The National Coalition for Alarm Management was launched in April 2104 to bring together a group of thought-leaders to share information with other pioneers in the “alarm-management space,” and to drive improvement in alarm management nationwide. Members come from all aspects of alarm management: the clinical community; industry; device regulators; hospital accreditors; and professional societies.

The goal of the coalition is to improve patient safety nationwide by first enabling the pioneering members of the coalition to share resources, thus amplifying their current and future efforts. The second step is to advance patient safety for the nation by disseminating the deliverables the coalition produces, so it may help save hospitals from developing alarm management techniques and methods in their own silos, and to help move the country to some standardization around alarms, where possible.

Come learn about the work of this Alarm Coalition and see what deliverables have been developed and are available for your use to improve alarm management in your hospitals. **Marilyn Neder Flack**, Executive Director, AAMI Foundation, Senior Vice President Patient Safety Initiatives, Association for the Advancement of Medical Instrumentation

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The long history of clinical alarms, delivering highly reliable and effective alarms has been an intractable problem. This is due in part from the need to have a systems approach to the generation of alarms. This systems approach would include medical device manufacturers, regulatory considerations, and standards requirements. The realization of reliable and effective clinical alarms is achievable if we examine historical limitations and collaborate in ways to overcome past shortcomings. This keynote will present a roadmap for industry and providers to collaborate on solutions resulting in a significant improvement in clinical alarm safety. The elements for this roadmap will be described in addition to a concise definition of the desired end point or outcome. **Julian M. Goldman**, MD, Director, MD PnP Program & the CIMIT Program on Interoperability & Medical Director, Partners HealthCare Biomedical Engineering
10:00  Sponsor/Exhibitor Showcase
Morning Refreshments Sponsored By:
ascom

10:30  KEYNOTE ADDRESS: FINDINGS FROM ALARM-SAFETY INCIDENT INVESTIGATION
ECRI Institute has conducted investigations of serious incidents related to clinical alarm problems for many years. Recent increased industry-wide awareness about clinical alarm safety, growth in the use of alarm-based medical devices, and a general increase in alarm fatigue have led to an up-tick in ECRI’s clinical alarm-based incident investigations. This presentation will provide ECRI’s perspectives from its recent incident investigation activities. Topics covered will include technology limitations and challenges, cultural factors, and general alarm management shortfalls, particularly related to configuration of alarm settings.

The presentation will also review recent ECRI support of hospitals’ efforts to improve alarm management and safety and comply with the Joint Commission’s National Patient Safety Goal on alarm management.

Jim Keller, Vice President, Health Technology Evaluation and Safety, ECRI Institute

11:15  KEYNOTE ADDRESS: TOP 5 GAPS IN ALARMS SAFETY KNOWLEDGE
The National Alarm Summit in October 2011 identified seven clarion themes to improve alarm management practices. However 3 years later, we continue to struggle with an overwhelming amount of non-significant alarms that distract clinicians. Alarm management must be considered in the context of the clinician’s workflow. Clinicians use alarms and other cues to determine if a response is required and do not rely solely on the audible alarm. This session will identify a clinician’s perspective on 5 gaps in knowledge related to alarm management. Research aimed at solving these gaps may lead to fewer alarms, better alarm response and new approaches that manufacturers can use to improve technology.

Maria Cvach, DNP, RN, FAAN, Assistant Director of Nursing, Clinical Standards and Evidence-based Practice, The Johns Hopkins Hospital

12:00  KEYNOTE ADDRESS: CLINICAL ALARM SAFETY AND THE IMPACT OF ALARM DELIVERY
Efforts to achieve effective alarm safety can be divided into two spheres, alarm generation and alarm notification. Numerous factors impact alarm notification and the resulting effectiveness of various approaches. This keynote will describe how historical changes and trends in hospitals, medical devices and the practice of medicine have made alarm notification an more important component of overall alarm safety. Past and current responses to alarm notification challenges will be described and the resulting impact of these responses will be detailed. Having established a background framework for evaluating alarm notification as a factor in alarm safety, focus will shift to framework for needs assessment. Current and evolving industry best practice will be presented, delving into the details of monitor over-watch and alarm notification systems. The keynote will close with a look into future trends and market adoption.

Tim Gee, Connectologist & Principal, Medical Connectivity Consulting

12:30  Luncheon & Sponsor/Exhibitor Showcase

1:45  WHAT DO PSYCHOTHERAPY AND ALARM MANAGEMENT HAVE IN COMMON?
Medical device alarms perform an essential patient safety function. However, the sheer number of alarms in some care areas can itself become a patient safety concern. With so many medical devices sounding alarms and issuing alerts, caregivers can too easily become distracted, overwhelmed or desensitized trying to respond to these alarms. This leads to alarm fatigue and the potential to cause adverse events due to missed alarms or delayed response. Preventing alarm fatigue-related adverse events requires scrutinizing all aspects of how alarms are initiated, how they are communicated, and the coordination of responding staff. It is important that care providers make Alarm Management a patient safety priority.

The key to Alarm Management is not just a number/or an alarm audit/or a new piece of technology.

• Learn how to get teams to change how they work around the alarms and across departments.
• Learn about affecting behavior change without becoming a psychotherapist.

Based on the literature and experience with over 200 hospitals, Mary will give you a framework to change clinical practice and affect long term patient safety. The goal - keep patients safe, affect real and lasting change around alarms and alarming devices and keep staff away from the Excedrin bottle so they can do what they were trained to do.

Hint: it does not involve either electric shock therapy or huge outlays of dollars.

Mary Baum, President & CEO, BA&T
2:15 REDUCING ALARM FATIGUE THROUGH ALARM LIMIT CUSTOMIZATION
Clinical monitoring is frequently used in healthcare settings as a tool for patient safety and as a method for warning clinicians of immediate or potential adverse changes in a patient’s status. Although there have been advancements in monitoring technology; adverse events, including patient deaths, related to clinical monitoring systems continue to occur. This presentation will describe key strategies for alarm limit customization using real-time patient information and clinical decision making algorithms.

Objectives:
1. Describe at least 3 key concerns related to alarm fatigue or clinical monitoring.
2. Discuss a process for alarm limit customization using real-time patient information and decision-making algorithms.
3. Identify 3 barriers to alarm limit customization.

Simi Randhawa, DNP, MBA, MS, RN, NE-BC, Director Nursing Education & Professional Development, Children’s National Health System

2:45 ALARM MANAGEMENT AT TEXAS CHILDREN’S HOSPITAL
This presentation will discuss the methodology and analytics that Texas Children’s Hospital has used with its partner Medical Informatics Corp. to capture alarm history, analyze data, make recommendations and effect changes to the alarm environment. It will present an analytics platform that utilizes real time, individualized patient data to enable more transparency and make alarm management decisions manageable. A roadmap of activities as well as lessons learned will also be discussed.

Emma Fauss, PhD, MBA, Chief Executive Officer, Medical Informatics Corporation
Samantha Jacques, PhD, FACHE, Director Biomedical Engineering, Texas Children’s Hospital

3:15 Sponsor/Exhibitor Showcase
Afternoon Refreshments Sponsored By: ascom

3:30 CENTRALIZED TELEMETRY MONITORING SYSTEM: ALARMS, TECHNICIANS AND COMMUNICATIONS
Beaumont Health System implemented a centralized telemetry monitoring system (TMS) in May of 1991. The growth from 48 channels to 288 dedicated telemetry channels has seen numerous clinical benefits but also an increase in alarms. The comparative analysis of the proposed benefits of TMS-based patient monitoring and the inherent limitations and challenges are important processes to validate the efficacy of remote monitoring as it relates to patient safety and alarm management. We will share key features from the perspective of a large institution-small health system on alarms, TMS workflows, and communication between clinicians, monitoring technicians and BMETs.

Rocco Ottolino, Clinical Engineer, Beaumont Health System
Caitlin Presnell, MSc, Clinical Engineer, Medical Physics and Clinical Engineering, Beaumont Health System

4:00 THE MEMORIAL SLOAN KETTERING APPROACH TO MANAGING CRITICAL ALARMS
In this talk we will explore alarm management at MSKCC focusing on our identification of global alarm deficiencies, selection of new alarm middleware, our simulation laboratory and meeting Joint Commission national patient safety goals. We will then discuss challenges in avoiding alarm fatigue, filtering and delivering alarms, and the transformation of alarms into meaningful data using current technology and smart intelligent alarm software. The need for device-patient association, time and data synchronization, and device interoperability will also be addressed. Finally the difficulties inherently associated with the introduction and maintenance of a complicated enterprise wide medical device informatics system will be explored.

Neil A. Halpern, MD, Chief of Critical Care Medicine and Medical Director of Respiratory Therapy, Memorial Sloan Kettering Cancer Center & President, Critical Care Designs, NY, NY

4:30 CASE STUDY: IMPROVING ALARM MANAGEMENT AT BOSTON MEDICAL CENTER
Boston Medical Center has achieved great success in reducing the number of alarms on medical-surgical units. The results have shown that a didactic systems approach to the management of alarms is one that is both transferrable to other organizations as well as other projects involving technology, clinicians and change management.

Our work on managing alarms has garnered a great deal of coverage for our institution and often times when asked how we did it our answers have been simple – create an understanding of what the underlying issue is, engage senior leadership and the front line staff, use alarm data to frame the discussions, educate staff, get the vision right as to what the issue is and the resolution, create a plan, disseminate it, be transparent about activities and be vigilant.

We will share the steps we took along the way during our pilot project and our organization-wide deployment so that others can learn from us and transfer some or all of this knowledge in their work on alarm management.

James Piepenbrink, Director, Clinical Engineering, Boston Medical Center
5:00 IMPROVING ALARM SAFETY AS PART OF A BROADER CHALLENGE

Our culture has adopted a dashboard metaphor for their life using social media tools like Facebook and Twitter. This mindset has changed our perception of how we engage with other humans, software, and information. At the same time, hospitals concerned with alarm fatigue are reassessing their traditional approaches as a consequence of the industry’s attempt to automate alerts to enable better more timely care. A major question in this reassessment is if alarm safety can be improved by focusing on a very narrow set of specific things, or whether effective and sustainable solutions require a broader perspective of the patient and point of care workflows. Has the industry reached a point where patient generated data is as important as caregiver documented data? In this discussion we will dissect how we step out of the pressure cooker of answering the narrowly focused problem and identify a more holistic vision ensuring patient safety at the point of care.

Kourtney Govro, CEO, Sphere3 Consulting

5:30 PANEL DISCUSSION: ALARM MANAGEMENT

Alarm Management! Everyone wants to do it. Everyone knows its important. The data points to significant challenges related to resources, staff fatigue and safety for patients with Alarm Design failures. We will explore the reasons the project launched – the drivers in business that would not allow status quo to continue. We will share the specific and measurable goals set for the project and the status of alignment with Joint Commission standards. Our industry expert panel will relate stories associated with designating internal resources, scoping vendor involvement and other major challenges in the project. Finally, we will explore lessons learned in creating a sustainable environment for continuous monitoring for current measures and targeted improvements in future Alarm Design.

Moderator:
Kourtney Govro, CEO, Sphere3 Consulting

Panelists:
Lacey Bergerhofer, MSN, RN-BC, Clinical Informatics & Practice Manager, Children’s Mercy Hospitals and Clinics
Steve Cazzell, Director of Biomedical Engineering, Children’s Mercy Hospitals and Clinics
Christy Claeyis, BSN, RN, CCRN, Clinical Informatics and Practice Manager, Children’s Mercy Hospitals and Clinics
Derek Shroyer, BSN, RN, CCRN, Clinical Informatics & Practice Manager, Children’s Mercy Hospitals and Clinics

6:15 Day One Concludes;
Sponsor/Exhibitor Showcase & Networking Reception

7:15 Networking Reception Concludes
7:15 Sponsor/Exhibitor Showcase
Breakfast Sponsored By:

7:45A CHAIRPERSON’S OPENING REMARKS
Samantha Jacques, PhD, FACHE, Director Biomedical Engineering, Texas Children’s Hospital

8:00A DISCOVERING REAL SOLUTIONS FOR ELIMINATING ALARM FATIGUE
While clinical alarms are an integral part of a patient care environment, these alarms pose an immense challenge to caregivers. It is well documented that alarm fatigue is one of the leading risks to patient safety. Clinicians can become desensitized, overwhelmed, or immune to the sound of an alarm. Studies published by the US Joint Commission have directly attributed patient deaths to alarm fatigue. Clearly, alarms should be actionable and clinically significant.

The US Joint Commission raised the bar higher for hospitals when it drafted a new National Patient Safety Goal on clinical alarm safety. As of January 2014, hospitals were required to demonstrate that alarm management is an organizational priority and to identify alarms targeted for reduction. By 2016, hospitals will need to develop and implement specific protocols and procedures aimed at curbing unnecessary alarms to assure continued accreditation.

Our discussion will focus specifically on patient monitor alarms, exploring ways to significantly reduce low priority alarms. We will demonstrate effective measures for alarm filtering and the role of middleware in addressing these challenges. We will also review how specific hospitals have already cracked the code on alarm fatigue.

Dan Allen, Product Manager, Unite, Ascom Wireless Solutions

8:30A IT / BIOMED ROLES AND RESPONSIBILITIES FOR ALARMS – FROM DESIGN TO SUPPORT
This presentation will cover the roles and responsibilities for both IT and Biomed departments in alarm management activities covering the lifecycle from facility design and system implementation to long term support of systems. It will discuss the needs during requirement gathering, management of implementation (including change control, configuration, and testing) and long term support models.

Samantha Jacques, PhD, FACHE, Director Biomedical Engineering, Texas Children’s Hospital

9:00A INFUSION PUMP ALARMS: INITIAL RESULTS OF DATA COLLECTION AND ANALYSIS
Wireless connectivity to infusion pumps was initially implemented to track and collect dose error reduction software (DERS) alerts and subsequent caregiver actions (reprogram, override, etc.), and to broadcast drug library updates. More recently, the wireless system has been expanded to transmit and collect all infusion data, including alarms such as “occlusions” and alerts such as “infusion completed.” While most infusion pumps are not assigned to individual patients, we are able to collect data based on care area, drugs/fluid infused, frequency, and type of alarm and alert.

Infusion pumps differ from monitors in several ways: they do not typically have false alarms, the frequency of alarms is a small fraction of what is experienced with monitors, and they do not automatically reset if the alarm condition clears. They are similar in that many of the alarms and alerts are configurable, and they can be customized for specific patient types and/or care areas. With the availability of the data, we can now begin to investigate variation in patterns, identify problematic practices, and share best practices to address the pump alarms and alerts. In much the same way that our early look at the Smart pump data raised numerous questions, highlighted practices that previously were hidden, and identified significant opportunities for improvement, the early look at the pump alarms and alerts seem to hold the same promise.

Rob Regedanz, Associate Product Manager - Infusion Connectivity, CareFusion
NEW CONCEPTS IN ALARM MANAGEMENT

As alarm notification system early adopters have advanced technology and clinical practice, new capabilities have demonstrated improvements in patient safety and outcomes. This presentation will focus on high-fidelity medical device data collection and processing that enables an intelligent approach to patient-centric alarm management, in the filtering and routing of clinical data and alarms. In the evolving connected hospital, new surveillance modalities include the use of near real-time waveforms, and unique alarm summary displays that incorporate data generated by all of the medical devices attached to the patient. Smart alarms, alarm escalation, and responsible alarm distribution protocols can integrate seamlessly with existing in-room alert systems and third-party notification devices, resulting in intuitive alarm management. Also included is a look at how alarm management decisions can be supported using hospital-wide alarm analytics, and a rich set of data.

**Steven Plazia, Director Design & Product Development, Cardiopulmonary Corporation**

LEVERAGING YOUR MEDICAL DEVICE ALARM DATA TO IMPROVE ALARM SAFETY

Alarm hazards have plagued caregivers and patients for years and the problem is only getting worse with the proliferation of medical devices. The Joint Commission’s 2014 National Patient Safety Goal (NPSG 06.01.01) is a driving force for hospital alarm improvement. While most hospitals will agree that alarm issues are a high priority, many are uncertain how to implement change. During our discussion, Extension will review how Owensboro Regional Health Hospital aggregated alarm data from current regulated medical devices and non-regulated systems - like nurse call and order entry systems - and used the data to gain visibility into effectiveness of their current policies and procedures. We’ll also discuss how Owensboro is leveraging alarm management middleware for alarm and alert notifications and patient-centric text messaging. We’ll review the limitations of traditional alerting systems and stand-alone texting applications and discuss why Owensboro chose a unified clinical communication solution to improve caregiver collaboration and quality of care.

**Allen Enebo, Sr. Product Manager, Extension Healthcare**

**Ryan Aud, Application Analyst III, Owensboro Health IT**

INTUITIVE, EVIDENCE-DRIVEN ALARM MANAGEMENT AND ANALYTICS REDUCE ALARM FATIGUE, IMPROVE PATIENT SAFETY

Communication breakdowns caused by alarm fatigue have become a top patient safety concern and a regulatory priority. Thousands of alarm signals sound within a hospital every day, yet The Joint Commission estimates that 85-99 percent of those alarms do not require immediate clinical intervention. As a result, care teams often suffer from alarm fatigue and become immune to alarms, which can have serious or fatal consequences.

To address and help decrease alarm fatigue, hospitals are implementing various approaches to alarm management, including technology that can funnel alarms to the correct caregiver. Not only does this targeted alarm technology potentially reduce noise, some solutions even allow intelligent integration with each unit’s specific workflows. However, hand-in-hand with this technology, a comprehensive strategy is required for managing workflows down to the day-to-day level. For safe and effective implementation in a hospital, the alarm management system must address optimization of the alarm source, continuous workflow improvements, clinical relevance, and important contextual information for the alarms that are delivered to truly result in an effective, managed process while controlling risk. A data driven, evidence-based approach for source optimization, workflow improvement and alarm notification is essential to patient safety as well as staff satisfaction.

A 2014 Patient Experience Survey conducted by Vocera revealed that 76% of patient respondents who were hospitalized in the past 60 days indicated that “the alarms disturbed their sleep,” while 58% indicated that “the alarms made them feel anxious.” When asked to describe how the beeps and alarms of hospital monitoring devices affected their experience and healing, one patient said, “If you can’t rest you can’t heal.” Leveraging an intelligent, integrated alarm management system can go a long way to reducing the nuisance of alarms and creating an optimal healing environment for patient, families and staff.

Learning Objectives:

- Describe ways in which technology can be used to provide contextual information such as waveforms and vital signs to filter alarms so the correct clinician is contacted.
- Discuss ways in which hospitals and health systems can improve clinical workflow and measure the success of alarm management systems while leveraging technology to manage risk.
- Outline why sending alarm notification directly to the caregiver should be a standard of practice.
- Define key performance requirements of alarm notification systems that will improve the reliability and timeliness of alarm response.

Establish alarm notification systems as management tools to gauge workload, staff responsiveness, facilitate adverse event investigations, etc.

**Rhonda Collins, MSN, RN, Chief Nursing Officer, Vocera Communications, Inc.**

**Praveen Dala, PhD, Director of Product Strategy, Vocera Communications, Inc.**
11:30 A  BREAKING DOWN ALARM MANAGEMENT INTO MANAGEABLE BITS
Successful alarm management is not just about knowing how to get the alarm data. Understanding what impacts alarm management in a hospital, and matching contributing factors to solutions is essential to realizing a meaningful improvement in alarm management. It is also important to understand what can and cannot be accomplished with technology, policy, and risk management in your own institution. This presentation will discuss lessons learned regarding implementation of alarm management as a process of discovery, stakeholder integration, and organizational change.

Emma Fauss, PhD, MBA, Chief Executive Officer, Medical Informatics Corporation

12:00  KEYNOTE ADDRESS: PROMOTING MEDICAL DEVICE ALARM SAFETY AND EFFECTIVENESS – AN FDA PERSPECTIVE
The Center for Devices and Radiological Health at the FDA regulates a wide variety of medical devices that implement alarms intended to mitigate risks in the clinical environment. The FDA recognizes the importance of improving the safety of clinical alarm use and particularly reducing alarm fatigue. Contributors to alarm fatigue are multi-factorial and improvements require a variety of approaches. Recent efforts at the FDA to promote alarm safety have included formal reviewer training on common alarm concerns and related standards and developing policy related to development and validation of novel combined physiological parameter monitoring and associated alarms. The FDA is also involved in efforts to improve related device standards and make available better data sources for improved alarm algorithms.

Shawn Forrest, Acting Branch Chief, Cardiac Diagnostic Devices Branch, Division of Cardiovascular Devices, Office of Device Evaluation, CDRH, Food and Drug Administration

12:30  PLENARY PANEL DISCUSSION: WE’VE BEEN HERE BEFORE: WHAT WILL IT TAKE TO FINALLY ADDRESS ALARM FATIGUE?
The panel will discuss the factors that have caused clinical alarm safety to be such a long term intractable challenge. Topics will range from the evolution of the architectural design of nursing units, staffing and technology. The discussion will include recent changes in hospital oversight (the Joint Commission), newly available technology tools and other factors that could contribute to the long term improvement of clinical alarm safety. The panel will close with some prognostication regarding potential near term changes and outcomes impacting alarm safety.

Moderator:
Tim Gee, Connectologist & Principal, Medical Connectivity Consulting

Panelists:
Mary Baum, President & CEO, BA&T
Simi Randhawa, DNP, MBA, MS, RN, NE-BC, Director Nursing Education & Professional Development, Children’s National Health System
Maria Cvach, DNP, RN, FAAN, Assistant Director of Nursing, Clinical Standards and Evidence-based Practice, The Johns Hopkins Hospital
Adam Sapirstein MD, Associate Professor, Department of Anesthesiology/Critical Care Medicine, The Johns Hopkins School of Medicine
Debbie Gregory, RN, BSN, Senior Clinical Consultant, Smith Seckman & Reid
Jim Welch, Executive Vice President, Product Development and Customer Fulfillment, Sotera Wireless

1:15  SYMPOSIUM CONCLUDES
8:30B YOU HAVE (ALARM) MAIL: ALARMS AND ALERTS ON SECONDARY ALARMING DEVICES

Most modern monitoring systems and many other medical devices can be interfaced to IT-networks. This allows for transmission of patient-related device data including alarms and alerts onto “non-medical” network devices such as smartphones, tablets, or pagers. Displaying alarm messages on such wearable, personal devices may support caregiver workflow and improve responsiveness to alarms and alerts. But using these secondary alarming devices may be a double-edged sword. Besides issues of network safety and security, significant challenges with respect to potential clinical hazards related to the use of secondary alarming devices must be considered. Care delivery organizations must take the lead during implementation and operation of such systems in order to minimize risks to patients and caregivers. This presentation will highlight selected aspects of clinical risk management related to alarms and alerts on secondary alarming devices.

Michael Imhoff, MD, PhD, Professor for Medical Informatics and Statistics, Ruhr-University Bochum, Germany

9:00B CREATING A CULTURE OF INNOVATION AND TRANSFORMATION: THE ESSENTIAL INGREDIENT FOR IMPROVED ALARM SAFETY

The healthcare landscape is changing so fast it is impossible to keep up with all the new “bells and whistles” of technology. Electronic medical records, telehealth, wireless phones, wireless devices, and tracking are just a few examples of these changes. These new technologies create increased pressure on clinical staff to adapt and adopt new workflows into their care delivery processes. As new technologies become standard, how can clinicians provide leadership and vision for the future? Change and transformation do not always sit well with clinicians. “We’ve always done it this way” is a well known mantra.

This session will examine the process of change and transformation involved with the selection and launch of new technology in the clinical setting. Insights and lessons learned from many current examples will be shared such as avoiding “work arounds”, managing alarms, maximizing optimization, and best practices. Transforming a culture through technology implementation is an exciting opportunity for hospitals. Understanding and overcoming the barriers to transformation requires education and continuous reflection and assessment. Learn how to set your organization on a course for success and transformation.

If your hospital has not launched new technology in the past year, just wait, you are next.

Debbie Gregory, RN, BSN, Senior Clinical Consultant, Smith Seckman & Reid

9:30B CREATING A CONNECTED ECOSYSTEM TO PROMOTE ALARM SAFETY AND EFFICIENT CARE

Join Vicki Brock, Clinical Systems Analyst, from Nash Health Care and Ashleigh George, Director and CNIO over Cerner Corporation’s CareAware division, as they discuss how their organizations collaborated to address device connectivity, alarm management and care team communication. With a shared vision and passion for improving patient care, the organizations successfully deployed and quantified the benefits of innovative CareAware mobile communication and alarm management technologies. CareAware Connect, a smartphone based care team communications solution, is the focal point of the new health care technologies at the Nash Health Care. With CareAware Connect, nurses, physicians, radiology techs and other caregivers are able to make VoIP based calls and securely text one another, receive critical alerts and access patient information from an application running on an Apple iPhone. Learn how they holistically approached alarm safety and communications to improve team collaboration, perceived noise levels and patient turnaround times.

Ashleigh George, RN-BC, BSN, Director, CNIO, Cerner DeviceWorks
Victoria Brock, BSN, RN, EMT, Sr. Clinical Systems Analyst, Nash Health Care Systems
10:00 Sponsor/Exhibitor Showcase
Morning Refreshments Sponsored By:

10:30B BEYOND BELLS AND WHISTLES: USING SYSTEMS APPROACHES TO IMPROVE PATIENT SAFETY
The Armstrong Institute at Johns Hopkins University proposes that systems engineering and design methods can be used to create high reliability healthcare organizations. In spite of advances in disease management and technology the intensive care unit (ICU) remains a risk filled environment. Alarm fatigue, misdiagnoses, near misses and other factors contribute to preventable patient harms and escalating costs. There is little evidence to suggest that current investments in technology such as $22.5 billion to drive universal adoption of electronic health records have led to improvement. Indeed preventable harm is estimated to be the third leading cause of patient deaths in the U.S. This presentation will provide an overview of Project Emerge – a pilot project to apply a systems approach to eliminate seven preventable harm, engage patients and family members, and improve efficiency in the ICU. The Emerge program uses systems engineering approaches to design, test and iterate solutions that align people, technology, and processes in areas that have the potential to improve quality, safety, and costs in the ICU. The Emerge approach has the potential to be applied to improve situational awareness and responses across health care setting.
Adam Sapirstein, MD, Associate Professor, Department of Anesthesiology/Critical Care Medicine, The Johns Hopkins School of Medicine

11:00B REDEFINING ALARM MANAGEMENT: IMPROVING THE LIVES OF CLINICIANS AND PATIENTS ALIKE: A MANUFACTURER’S PERSPECTIVE
With the high visibility of alarm fatigue and the industry need to understand alarms and alarm management, manufacturers struggle to provide the information hospitals need to meet The Joint Commission alarm safety requirements and for clinicians to efficiently manage alarms. This presentation will show how Spacelabs Healthcare has addressed the management of alarms to reduce alarm fatigue and what they are doing to assist hospital in retrieving the needed alarm information from their patient monitoring system. We will also discuss how to simplify the presentation of this data and turn it into useful information needed to understand how you can identify process improvement areas.
Bob Steurer, Global Product Marketing Manager, Spacelabs Healthcare

11:30B CASE STUDY: CREATING A CLINICAL ALARM COMMITTEE
Alarm Fatigue is a National issue and there is an immediate need to take action. Children’s National is taking great steps to assure that the goals of The Joint Commission’s Alarm Management goal are met while striving to make the clinical equipment alerting process as safe as possible. Children’s would like to present a case study of the events that led up to the creation of an clinical alarm committee, as well as the outcomes and objectives since the creation of the committee. In addition Children’s has an interesting story to tell regarding the updating of our secondary alarm notification system.

Objectives:
The participants will be able to gain the following from the presentation:
• Understand the objectives and the make up of a clinical alarms committee
• Have insight into the process necessary to inventory all alarms and the steps to determine prioritization
• Understand the available data available from clinical alarms and how it can be used to drive change.
Jeff Hooper, Director Biomedical Engineering, Children’s National Health System

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Shawn Forrest, Acting Branch Chief, Cardiac Diagnostic Devices Branch, Division of Cardiovascular Devices, Office of Device Evaluation, CDRH, Food and Drug Administration
12:30 PLENARY PANEL DISCUSSION: WE’VE BEEN HERE BEFORE: WHAT WILL IT TAKE TO FINALLY ADDRESS ALARM FATIGUE?
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1:15 SYMPOSIUM CONCLUDES