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# New hospital policies and procedures required for patient safety

Eighteen Actionable Patient Safety Solutions are the key to zero preventable patient deaths in our hospitals

## What are the patient safety processes that every hospital administrator and healthcare professional should adopt today to avoid preventable patient harm and death in hospitals?

It's an unfortunate fact of the medical profession that we can't save everyone who enters the hospital for life-saving surgery, critical care for a serious illness, or emergency trauma. But we collectively draw on all our skills and technology to always do everything we can to give each patient the best chance of a successful outcome.

What's more, we continue to develop new techniques, medicines, procedures, and technologies to further improve a patient's chances of surviving and healing from any medical condition. Yet, when it comes to doing everything we can to prevent medical errors in a hospital setting, that same effort is often lacking.

Over my career, I've seen how a certain number of losses from medical errors have become accepted around the world, if not expected. In the U.S., that number is anywhere from 200,000 deaths per year to 400,000 plus deaths.

What if I told you that we know how to prevent most, if not all, of these deaths? That there are proven processes that have been developed and tested by teams of patient safety experts and have been made freely available to every hospital? What if I told you a major reason anyone still dies from medical error is a lack of awareness or willingness on the part of hospitals to adopt new policies and procedures and to do everything they can to implement a culture of patient safety?

## Patient safety

Patient safety has been a primary preoccupation of mine for decades, mainly through my work to improve

the safety of administering anaesthesia, once a very serious source of patient safety risk.

I developed the Ramsay Sedation Scale, a measurement designed for interpreting the depth of sedation for patients in the critical care unit. This scale has been adopted around the world. Just as new methods and technologies were devised by experts over the years to improve the safety of anaesthesia, so too have methods and technologies been developed that address other patient safety challenges.

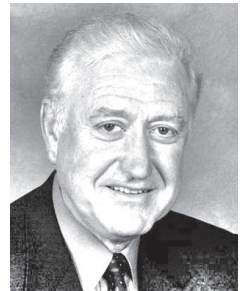
## The Patient Safety Movement Foundation

Since 2012, the Patient Safety Movement Foundation (PSMF) and its partners have put tremendous effort into achieving its goal of ZERO preventable patient deaths by the year 2020.

I am proud to have been with them from day one and look forward to furthering the PSMF's mission, in collaboration with patient safety experts and advocates around the world, as the organisation's board chair starting in 2020.

One of the PSMF's greatest contributions to the advancement of patient safety is the development of 18 Actionable Patient Safety Solutions (APSS). The APSS are specific actions, researched, tested and proven to reduce harm and written up by teams of experts in their respective fields. Any medical facility can implement these APSS to prevent harm to a patient and reduce preventable deaths. These are "living documents" and improvements can be suggested by any provider or organisation as long as they can be proven to be effective.

As announced at the PSMF's 7th Annual World Patient Safety, Science & Technology Summit in January, more than 4,700 hospitals around the world have pledged to implement at least one of these APSS.



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These hospitals have demonstrated to independent audit that over 200,000 patient deaths have been prevented with this effort. But why stop there? If you were an administrator or patient safety officer at a medical facility, why wouldn't you do everything in your power to try to prevent any known source of patient risk? Implementing all of the APSS is certainly a great place to start.

Thankfully, as just announced at the 2019 Summit, four hospitals (three in the U.S. and one in Mexico) have committed to doing just that: CHOC Children's Hospital in Orange County, University of California Irvine Medical Centre, Parrish Medical Centre in Florida, and Hospital Español in Mexico City. They are not hoping for zero preventable deaths, they are planning for it.

### An Overview of the 18 APSS

It's understandable that overcoming longstanding institutional cultures that are resistant to change is a tricky proposition. That's why the PSMF has gone to great lengths to provide detailed information and checklists to facilitate the implementation of its APSS. Complete overviews of the 18 APSS are available on the PSMF's website, along with instructions on how to make a commitment to implementing one or more of them. The APSS cover everything from education in patient safety to specific medical procedures, as the following summary shows.

#### APSS 1. Culture of safety

As outlined in the first APSS, creating a culture of safety within a healthcare organisation is critical and entails fostering a safe and reliable environment of transparency, safety, trust, and accountability. You need to emphasise teamwork, build trust and reject intimidating behavior that suppresses reporting. One approach explained is called CANDOR – Communication and Optimal Resolution.

#### APSS 2. Healthcare-associated infections

Healthcare-associated infections are serious and often times preventable if best practices to safely manage these infections are followed. This APSS has developed such practices in the following sub-APSS areas: 2A. Hand Hygiene, 2B. Catheter-Associated Urinary Tract Infections, 2C. Surgical Site Infections, 2D. Ventilator-Associated Pneumonia, 2E. Clostridium Difficile Infection, and 2F. Central Line-Associated Blood Stream Infections. Several hospitals have demonstrated that Zero HAIs are possible if the right processes are in place and adhered to.

#### APSS 3. Medication safety

A medication error leading to patient harm and/or death is another preventable event in any healthcare setting. This APSS classifies medication errors (3A) into five categories: 1) wrong drug, 2) wrong dose, 3) wrong route, 4) wrong frequency, and/or 5) wrong patient. It also lays out actionable steps in these additional challenge areas: 3B. Antimicrobial Stewardship, 3C. Severe Hypoglycaemia, 3D. Paediatric Adverse Drug Events, 3E. Standardise and Safeguard Medicine Administration, and 3F. Drug Shortages. This last one, Drug Shortages, was officially announced at the 2019 Summit, demonstrating that the PSMF is continuing to find solutions for clinical

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#### APSS 4. Monitoring for opioid-induced respiratory depression

We know that opioid-based medications can lead to respiratory depression that decreases the level of oxygen in the blood, which can cause irreversible brain damage in two to three minutes and death in five minutes. There are recommended doses for prescribing these medications, but the reality is that every person reacts differently to these drugs. What's safe for one person may be too much for another. Every patient receiving these powerful painkillers postoperatively should have the opportunity to be monitored continuously with modern technology that is unobtrusive but can alert a caregiver that adverse effects are developing.

When a patient dies because a complication was not recognised in a timely manner or treated properly, the death is preventable and is called "Failure to Rescue." One of the known adverse effects of opioid analgesics in post-surgical patients is respiratory depression, which must be monitored for and prevented. Failure to rescue patients should no longer occur in our hospitals. We have the technology to be alerted if a patient is at risk, just as we have in modern day vehicles.

**APSS 5. Patient blood management**

Red blood cell transfusions (RBC) are often administered to patients during active bleeding, chronic blood loss, or poor production in order to increase the body's oxygen-carrying capacity. Despite its perceived benefits, RBC transfusions are often deemed unnecessary resulting in risk or harm and defined as "overuse." Errors in the use of blood components are a significant cause of hospital patient morbidity and mortality. Effective solutions now exist and should be implemented.

**APSS 6. Hand-off communications**

The Agency for Healthcare Research and Quality reports that nearly half of hospital staff believe patient information is lost during transfers across hospital units or during shift changes. This APSS outlines the process for a successful hand-off of patient care and information through effective communications and check lists, thereby eliminating multiple risks of potential harm resulting from insufficient or incorrect information being transferred among hospital staff.

**APSS 7. Neonatal safety**

Two critical and common neonatal safety challenges are addressed by this APSS in order to protect one of the most vulnerable categories of hospital patients: newborns. The two challenge areas are 7A. Optimal Neonatal Oxygen Targeting and 7B. Failure to Detect Critical Congenital Heart Disease (CCHD) in Newborns. Congenital heart disease is one of the most common types of birth defects.

**APSS 8. Airway safety**

Airway safety refers to the management and monitoring of the respiratory tract (ie mouth, nose, lungs) to ensure air is properly transported to the lungs avoiding any complications that may arise, such as the need for intubation (placing a tube down the trachea) or an unplanned extubation (the tube being dislodged from the trachea before it is ready to be removed). Unplanned extubation is common and leads to 33,000 preventable deaths each year.

**APSS 9. Early detection and treatment of sepsis**

Sepsis occurs when the body reacts to an infection and releases chemicals that cause inflammation as well as organ failure. Early detection of sepsis, with the timely administration of appropriate fluids and antibiotics, is one of the most important factors in

reducing morbidity and mortality from sepsis. This APSS addresses the varying capacities and resources of hospitals around the world, separating actionable solutions under two categories: 9A. Early Detection and Treatment of Sepsis for High-Income Countries and 9B. Early Detection and Treatment of Sepsis for Low- and Middle-Income Countries.

**APSS 10. Systematic prevention and resuscitation of in-hospital cardiac arrest**

In-hospital cardiac arrest is a major preventable cause of patient harm and death, yet outcomes have been largely unchanged for decades. This APSS gives recommendations to improve care systems, including use of data to identify patients at risk of cardiac arrest, improving staff CPR capability, and integrating technology into clinical practice. Again "Failure to Rescue" must and can be eliminated.

**APSS 11. Optimising obstetric safety**

The goal of obstetric safety is to improve early recognition and the readiness and responsiveness of healthcare professionals in treating pregnant women. This APSS focuses on the following obstetric-related challenges: 11A. Postpartum Haemorrhage, 11B. Severe Hypertension in Pregnancy and Postpartum, and 11C. Reducing Unnecessary Caesarean Sections. Postpartum Haemorrhage is the most common problem in pregnancy and the leading cause of severe maternal morbidity.

**APSS 12. Embolic events**

The most common source of embolism is a blood clot (thrombus) from the periphery, usually from the leg veins. This mechanism of "Deep Venous Thrombosis," or "DVT," is the subject of APSS 12A. Another common embolic mechanism is the admission of air into the venous circulation. "Air Embolism" is the topic of APSS 12B. Other sub-APSS for future development may include fat, marrow, and amniotic fluid embolism.

**APSS 13. Mental health**

With more than 1,500 suicides taking place at in-patient psychiatry units in the United States each year, patient safety events in psychiatry units is a serious concern, requiring heightened levels of monitoring, early recognition of warning signs, and applying appropriate interventions. There is a lack of access to acute psychiatric beds which increases the rate of suicide. The sub-APSS, 13B. Collaborative Care Planning in Mental Health, draws on the combined efforts



of staff, patients, and their family caregivers to set and achieve health goals in the planning, delivery, and evaluation of care.

**APSS 14. Falls and fall prevention**

Every second an older adult in America falls. The Centers for Disease Control and Prevention estimates that approximately 2.8 million older adults are treated in emergency departments for fall injuries every year. Despite significant research over the last several decades to minimise harm and mortality due to falls, the topic still remains one of the great challenges facing hospitals today. The PSMF continues to work toward developing solutions to ensure preventable falls no longer occur and to minimise injury from falls that aren't preventable.

**APSS 15. Nasogastric tube (NGT) placement and verification**

A nasogastric or NG tube is a plastic tubing device that allows delivery of nutrition directly into the stomach (feeding), or removal of stomach contents (drainage). It is passed via the nose into the oropharynx and upper gastrointestinal tract. Many times, these tubes can be malpositioned, leading to significant harm and even death. The National Health Service Improvement (NHSI) in the United Kingdom has placed this type of incident on their "never events" list; never events are "errors in medical care that are identifiable, preventable, and serious in their consequences for patients, and that indicate a real problem in the safety and credibility of a health care facility."

**APSS 16. Person and family engagement**

Person and Family Engagement (PFE) is an under-used "natural resource" for improving the safety of care. Patients and their family members see and learn things that care providers and researchers miss. Their input should not only be heard, but encouraged, for the substantial role it can play in helping healthcare organisations prevent harm. The PSMF website also offers resources to patients and their families who are anticipating a medical procedure and hospital stay to enable them to be their own best advocate.

**APSS 17. Patient Safety Curriculum**

The 2019 World Patient Safety, Science and Technology Summit marked the official announcement of this much-anticipated APSS that provides for a sustainable model for creating a culture of patient safety in all health fields and environments. The goal of the patient safety curriculum is to close a critical gap in

student training around patient safety. It was designed by a team of experts to be adopted by education programs in all healthcare professions (nursing, pharmacy, behavioral health, medicine, etc).

**APSS 18: Post-operative delirium in older adults**

At the 2019 Summit, I moderated a panel on post-operative delirium. Delirium is a condition of acute cerebral dysfunction and maybe seen in the early post-operative period or in the ICU patient. Delirium occurs frequently in elderly patients following surgery. It is predictive of cognitive decline, longer time in the hospital, and increased mortality. Recent studies have demonstrated a signature of dementia on EEG that may open doors to early diagnosis, aetiology, treatment, and prevention.

Every APSS is needed in every hospital. To download all 18 APSS, please visit [patientsafetymovement.org](http://patientsafetymovement.org). Whatever your current role is, there is always something you can do to begin introducing these concepts and procedures at your organisation. If you aren't already actively involved in implementing the APSS, I encourage you to reach out to the Patient Safety Movement Foundation and we will guide you through the process. Join us. Zero preventable deaths in our hospitals are possible but it requires all of us to do our part. ■

KEY POINTS



- ✓ ZERO Preventable patient deaths in hospitals is possible.
- ✓ The PSMF has developed 18 Actionable Patient Safety Solutions (APSS) to address the main Patient Safety challenges hospitals face.
- ✓ Every hospital needs to implement every APSS today.
- ✓ If you want to implement all of the APSS but need help in getting started, you can contact the PSMF.