



SESSION AGENDA

Monday, October 5, 2020

CONCURRENT 1

ASHE Education Theater

9:00 – 10:00 a.m.

Developing a Code Compliant Fire Alarm ITM Program

Joshua Brackett, PE, SASHE, CHFM, Special Projects Manager, Baptist Health Systems;
Jonathan Hart, PE, SASHE, CHC, Technical Lead, National Fire Protection Association

Health care occupancies are constantly battling inspection, testing and maintenance (ITM) contractors about their fire alarm ITM program and results. Errors in the development of ITM contracts, a lack of training and owner involvement, the inability to involve all necessary parties and several other factors often lead to citations from CMS accrediting organizations (AOs), including The Joint Commission and DNV. In fact, citations for lack of compliant ITM programs or documentation consistently appear as one of the most common noncompliant items in hospital surveys. Using components from NFPA's "Fire and Life Safety Ecosystem" and reviews of NFPA 72®, National Fire Alarm and Signaling Code, and NFPA 4, Standard for Integrated Fire Protection and Life Safety System Testing, this session will present a case study of Baptist Health, an 11-hospital health care system in Arkansas, and will outline how the system successfully worked with a local fire alarm ITM provider to develop a truly code-compliant fire alarm ITM program over a two-year period. Review of lessons learned and a step-by-step guide will be provided and ASHE tools will be referenced.

- Identify code requirements and common misinterpreted or misapplied code requirements.
- Review common contract errors, device testing errors and communication errors.
- Identify strategies to train fire alarm ITM contractors on CMS, Joint Commission and DNV requirements to ensure the hospital is continuously survey ready.
Describe step-by-step how to replicate and implement a code-compliant fire alarm and emergency program.

The Race to 100: Achieving Operational Efficiency

Caleb Brantley, Vice President, Bernhard TME; **Todd Harvey**, Director of Engineering Services, Memorial Hermann Hospital Cypress; **Caleb Haynes, PE**, Vice President of Business Development, Bernhard TME;

Jacob McCall, CHFM, Director Engineering Services, Memorial Hermann Sugar Land Hospital

Learn how two hospitals won the race to an Energy Star score of 100. Team members with Memorial Hermann Health System share their paths to operational efficiency through continuous commissioning, building analytics and sustainable maintenance strategies. Shortly after new construction and major expansion, Memorial Hermann Cypress and Memorial Hermann Sugar Land began a race to lower their site EUI and attain a perfect Energy Star rating. Session participants will hear directly from Memorial Hermann's facility managers about the design approach, monitoring tools and operational strategies they employed to optimize building systems for operational and energy efficiency and win the race to Energy Star 100.

- Identify methods for incorporating facility and operational perspectives into the design process to create a foundation for operational effectiveness.
- Assess tools for monitoring and troubleshooting building automation systems that can be utilized to achieve and sustain energy savings during operation.
- Learn preventative maintenance strategies that support sustainable operation.
- Implement operational tactics to maximize efficiencies of HVAC equipment and controls systems.

Water Management and Infection Prevention during Construction

Greg Ballay, RN, BSN, Director of Employee Safety, Allegheny Valley Hospital; **Scott Hamilton**, Senior Director, IAPMO Group/ASSE International; **Kurt Steenhoek**, International Representative, United Association

Health care facilities face challenges in water quality, namely Legionella. Possible issues also arise during construction or remodeling pertaining to risk assessments and infection control. ASSE Series 12000 is an ANSI-approved standard which addresses both topics. Patient protection is imperative during construction activities; thus, it is important to have trained and certified contractors and workers. These trained and certified contractors and workers can also play a role on water management teams along with implementing water management plans meeting the requirements of ASHRAE 188. This session will include perspectives from several key groups affected by the ASSE Series 12000. ASSE Senior Director Scott Hamilton will moderate a panel discussion. United Association International Representative, Kurt Steenhoek, will represent the worker's perspective. Ed Gormley, ASSE 12000 certified contractor, will represent the contractor's perspective, while Greg Ballay, director of employee safety, Allegheny Valley Hospital, will provide the health care facility perspective.

- Discuss the requirements of being certified and why third-party certification is critical.
- Describe how the ASSE Series 12000 standard and a certified contractor and workforce can assist with risk assessments and infection prevention during construction and remodeling.
- Recognize the importance of having a trained and certified contractor and workforce participating on water management teams along with water management plan implementation.
- Explain how the ASSE Series 12000 can assist in meeting the ASHRAE 188 requirements.

Solution Spotlights & Sessions

Solutions Theater

10:00 - 10:30 a.m.

Solution Spotlight: Safety First! Disinfectant and Emergency Lighting Technology Solutions for Health Care (Presented by EMC)

Aakash Chandarana, Director of Advance Development;

Safety concerns top the minds of health care facility managers now more than ever and lighting can play an important role in providing a safe and reassuring environment for patients and health care professionals. From disinfectant lighting, which kills pathogens with up to 99.9% effectiveness, to emergency light testing that provides efficient and cost-effective ways to illuminate exits during emergencies, lighting reassures patients and personnel that you are taking all necessary precautions to keep your facilities safe. Learn the latest safe lighting methods, how they can be automated with your building management systems and help you meet human safety expectations and your business goals.

Attend this session to learn about the latest in disinfectant and emergency lighting and controls technologies from an industry expert to include:

- Best practices for determining which safety lighting technologies are right for your facility
- Technologies readily available for implementation
- Considerations for which controls technologies could be used to manage and integrate disinfectant and emergency lighting into your lighting and building operations management systems

General Session

ASHE Education Theater

10:30 – 12:00 p.m.

Opening Session & Keynote Presentation: **Life is Magic**

Jeffrey Henne, FASHE, CHSP-FSM, CHEP, CHC, Safety & Emergency Manager, University of Pennsylvania Health System; **Jon Dorenbos**, Magician and Former Long Snapper, New Orleans Saints & Philadelphia Eagles

Welcome & Awards: ASHE Welcome & presentation of the 2020 ASHE President's Award and the ASHE 2020 Crystal Eagle Leadership Award along with recognition of Regional Leader Awards.

Life is Magic: Jon Dorenbos amazes crowds with acts of comedy and magic, while inspiring them with his extraordinary and empowering story of resilience, forgiveness, and living a life of purpose in the face of unfathomable obstacles.

With 14 years in the NFL as a professional athlete, a finalist on America's Got Talent, a regular on the ELLEN Show and a world-class speaker on Fortune 500 stages, Jon shares his inspiring journey from tragedy to self-discovery.

Solution Sessions & Spotlights

Solutions Theater

12:00 – 12:45 p.m.

Solution Session: **Energy Transition and Grid Transformation, Microgrid and DER Assets (Presented by Eaton)**

Robert Kirsulis, Senior Application Engineer, Eaton

This session will discuss one form of energy transition and grid transformation; the proliferation of microgrids. The discussion will include:

- What is a microgrid and distributive energy resources (DER)?
- Use cases and control strategies for microgrids.
- Microgrid essentials, value propositions and revenue streams
- Microgrid controllers
- Demonstrating a microgrid in action

Solution Session: **Building Safety Post COVID-19 Lockdown (Presented by Watts Water Technologies)**

Jana Summey, Watts Healthcare Vertical Market Manager; **Scott Alford**, National Account Manager for Healthcare sector for Watts Water Technologies

There is an eagerness with business owners and government officials to bring our lives back to the normalcy of early 2020. The COVID-19 outbreak is showing signs of slowing down, and unfortunately, a different risk is now on the rise of opening dormant buildings with stagnant water systems. Several weeks of zero flow and tempered water can result in an increased risk of legionella, microbiological growth, heavy metals leeching, and increased corrosion within our plumbing systems.

Watts Water Technologies is committed to helping the industry shift into confidence going forward. This presentation will examine essential steps a building water management team or team of one should consider in order to maintain water quality and safety in plumbing systems of unused or slightly used buildings.

Solution Session: What To Consider In Maintaining The Barrier's In The Facility (Presented by Specified Technologies Inc.)

Kelly Mason, Director of Healthcare Partnerships, Specified Technologies Inc.

1 – 1:30 p.m.

Solution Spotlight: Connected Room Solution & Compliance Pack for Regulated Industries (Presented by Schneider Electric)

Brian Hanchey, US Offer Manager, Schneider Electric; **Andrew Tanskey**, US Offer Manager, Schneider Electric

Solution Spotlight: Corrigo CMMS and Business Intelligence Demonstration (Presented by Corrigo)

Kevin Eaton, National Director, Healthcare, Corrigo; **Janaye Piper**, Senior Solutions Engineer, Corrigo;

CMMS is a four-letter word in many healthcare organizations. What would it look like if it really supported your success? Take a peek at this demonstration of CMMS vendor management workflow and business intelligence reporting, and catch a vision for what's possible to accomplish with modern CMMS.

Solution Spotlight: Impact and Considerations of Thermal Cameras in Healthcare (Presented by Johnson Controls)

Michael Lamarca, Solution Engagement Manager; **Jason Ouellette**, Security General Manager; **Ross White**, Security Product Manager

Thermal cameras have burst onto the scene as part of screening measures in the global pandemic. This session will review details of reliable setup and installation, unique privacy considerations in healthcare and criteria for evaluating thermal cameras. It outlines where cameras can be of help as part of a screening strategy for the health and safety of patients and staff.

General Session

ASHE Education Theater

1:45 – 3:00 p.m.

Compliance with Accreditation – Leading the Way to Zero

Mark G. Pelletier, RN, MS, Chief Operating Officer, Accreditation and Certification Operations, Chief Nursing Executive, The Joint Commission;

Health care facilities may need to navigate requirements from various government and accrediting organizations. This session will cover the accreditation organization's approach to improving health care for the public by evaluating health care providers and inspiring them to excel in providing safe and effective care of the highest quality and value.

- Describe The Joint Commission's broad focus as it relates to patient outcomes
- Identify potential paths to help clients achieve zero harm
- Discuss future health care challenges that we need to prepare for today
- Recognize the importance of creating a culture of safety

CONCURRENT 2

ASHE Education Theater

3:15 – 4:15 p.m.

ENERGY STAR Score Changes for Hospitals and MOBs

Clark Reed, National Program Manager, ENERGY STAR Commercial Buildings, U.S. Environmental Protection Agency

You've heard it before: you can't manage what you don't measure. That adage is why the U.S. Environmental Protection Agency (EPA) created the ENERGY STAR Portfolio Manager®, an online tool currently used by over 3,000 hospitals to measure and track energy and water consumption. To keep up with changes in building technology and practices over time, it is important for the ENERGY STAR scores generated from the Portfolio Manager to be periodically updated. In this session the EPA will provide information on the recent data survey of health care facilities and the new trends in energy usage identified that informed the ENERGY STAR 1-100 score update. Attendees will learn how this update might impact current scores, what they should do to prepare and how to effectively communicate the update to senior leadership. Attendees will also gain access to the resources of the EPA's communication toolkit.

- Discover how energy use has changed in hospitals and MOBs since 2008.
- Understand EPA's rigorous approach to creating new updated national energy benchmarks for health care spaces.
- Learn the new inputs needed to receive an ENERGY STAR score and why they were chosen.
- Realize how ENERGY STAR scores will change and what to do now to prepare for the updated version.

Facility Management and Infection Prevention: Understanding Critical Risks

Bryan Connors, MS, CIH, Managing Principal Consultant, Environmental Health and Engineering;
Patricia Jackson, RN, MA, CIC, FAPIC, Senior Director, Infection Prevention, Children's Health

Health care facility managers have joined infection control practitioners on the frontlines of infection prevention. To safeguard patients from infection risks related to the physical environment, facility managers must have a clear understanding of the infection risks and the role the physical environment plays. Likewise, infection preventionists need to have an understanding of how building systems such as plumbing and HVAC work. This session details the specific high-risk areas that facility managers need to actively monitor, strategies to mitigate these risks and how to respond to issues related to potential life-threatening infections and outbreaks. Participants will also gain insight into how to effectively communicate and collaborate with infection prevention practitioners for a successful partnership.

- Establish a process to continually measure and evaluate infection control measures to identify vulnerabilities and areas for improvement.

- Implement current best practices and strategies to mitigate risks from hospital operation, maintenance and construction activities to patient health and safety.
- Provide an experienced infection prevention director's perspective of the most important risks and strategies for risk reduction.
- Communicate effectively with infection prevention practitioners about risks and understand key infection terms that may be used in these discussions.

Managing Life Safety Deficiencies and Infection during Construction

Anne Guglielmo, SASHE, CHFM, CFPS, CHSP, LEED A.P., Project Manager, Code Consultants, Inc (CCI); **Danielle Gathje**, CHFM, SASHE, Director of Plant Operations, MHealth Fairview

This presentation will spark an interactive audience discussion about maintaining life safety and infection control compliance during construction projects as it walks through best practices for ILSM, PCRA and ICRA implementation. Ways to limit the spread of construction-related infections, balancing project needs with code requirements and common survey findings will be shared. Current construction projects and lessons learned from completed projects will be the focus of the discussion. Bring your experiences to share with others as we discuss what to do and what not to do in today's project environment.

- List ways to ensure Life Safety Code compliance during active construction projects.
- Identify infection control activities that should be implemented to limit the spread of construction-related infections.
- Describe key elements of required ILSM, PCRA and ICRA policies and assessments for use during construction projects.
- Assess ILSM, PCRA and ICRA implementation activities throughout the life of the construction project.

What to Expect from the 2021 NFPA 99

Michael Crowley, PE, FASHE, FSFPE, Director Industry Relations, Jensen Hughes; **Brian O'Connor**, PE, Technical Services Engineer, National Fire Protection Association (NFPA)

The 2021 edition of NFPA 99 will be approved in August 2020 and contains a number of differences from the 2012 edition currently adopted by CMS and enforced by the accreditation organizations. A number of new requirements and revisions to existing requirements may not be a reality to facilities just yet, but an eye on the future must be maintained. This session will detail the newest changes from the 2018 edition to the 2021 edition of the code and will also highlight many of the other major changes that have occurred since the 2012 that health care engineers and all others in the field of health care compliance should be aware of. Key updates include revisions to risk assessment language, an electrical preventative maintenance program, responsible facility authority for medical gas systems, and allowance for microgrids, RPTs and flammables in the operating room.

- Identify changes to NFPA 99 that most affect health care engineers.
- Describe the performance criteria allowing microgrids to be used as sources for the essential electrical system.
- List the responsibilities for the individual required to be deemed the responsible facility authority for medical gas and vacuum systems.
- Identify the requirements for establishing a preventative maintenance program for health care facility electrical systems.

Tuesday, October 6, 2020

General Session
9:00 – 10:45 a.m.

ASHE Education Theater

General Session: Where We're Headed – A Discussion on Pandemic Recovery

Moderator: **Jonathan Flannery**, MHSA, FASHE, FACHE, Senior Associate Director of Advocacy, American Society for Health Care Engineering

Panelists: **Robert Booth**, MPH, CIH, Senior Healthcare Consultant, Oncore; **Brad Pollitt**, AIA, Vice President, Facilities, UF Health Shands; **Frank D. Rudilosso**, PE, M.Eng, CHSP, Director Facilities Regulatory Readiness, New York -Presbyterian Hospital; **Michael Sheerin**, PE, CEO, TLC Engineering Solutions, Inc.; **Pier-George Zanoni**, PE, CIH, Facility Engineering Specialist, State of Michigan;

The COVID-19 pandemic has impacted the health care physical environment in ways we never imagined. Facilities have been reimagined, renovated, expanded, enlarged and underutilized simultaneously. The pandemic's significant impact on the physical environment has offered challenges and learning experiences. This session will address specific health care facility measures based on immediate, short- and long-term needs regarding preplanning, inspection, testing and maintenance, sustainability and the "new normal" and will provide guidance and recommendations on best practices and lessons learned.

- Appreciate the impact that the pandemic has had on the physical environment.
- Have the tools to manage preplanning, immediate, short- and long-term needs in your health care facility recovery effort.
- Recognize the steps necessary to implement and recover ITM waivers.
- Be prepared to lead the recovery effort.

Solution Sessions & Spotlights

Solutions Theater

10:30 – 11:15 a.m.

Solution Session: Building Systems Infection Control to Enable Flexible Healthcare (Presented by Johnson Controls)

Julie Brown, Institutional Market Leader, Johnson Controls; **Clay Nesler**, VP Global Sustainability and Regulatory Affairs; **Bernard Clement**, Senior Product Manager, HVAC Systems

Infection Control Science for Building Systems. The recent pandemic has highlighted the need for our healthcare systems to be able to flex to accommodate new challenges. These are not limited to viruses, but can also include other natural disasters. This session will cover how buildings can become FlexReady and the Infection Control science necessary in building systems to help protect occupants, especially in ambulatory care.

Solution Session: Minimizing Costs and Maximize Compliance with Life Safety Plans, Inspections and Repairs (Presented by Grainger)

Kym Orange, Sr Manager Healthcare Strategy & Offers Grainger; **Neil Sommers**, Partner, Life Safety Architects a Grainger Safety Services Network Supplier; **Kirk Kaiser**, Partner, Barrier Compliance Services a Grainger Safety Services Network Supplier

W.W. Grainger is excited to partner with Life Safety Service network partners Barrier Compliance Services and Life Safety Architects to present "Minimizing costs and maximize compliance with life safety plans, inspections and repairs. In this presentation, we describe how the facility, contractor, Grainger product vendors, and the architect can all work together for the best life safety compliance

outcome. We describe the process from analyzing existing life safety plans, updating code reviews and drawings, and how we work seamlessly throughout the inspection and repair process.

Solution Session: Operate your facilities like Global 500 leaders do (Presented by Corrigo)

George Mills, CEO at ATG, a JLL company and Director of Operations, Healthcare, JLL; **Russ Parrish**, VP Account Optimization & Onboarding, Corrigo; **Kevin Eaton**, National Director, Healthcare, Corrigo

It's evident that COVID and post-COVID pressures will drive a sea change in healthcare cost containment. The only way for human beings to do more with less is with increased adoption of technology. Healthcare is no stranger to technology adoption, but hasn't previously had to create or sustain the kinds of operational results that will soon be required.

Where can we turn for examples to learn from? In this session, take a tour of best practices and operational norms from some of the world's largest and most sophisticated companies. Get inspired by what's possible, and new ways to deliver better operational outcomes than have ever been possible before in healthcare.

11:20 – 11:50 a.m.

Solution Spotlight: Intelligent Panelboards and Switchboards Drive More Reliable Power Systems (Presented by Eaton)

Manny Alexander, Product Manager for Panelboards & Switchboard

Panelboards and switchboards are critical electrical assemblies that are used throughout all healthcare applications. By integrating recent technological advances into overcurrent protective devices, these assemblies can leverage a new level of intelligence that can drive more reliable power systems for critical applications. This presentation will highlight some of the challenges in the industry today and how Eaton's new Pow-R-Line Xpert family of products helps address them using intelligent solutions.

12:00 – 12:30 p.m.

Solution Spotlight: Clinician Patient Access Device (Presented by Specified Technologies Inc.)

Presentation description is not available.

Solution Spotlight: Combination Plant Solutions by Watts (Presented by Watts Water Technologies)

Nery Hernandez, Sr. Product Manager, Hydronic Solution

In this presentation, you'll learn more about the combination plant (space heating/domestic hot water) solutions offered by Watts. Participants will be exposed to reviewing a system wide approach in not only combining space heating and domestic hot water applications but also optimizing for best efficiency and performance.

Attendees will:

- Have a glance of the key equipment at the heart of the combination plant solution, AERCO Benchmark Platinum Boilers and SmartPlate Indirect Water Heaters
- Combination plant control modes available on the Edge Controller that is standard on all Benchmark Platinum boilers.
- System design optimization considerations for best performance and efficiency

- Critical system accessories for water wellness and extended performance of system/equipment

Watts is a global leader of quality water solutions for residential, industrial, municipal, and commercial settings. With more than 150 years of industry expertise, Watts offers a broad portfolio of innovative heating, plumbing, and water quality solutions. Learn more about Watts' complete heating and water management solutions the healthcare facilities that help improve the comfort and well-being of patients and medical personnel by providing safe, reliable hot water on demand by visiting watts.com.

General Session

ASHE Education Theater

12:30 – 1:45 p.m.

General Session: Joint Commission Update

Herman McKenzie, MBA, CHSP, Director, Standards Interpretation Group (SIG) Engineering, The Joint Commission; **James Kendig**, MS, CHSP, CHCM, CHEM, LHRM, Field Director, Surveyor Management and Development Accreditation and Certification Operations, The Joint Commission; **Tim Markijohn**, MBA, MHA, CHFM, CHE, Field Director, Surveyor Management and Support Division of Accreditation & Certification Operations, The Joint Commission

This session will describe recent Joint Commission updates, including those related to new and proposed standards including Legionella, as well as the new virtual survey process, proposed time defined, changes in LSCS survey and expanding into free-standing Eds and ASCs. The session will include advice on how to prepare for surveys and suggestions regarding solutions to common findings and new trends. Attendees can ask questions and get answers directly from those overseeing Joint Commission Life Safety Code Surveyors.

- Describe how new updates, tools and surveyor processes will be used
- Implement a plan to prepare for and participate in surveys
- Initiate measures for a successful Life Safety Code survey
- Receive an update on Emergency Management

CONCURRENT 3

ASHE Education Theater

2:00 – 3:00 p.m.

Can We Operate? Assessing Wildfire Smoke Impact on Hospital Operations

Charles Clay, PE, MBA, CHFM, Regional Director of Facilities, Sutter Health; **John Martinelli**, CAC, CDPH I/A, CHCPEW, Healthcare Practice Director, Forensic Analytical Consulting Services; **Michelle Rosales**, MPH, CIH, Senior Project Manager, Forensic Analytical Consulting Services

Access to functional hospitals and other critical health care occupancies is critical during disasters such as wildfires. However, the unhealthy outdoor air conditions can adversely impact indoor air quality. The faculty for this session has had firsthand experience in dealing with this issue. Their session will cover the hazards present in the smoke and its impact on indoor air and surfaces. It will also detail the processes of building access management, temporary HVAC modifications and enhanced indoor air and surface cleaning that can minimize the impact indoors and result in faster recovery, and will explore the financial and operational impacts. Additional topics will include common questions from clinicians and other staff, key internal and external participants in emergency response planning and support and how the facilities management and operations team can provide details that are important to leadership and the public information officer.

- Describe the hazards present in wildfire smoke.
- Prepare a fire smoke-related emergency response plan that includes: building access control plan, temporary HVAC system operational modifications, and enhanced indoor air

and surface cleaning plans with a focus on keeping critical areas clean, safe and available.

- Describe methods to assess indoor air quality and cleanliness.
- Participate in the Incident Command System to provide clinicians, leadership and the public information officer with needed building condition reports.

Changing Technology and Power System Resilience

Jason D'Antona, PE, LEED AP, Director of Engineering & Utilities at Mass General Brigham, Mass General Brigham; **David Stymiest**, PE, CHFM, CHSP, FASHE, Senior Consultant, Smith Seckman Reid, Inc.

This session covers changing technology impacts in surgery, imaging, other clinical areas, laboratories, and facilities; patient information, EHR/EMR, PACS, IT, communications, AI, 3D printing, IoT, RTLS and RFID. The session will also explore nontraditional impacts such as tablets, kiosks, consent forms, copay processes, wayfinding, scheduling, preregistration, remote monitoring and diagnostics.

Health care facilities planning for island mode operation with new technology is considered mission-critical in today's market. This growing business continuity reality during a prolonged outage may require more than historical regulatory emergency power compliance. Options for broader, more scalable UPS applications for changing technology equipment. Impacts of technology equipment portability on predicting ever-changing UPS needs. Having reliable, manageable, flexible, and scalable power systems and equipment. Dealing with increasing electrical utility outage frequency. Managing changes without adversely affecting original design concepts. Facilitating important maintenance and repair activities without adversely affecting patient care activities. Dealing with the potential for increased emergency power demand.

- List the top 10 changing technologies.
- Describe market impacts on new mission-critical technology equipment.
- Identify potential future changing drivers in emergency power needs.
- Describe how to plan upgrades to reflect today's changing technologies.

Exercising Active Shooter Preparedness in Ambulatory Care

Daniel Meisels, MPA, EMTP, CHSP, CHFM, CEM, Senior Associate Director of Safety Security & Emergency Management, NYC Health+Hospitals;

The CMS final rule on emergency preparedness provided an opportunity for ambulatory care centers, both large and small, to develop a hazard vulnerability assessment for the first time. In New York City, the municipal health care system's FQHC "Gotham Health" identified that an "active shooter" was one of the top risks to its facilities, and undertook an extensive training and exercise program over the course of 12 months to prepare staff to address this phenomenon and be better equipped to protect themselves and their facilities. This case study will provide an overview of the NYC Health + Hospitals emergency management training and exercise initiatives around "active shooter" preparedness, and discuss how planning, preparedness and collaboration with partner agencies resulted in a tremendously successful training and exercise program, while at the same time meeting CMS requirements.

- Describe the extensive planning required to undertake a comprehensive training and exercise program for "active shooter" preparedness.
- Describe how training and exercises help meet regulatory requirements for emergency preparedness.

- Identify challenges and barriers to undertaking full scale exercises in ambulatory care settings.
- Assess staff compliance with security & safety recommendations.

CONCURRENT 4

ASHE Education Theater

3:30 – 4:30 p.m.

A Systematic Approach to Risk Management

Matthias Ebinger, CHFM, LEED AP, PMP, CFM, Senior Director, Enstoa; **Dennis Ford**, MHA, FASHE, CHFM, CHC, Corporate Support Services, Atrium Health; **Johnathan Johnson**, Mechanical Engineer, National Institutes of Health - Office of Research Facilities; **Frank Rudilosso**, PE, M.Eng, CHSP, Director Facilities Regulatory Readiness, New York -Presbyterian Hospital; **Charles Cutchall**, CHFM, AVP AVP Capital Projects, Infrastructure and Engineering, Northwell Health System

Multiple health care systems will share their approach to a systematic, data-driven approach to risk management in health care facilities management. Presenters will focus on (1) how building information can be most efficiently organized to understand risk impact, and (2) how inspection results and risk assessments can be aggregated to pinpoint risk exposure. Presenters will show specific examples how they have been successful in data-driven risk management, and how current data standardization initiatives within ASHE and beyond are starting to transform health care facilities management into a data-driven management function.

- List regulatory requirements related to FM risk management.
- Identify current inhibitors for data-driven risk management.
- Detail current best practices on how to organize facilities data to support data-driven risk analysis.
- Explain the opportunities and potential that industry-wide standardization and benchmarking initiatives are offering.

Leveraging Innovative Technology to Improve Patient Experience

Steven Friedman, PE, CHFM, HFDP, LEED AP, Director, Facilities Engineering Design + Construction, Memorial Sloan Kettering Cancer Center; **Sean Hutchinson**, National Director, Siemens; **Beth Muller**, RCDD, RPIAC, Senior Associate, Information Technology Department Lead, Jaros Baum and Bolles (JB&B); **John Gillham**, AIA, NCARB, Associate Partner, E4H Architecture; **Roger McClean**, Director, Design+Construction, Facilities Management, Memorial Sloan Kettering Cancer Center

A digital hospital can leverage technologies that transform delivery of care, patient experience, staff management, operations management and hospital design. By implementing these systems throughout carefully planned facilities, we not only address today's health care challenges, but create the perfect place to heal.

- Identify which environmental elements have effects on health and wellness.
- Identify what is driving patient satisfaction and how it can be increased with the use of technology for better HCHAP scores.
- Explain how the implementation of technology can help control costs through optimization of space, productivity and compliance.
- Identify space-planning techniques to strategically plan for future technology demands.

Looks Matter: Package your Data to Drive Processes

Andrew Gelasco, Facilities IS Project Manager, Medical University of South Carolina; **Jennifer Hoel**, Facilities IS Director, Medical University of South Carolina; **Richard Terhune**, CPA, Chief Financial Officer for Facilities, Medical University of South Carolina

MUSC is leveraging our IWMS to generate operational metrics. While our team has had access to the data comprising these metrics in the form of queries and reports, presenting it in graphical dashboards allows managers to assess work order progress and manage workload in real time. The transition to proactive operational metrics promotes accountability and improves prioritization and resource allocation. This shift has resulted in a dramatic improvement in on-time preventive maintenance completion rates.

- Use metrics to drive front-line processes and arrange the data in clear graphical representations so managers can understand it intuitively.
- Keep the message uncluttered, using only relevant data.
- Identify goals and use metrics in the correct contexts.
- Distinguish between metrics and reports.

What to Expect from the 2021 NFPA 101

Kristin Bigda, PE, Technical Lead, Building and Life Safety, National Fire Protection Association; **Michael Crowley**, PE, FASHE, FSFPE, Director Industry Relations, Jensen Hughes

The 2021 edition of NFPA 101, Life Safety Code®, was issued by NFPA in August 2020. This will be the first time the new and accepted changes are presented to ASHE. Be one of the first to hear the updates!

- Describe the major changes relative to hospitals for NFPA 101.
- Discuss the updates in egress and hazardous areas.
- Identify updates to the fire protection feature for NFPA 101.

Wednesday, October 7, 2020

General Session

ASHE Education Theater

8:30 – 9:30 a.m.

General Session: ASHE Update and Award Recognition

Join ASHE leadership to hear the latest business updates and to recognize the 2020 ASHE Award winners.

Jeffrey Henne, FASHE, CHSP-FSM, CHEP, CHC, Safety & Emergency Manager, University of Pennsylvania Health System; **Antonio Suárez**, MBA, CHFM, FASHE, Director of Facilities, Texas Health Arlington Memorial Hospital; **Deanna Martin**, MS, CAE, Executive Director, American Society for Health Care Engineerin

CONCURRENT 5

ASHE Education Theater

9:45 – 10:45 a.m.

Closing the Gap for Critical Systems Power

Mary Alcaraz, PE, LEED AP, Facilities Senior Project Manager, Children's Hospital of Philadelphia; **Benjamin Medich**, PE, Section Leader - Electrical, HDR; **Tom Stryker**, President, CPN Power, Inc.

With the increasing number of natural disasters, maintaining power to critical loads is essential. An intermittent gap or delay can mean lost cases, revenue and patient/family dissatisfaction. This session presents the importance of central UPS power systems in health care facilities. Various

configurations of central UPS power systems in facilities throughout the U.S. will be presented to show the flexibility of embracing these systems, large or small, to bridge the gap between normal power and emergency backup, all while providing valuable power conditioning to the loads.

- Identify critical loads that will benefit from Central UPS Power.
- Assess the available technology available and future technology being developed.
- State the benefits of central UPS power systems in health care facilities.
- Describe ways to incorporate UPS Power systems into electrical system design.

Insourcing is In (Part II): A How-to Guide

Joshua Brackett, PE, SASHE, CHFM, Special Projects Manager, Baptist Health System; **Mackenzie Coates**, Business Analyst, Baptist Health; **Alan Forrest**, System Director of Facilities Management, Baptist Health; **Jordan Northcutt**, CM-Lean, Facilities Manager, Baptist Health

Navigating the current health care environment can often feel like steering a great ship through rough and uncharted waters. Most health care executives are proactively seeking opportunities to cut costs and improve productivity across all departments. It's like Moby Dick chasing the great white whale; can it really be done? Can you really cut costs while increasing productivity? Looking at pages of financial data can be a daunting task. How do facilities managers make sense of all the numbers? Where do they start? How does a facility reduce growing costs while not cutting back on necessary maintenance and improvements? That's exactly what one health care system discovered after diving deep into a sea of numbers to discover their million-dollar "whale". To date, Baptist Health has been able to reduce its operating expenses by \$1.2 million dollars, a more than 8% reduction, by increasing FTEs and reducing outside vendor spend.

- Examine a successful case study by a large healthcare system on their voyage in comparing the economic benefits of insourcing facilities management
- Perform a cost-benefit analysis, establish key metrics when comparing insourcing and outsourcing, and review step-by-step guidelines to developing an objective and data-driven business case for executive leadership.
- Discuss the benefits of insourcing in health care facilities management.
- Strategize to improve internal processes and yield greater productivity from in-house staff long term.

Renovating a JCPenny Into an Ambulatory Surgery Center

Jacob D'Albora, FMP, Director of BIM-FM Services, McVeigh & Mangum Engineering, Inc.; **Gopi OmRaju**, CEM, Senior Project Manager, Medical University of South Carolina; **Chris Pettit**, Vice President of Pre-Construction, MB Kahn Construction Co., Inc.

The new MUSC West Ashley Ambulatory Surgery Center is unique not only due to the first-class services they will provide for their patients, but for many different aspects that design and construction accomplished in order to deliver such an exceptional project. This lecture will present a case study on the MUSC ASC that renovated a vacant JC Penny attached to an active mall, leveraged an IPD teaming approach to expedite the design and construction process and met their schedule with the use of intensive BIM coordination and fabrication. The owner (MUSC), general contractor (MB Kahn) and BIM Consultant (McVeigh & Mangum Engineering) will present from their point of view on the project and how the team had to collaborate for the success of the full project.

- Explain why the vacant JCPenny presented a perfect opportunity for the new ambulatory surgery center.
- Describe the teaming approach and the dynamics in which made it successful.

- Identify the success that BIM coordination can provide especially with definite completion dates.
- Describe the issues that arose during design and construction and the lessons that were learned from them.

VAV Doesn't Save Energy...Unless You Let It

Joseph Firrantello, PhD, PE, Building Research Engineer, Envinity, Inc.; **Kevin Kanoff**, C.E.M., Campus Energy Engineer, PennState Health Milton S. Hershey Medical Center

Many spaces in health care facilities are over-aired. If your equipment is supplying excessive air, you're paying for it three times: at your fans, your cooling plant and your heating plant. A facility may be over-aired due to code and guideline changes, the evolution of design practice, design timeline, construction budget, and the day-to-day "make it work" necessities of health care facility operation. Regardless of the reasons, you can use design and BAS data to identify opportunities for airflow reduction in your facility. You'll use less air at your fan, less cooling at your chillers, less heating at your boilers and less cash at your bottom line. A 20% reduction in average airflow can approach a 40% reduction in fan power alone. In this session, you'll learn about the engineering theory of airflow reduction, followed by a case study of the reality of reengineering airflow at an existing clinical and research facility.

- Predict how reducing airflow affects fan, cooling and heating energy.
- Identify factors limiting airflow turndown goals in new and existing buildings.
- Identify nontechnical design and implementation considerations that can affect project success.
- Evaluate feasibility of energy savings through airflow reengineering at their facility using typical building data.

General Session

ASHE Education Theater

11:00 a.m. – 12:00 p.m.

General Session: Just Ask ASHE Codes and Standards Forum

Moderator: **Chad Beebe**, AIA, CHFM, CFPS, CBO, FASHE, Deputy Executive Director, American Society for Health Care Engineering

Panelists: **Michael Crowley**, PE, FASHE, FSFPE, Director Industry Relations, Jensen Hughes; **David Dagenais**, CHFM, FASHE, CHSP, Sr. Director of Plant Operations, Clinical Engineering, Emergency Management, Safety Officer, Wentworth-Douglass Hospital; **Jonathan Hart**, PE, SASHE, CHC, Technical Lead, National Fire Protection Association; **William Koffel**, PE, FSFPE, SASHE, President, Koffel Associates, Inc.; **Michael Sheerin**, PE, LEED AP, CEO, Engineering Solutions, Inc.®

In this session, ASHE's codes and standards experts will discuss emerging codes and standards issues facing health care facilities and offer answers to specific questions. Attendees are invited to ask questions about any of the codes and standards related to health care facilities.

- Describe the code compliance issues that health care facilities commonly face
- Discuss changes needed in health care facility regulations and how to support efforts to enact them
- Identify the means of meeting NFPA 99 and NFPA 101® requirements that often result in survey citations
- Explain the unique and important role of health care professionals in the development of codes and standards used to regulate health care facilities

12:00 – 12:45 p.m.

Solution Session: Benefits of a Low Voltage Integration (LVI) Lab for Penn Medicine PennFirst Project (Presented by Schneider Electric)

Warren Rosebraugh, *Director, Solution Architects, Schneider Electric*; **Braheem Santos**, *Pavilion Engineering Manager, Penn Medicine*; **Denise Vaughn**, *Corporate IS Program and Planning Director Penn Medicine*; **John Donahue**, *Vice President, IS Enterprise, Penn Medicine*

Join us as Warren Rosebraugh, Director Solution Architects, Schneider Electric leads a panel discussion around the Low Voltage Integration Lab for the PennFirst Project with some of the key team members from the PennFirst Project. They will review the goals of the lab, the education and innovation the lab has provided, as well as their favorite use-cases.

12:50 – 1:20 p.m.

Simplify Your Healthcare Facility Compliance - How a Hospital Made It Happen with CRx (Presented by Grainger)

Glenn Lebedz, *Facilities Director, Atlantic General Hospital*; **Matthew Untalan**, *Sr. CRx Implementation Consultant, HealthCare Facility Compliance Co a Grainger Safety Network Partner*; **Alexandra Mircea**, *CRx SME, HealthCare Facility Compliance Corp a Grainger*;

Facilities director, Glenn Lebedz, shares his experiences shifting compliance documents and activities from paper and Excel to a digital platform. Glenn's maintenance techs embraced CRx for its simplicity, and he was able to consolidate all compliance activities under one roof without duplicating tasks.