



# QUALITY & SAFETY MATTERS

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## **Thermoregulation of the neonate: Evaluating effects of skin-to-skin contact in the first day of life**

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During the first days of life, infants are at high risk for injury and death from hypothermia due to their immature heat production mechanisms. Their temperature naturally drops two to four degrees Celsius immediately after birth and, without interventions, it will continue to decrease to a hypothermic state. Because infants are extremely sensitive to temperature changes, health care providers should be diligent about preventing heat loss. If this hypothermia is not addressed, it will continue to contribute to infant mortality rates.

There is no universally accepted policy for infant thermoregulation at this time. Many hospitals offer or recommend skin-to-skin contact between mother and baby after the initial drying. However, since there is no universally accepted practice, every hospital or nurse can opine how this contact should take place. The amount of wait time for temperature stabilization before bathing can also differ widely and can impact the infant's temperature.

Based on the reviewed literature, there is strong support that immediate skin-to-skin contact has clear benefits in the overall thermoregulation of newborns. However, evaluating and bathing the neonate before initiating skin-to-skin contact after birth does not pose a threat to the newborn's ability to regulate its own temperature. Immediate skin-to-skin contact lowers the incidence of hypothermia and raises the neonates' temperature faster than other warming methods.

Evidence shows implementing immediate and continuous skin-to-skin contact is beneficial in maintaining a rise in temperature and lowering the incidence of hypothermia in healthy newborns. We recommend evaluating and drying the baby at birth under a radiant warmer followed by continuous skin-to-skin contact for as long as the mother wishes, up to 24 hours. During skin-to-skin contact, the baby should wear a hat and a diaper with no other clothing between the mother's chest and the neonate. A blanket over the baby and mother is also recommended.

## **Effective identification of suicide risk in the hospital**

By: Viviana Barraza, Sarah Hernandez, Emilee Nixon,  
Annie Skalaban and Madison Walther

Suicide is the second most common sentinel event in hospitals, only preceded by wrong-site surgery. Of the 35,000 suicides per year in the United States, six percent are inpatient suicides. The U.S. Department of Health and Human Services ranked suicide as the tenth leading cause of death, predicting it to remain in the top causes of death for years to come. While suicide has been linked to mental disorders, access to lethal means and chronic health conditions, there are multiple causative factors making identification of those at risk for suicide very difficult.

Depending on each hospital's individual policies, the current state of practice for suicide screening usually includes a short questionnaire regarding feelings of depression and self-harm, such as the Patient Health Questionnaire-2 or Patient Health Questionnaire-9. Some other questionnaires commonly used in the hospital are SAD Persons Scale, Beck Scale for Suicidal Ideation and Hamilton Rating for Depression. If the patient's response to these screening tools indicates a risk for suicide, hospitals usually have follow-up protocols in place.

The evidence shows that the most effective ways to identify patients at risk for self-harm is to complete an individualized assessment of each patient receiving medical care. Additionally, evidence has shown that reassessment of the patient, providing follow-up care and questioning, and continuous monitoring of the individual's mental and physical state are most effective in identifying persons at risk for self-harm since this is a complex and evolving issue.

Although there are several useful screening tools available to identify patients at risk for self-harm, there is no strong evidence that points to one screening tool or type of question being the most effective. When identifying patients, health care professionals should consider a holistic view of the patient that includes their medical, personal and social history. Based on the evidence, we recommend annual staff training focused on recognizing subjective cues (fatigue, withdrawal, mood changes, etc.) that may indicate at risk individuals and the protocol for providing care and referring patients who were identified as at risk while in the hospital and after discharge.

## **Human sex trafficking encounters in the health care setting**

By: Savannah Garcia, Megan Du, Lydia Holt and Maxwell Tadwick

The health care setting is generally a safe place known to heal and protect. Yet most victims of human sex trafficking consistently slip through the health care safety net undetected. In the paucities of research, we have discovered large numbers of victims who have been assessed and treated numerous times, then been allowed to return home to their abuser without a second glance of suspicion from the provider. The health care system has failed the abused due to a lack of universal implementation of provider education and an evidence-based victim self-reporting survey.

The current state of practice includes indicators for current trafficking victims including malnutrition, lack of eye contact, a “handler” who answers questions for the patient and the inability to provide a valid birthdate or contact information. Once a victim has been identified, the National Human Trafficking Hotline (NHTH) phone number, operated by Polaris, connects victims to resources such as shelter. Currently, there is not one specific training program or assessment tool used in hospitals that produces effective training for health care providers.

The available studies have an underlying theme which shines light on the lack of research available about human trafficking. However, these studies all propose implementing a teaching program on human trafficking for health care workers as the first step in identifying trafficked victims. Most studies use a self-reported survey to measure the health care providers’ prior knowledge of trafficking. After a short teaching lesson, their knowledge is re-evaluated and put into practice in order to identify victims of human trafficking.

There are numerous recommendations that have emerged based on evidence. A lack of knowledge is a major issue in regard to human trafficking. Education is essential in identifying human trafficking victims in the health care setting. According to research, many hospital staff have not been educated about the signs of human trafficking. Self-reporting surveys by potential victims have also been shown to increase the number of human trafficking victims identified. These two implementations should increase victim identification in the health care setting.

## **Do you hear what I hear?**

### **Addressing the phenomenon of alarm fatigue**

By: Lauren Faris, Gina Mancino, Raven Moses and Ashton Wilson

Audible medical device alarms in health care settings are designed to alert staff that something is potentially wrong or needs attention; however, alarm fatigue occurs when staff become desensitized to numerous alarms making it difficult to determine the legitimacy of the alerts. Therefore, clinically significant alarms are potentially ignored, threatening patient safety. Health care establishments should consider alarm fatigue and work to provide effective and efficient alarm management guidelines. Failure to properly manage alarms compromises patient safety, leads to unnecessary critical incident events, prolongs hospitalization and increases hospital-related costs.

The current practice for regulating alarms includes using telephone notification systems, answering the alarms as they sound and using default physiologic monitor parameters. Currently, monitors are designed with standard settings devised to grab the clinician’s attention when physiological responses deviate from the “normal range.” Current alarm monitoring systems are not equipped with technologies to decipher actionable and non-actionable interventions. This forces the clinician to respond to every alarm contributing to the phenomenon of alarm fatigue.

The majority of audible alarms indicate vital sign deviation from default monitor parameters. In several studies, hospitals implemented a new system called Waveform, a program that computes and filters data collection into an algorithm to determine when an alarm will sound. Following this criteria, the number of tachycardia-based alarms decreased between 59.7% and 78% per unit as compared to the institution’s preceding system. When alarm parameters are individualized to a patient’s condition, audible alarms reduce.

Based on available evidence, we recommend implementing patient-specific alarm parameters in telemetry units and enacting programs, such as the Arterial Blood Pressure Waveform Program, to decrease unnecessary alarms and subsequent alarm fatigue. Education on timely and appropriate alarm management will aid in maximizing compliance and help sustain significant change in the hospital culture of alarm management. Potential education may be implemented through both initial and annual competency testing, simulations, workshops and reward systems for the adaptation toward new approaches. Simulations should allow the health care team to initiate personalized alarm parameter modifications. As monitor manipulation increases, hospitals will need to implement institutional standards to prevent the unintended consequence of missed actionable alarms.

