority expectations and documentation responsibilities

By adopting a one stop holistic approach to building compliance, Stokes Safety has evolved from a firm of Building Surveyors/Certifiers to a team of Building Compliance Specialists. This approach allows us to provide service offerings across various disciplines, including building certification, fire safety, health and safety and asbestos and provide a broad range of advice and experience to the conference attendees.

Stream: Health Service Compliance, including OH&S, infection control, waste and pollution and energy management

FRIDAY 13 OCTOBER, 9.15AM

Developing a Water Quality Risk Management Plan

Sarah Bailey, QED Environmental Services

Abstract:

With the publication of the en health guidelines for legionella control, it has become important for hospitals and healthcare facilities to develop a risk management plan targeted at managing the risk of legionella within the water systems in healthcare facilities. However, legionella is not the only risk with water systems within large buildings, and other risks, such as Pseudomonas, a much more common cause of waterborne hospital acquired infection should be considered too. The development of a more inclusive risk management plan for water supplies is therefore recommended for hospitals and healthcare facilities. This presentation aims to cover some of the important elements that should be included in a water quality risk management plan, for both legionella and for other risks, an outline of why they are important and some of the risk management practices that can be employed to manage water quality risks.

FRIDAY 13 OCTOBER, 9.45AM

Meeting compliance and minimizing the risk of further waterborne pathogen related outbreaks in Australian hospitals

Morten Schnoor, Pall Water

Abstract:

Hospitals are facing regulations following frequent Legionella detection, an airborne bacterium common in Australia. To prevent hospital acquired infections, Wesley Hospital, a private 535-bed Brisbane hospital, sought to implement its own water treatment system after experiencing a Legionella outbreak.

Based on its reputation for successfully preventing similar Legionella outbreaks in Europe, Wesley Hospital installed a membrane filtration system from Pall Water to provide a physical barrier to contamination in incoming water. Since installing the filtration system, Wesley Hospital has not experienced a single Legionella detection. Prevention of outbreaks has also lowered the consumption of Point of Use Filters and eliminated the potential need for expensive, time consuming decontamination processes saving the hospital an estimated \$750,000 per year and an additional potential \$1.2 million per outbreak.

This presentation will detail how Wesley Hospital overcame a disastrous Legionella outbreak and transformed its water treatment strategy to prevent future waterborne pathogen related outbreaks. With its state-of-the-art membrane filtration system, Wesley Hospital has become a model for hospitals in the region facing Water Management.

FRIDAY 13 OCTOBER, 10.45AM

Safety-in Design Responsibilities for Hospital Engineers and Facility Managers - How to avoid being left with difficult and expensive to resolve safety issues

David Oakeshott, A.G. Coombs Advisory

Abstract:

Safety-in-design is an important and emerging issue for Hospital Engineers and Facility Managers, and as yet often not well understood or adequately addressed. There is now clear responsibility throughout Australia under the Commonwealth WHS Act 2011 for the works that Hospital Engineers and FM's commission or oversee to:

"...ensure, so far as reasonably practicable, that the health and safety of other persons is not put at risk from the work carried out as part of the conduct of the business or undertaking".

This affects Engineers and FM's in their role as instigators and or managers of works and also as 'inheritors' of project outcomes with legacy safety issues that are difficult and often expensive to resolve. Whilst the responsibilities from a legal perspective are clear, albeit not well known, the practicalities around addressing the obligation remain problematic for many elements of the industry.

This presentation will provide a clear understanding of the obligations for safety-in-design as they relate to Hospital Engineer and Facility Manager roles, using case study examples depict how to ensure that there are measures included in works projects to address this regulatory requirement, and describe effective ways to avoid being left with legacy safety issues.

FRIDAY 13 OCTOBER, 11.15AM

Compliance with OHS, Legionella and Environmental Legislation and the Role of Management Systems

Rafx Hamilton, Engineering Services Manager, Cabrini Health

Abstract:

Legislative compliance is a key responsibility of healthcare facility managers. Aspects of legislation we need to be aware of and comply with include legislation in regard to OHS, legionella control, and energy and waste management. OHS applies to all persons in the workplace. Effective planning, with supporting documentation is a key component to ensuring workplace safety. A key component of OHS legislation is an understanding of Worksafe reportable incidents. Legionella prevention and control is another key area of responsibility for healthcare facility managers. Good management of water systems can reduce infection risk to patients and the general public. Health care facilities generate significant waste, consume energy, and are significant polluters. Effective management of waste and energy consumption can ensure regulatory compliance, reduce risks and reduce costs and improve environmental performance. An effective way of managing compliance is through good management systems. Management systems provide an effective mechanism to document and control policies and processes and to ensure that activities are performed in compliance with legislation and corporate requirements. The Cabrini Health Engineering department operates under an accredited ISO9001 Quality Management System and also manages the Cabrini wide ISO14001 Environmental Management System. Accredited management systems introduce consistency and rigour in activities, drive continuous improvement, and provide a sound reporting framework with documentary evidence of methodologies used to ensure legislative compliance.

FRIDAY 13 OCTOBER, 12.45PM

Non-Compliance and Hospital Acquired Infection: Using Design Methodologies to Improve Hand Hygiene Practices

Kieran John & Donald Campbell, Monash University

Abstract:

There is an understood correlation between poor hand hygiene and hospital acquired infection (HAI) (Al-Tawfiq & Pittet, 2013). Evidence indicates the global cost of HAI is between \$35.7-45B (Scott, 2009) and the WHO estimates there are 80,000 deaths per year attributable to HAI (WHO, 2017). Nevertheless, it is difficult to trace infection transmission back to poor hand hygiene practices by specific individuals. This lack of direct risk relationship makes enforcing hand hygiene an acute compliance issue.

This paper describes an ongoing research project led by Monash University Health Collab, a design research lab working across the medical and healthcare industry, in collaboration with a large Australian hospital and Enware, a manufacturer providing taps to hospitals. The research works to reduce HAI by improving hand hygiene practices, using design thinking and co-design methodologies. Using systems evaluation and empathy research with individual end-users, it identified failings of current procedures and motivations behind non-compliance.

While causation for sub-optimal hand hygiene is complex, a foundational problem is mindset and how it directs human behaviour. This research introduces the findings of a non-conventional, collaborative research project using design to improve mindsets and human behaviour to facilitate compliance, including forthcoming interventions and testing.

FRIDAY 13 OCTOBER, 1.05PM

Facility Hygiene - How clean is clean? or How Clean does it need to be?

Brett Cole, Biosafety

Abstract:

In any hygiene project that focuses on cleanliness, the universal question often asked is “How clean is clean?”. But far too often, the project hygiene focus is on the question of cleanliness rather than “How clean does it need to be?”, or what is the desired cleanliness outcome. The former is, without a doubt, a very important question in terms of validation of a hygiene project, however the latter is the question that should be asked first as it is imperative in detailing the hygiene scope, available methodology, chemicals where used, approach and validation. The level of cleanliness is often dictated by industry standards and codes of practices but often there is no standard so it is up to the Facility to determine the best course of action and this is not always clear.

This presentation will focus on determining the level of cleanliness for a given project, the management approach to such hygiene projects, discussions over appropriate hygiene methods and materials, scheduling and validation. This will be supported by case studies and references from industry projects. The aim is to provide the audience with an educational forum for dealing with the task of managing hygiene projects and the desired outcome.

FRIDAY 13 OCTOBER, 1.35PM

Common Approach for Asset Management and Statutory Obligations

Seyed Safi, Covaris

Abstract:

This paper describes the processes that enable demonstration of asset management compliance with statutory requirements regarding maintenance delivery.

The work presents the processes developed for the efficient upgrade of the asset management system from the initial asset validation to the final upload of the master data in the asset management system. Four processes were developed to ensure that data collection, validation, development and management is consistent across the portfolio. The techniques outlined in these processes are presented utilising a case study of a portfolio of public hospitals.

The first process is for asset validation and data collection including guidelines for asset attributes and data standards. The second process is for asset condition assessment. The third process provides a consistent procedure for asset criticality analysis. The last process is for development of preventive maintenance strategies for maintainable assets.

The main requirement of the maintenance strategies is the compliance with statutory obligations. The process ensures the statutory compliance by providing the line of sight from statute to regulation to asset class and to maintenance job plans. It provides the asset manager the visibility of the requirements of maintenance for each asset type and ensures the compliance on the maintenance requirement of the asset portfolio.