Baby Grace
One of more than 100,000 lives saved

When Glenwood Springs resident Sarah Hassell went in for a routine pre-operative appointment with her obstetrician, she was feeling happy and confident about the upcoming birth of her third child. Already 37 weeks into her pregnancy, Sarah and her partner, John, were in the hospital for a sonogram a week later. She had no complaints and was in good spirits.

When physician Mary Glode, MD, examined Sarah that morning, everything changed.

“I heard an irregular fetal heart rate that concerned me,” said Dr. Glode, who sat Sarah down at the same desk at Valley View Hospital to have a fetal non-stress test done. Just to be sure.

Sarah’s arrival at the hospital set off a series of rapid events. Nurse Irma Starbuck assessed Sarah and determined that the fetal rate was indeed abnormal.

“I heard an irregular fetal heart rate that concerned me,” said Dr. Glode, who sat Sarah down at the same desk at Valley View Hospital to have a fetal non-stress test done. Just to be sure.

Sarah said she and her husband, John, had already planned to name their daughter Grace. After the event, she believes they are doubly blessed.

One of more than 100,000 lives saved here if it weren’t for the rapid response of the hospital,” said Sarah. “I will be eternally grateful for what they did that day.”

“Changes at this scale require leadership, not just good-will in the workforce. In the final analysis, defining the organization’s strategic intent and priorities is the responsibility of leadership at the highest levels,” said Donald Berreth, MD, President and CEO, for The Colorado Trust.

Commitment of Leadership
Hospitals are often faced with a variety of improvement efforts that compete for staff, infrastructure and technological resources; however, quality improvement generally and patient safety in particular have become leading objectives of Colorado hospital leadership. Increasingly, hospitals have professionals dedicated to identifying and executing practices designed to improve patient safety and outcomes.

Hospitals participating in the campaign indicated that the commitment and involvement of hospital leadership is a critical component of patient safety efforts, and essential for creating sustainable change.

Many of the participating hospitals reported that seeing the results from The Trust contributed to their success in the Colorado 100k Lives Campaign. While all hospitals had been working on some or all of the improvement efforts prior to the campaign, all types of hospital — urban and rural, for-profit and nonprofit — noted that a lack of resources and time had been major barriers to comprehensive and sustained implementation of the six interventions. Trust funding provided for staff, purchase of infrastructure equipment and technology, community outreach and education efforts, and networking and education opportunities for hospital staff.

In addition to funding, these three broad areas that hospitals said contributed to their success in applying the interventions and will help sustain their success moving forward.

Hospitals Helping Hospitals
One key aspect in the success of hospitals during the campaign was the ability to learn from other hospitals that had contributed to their success in applying the interventions and will help sustain their success moving forward.

Hospitals said they were able to connect and share with other hospitals through regular campaign meetings and intervention-specific telephone calls.

In addition, five Colorado hospitals were identified as “mentor hospitals” by IHI and worked closely with other hospitals in Colorado and other states to spread their knowledge and experience. Those hospitals included Exempla St. Joseph Hospital, North Suburban Medical Center, Parkview Medical Center, St. Mary’s Hospital and Valley View Hospital.

Dr. Glode suspects: “I can’t predict what would have happened to this baby had all of the pieces not been in place,” she says. “But I really do believe that was an incredible save.”

Read more of the Colorado 100k Lives Campaign online at www.coloradotrust.org.
The Colorado Trust

The Six Interventions: Colorado Hospital Successes

The six interventions under the 100k Lives Campaign are widely accepted as evidence-based standards of care that reduce hospital mortality and complications. Many Colorado hospitals were already implementing some or all of the interventions prior to the campaign. However, many of the measures were employed only partially or inconsistently in the hospital setting. The 100k Lives Campaign gave hospitals the tools to ensure 100% compliance on the part of all hospital staff, providing for the best possible outcomes for every patient.

1. Deploying Rapid Response Teams

A Rapid Response Team is a group of nurses and doctors trained to rapidly assess patients whose condition appears to be worsening. The teams operate in non-critical care settings, such as post-surgery, during medical tests or when a patient is recovering from an illness. Immediate assessment of a patient showing either a sudden or gradual worsening in their condition can reduce codes (patients who stop breathing or experience cardiac arrest) in non-intensive care settings and intervene in what could otherwise be serious health events.

Sixty-two of Colorado’s 71 acute care hospitals participated in the $3.8 million, 18-month Trust-funded campaign, representing 96% of all hospital beds in the state. The hospitals were from communities large and small, urban and rural, each receiving a grant of $35,000 from The Colorado Trust to help put the evidence-based improvements in place. There was no prescribed approach to implementation, each hospital was encouraged to tailor interventions to best match its unique needs and the patient population it serves.

The Colorado Trust also contracted with the Colorado Foundation for Medical Care, a leading state health care quality improvement organization, to provide technical support to participating hospitals. Numerous health care quality improvement organizations also endorsed the campaign, including the Colorado Nurses Association, Colorado Rural Health Association and Colorado Hospital Association.

At the end of the 18-month 100k Lives Campaign, the Institutes for Healthcare Improvement’s 100k Lives goal was surpassed, with an estimated 122,500 lives saved nationwide.

2. Preventing Medication Errors

One of the most common types of medical mistakes is when patients take too many, too few or the wrong medication in the hospital or after discharge. Medication errors can lead to more hospitalization, readmissions and hospital-acquired infections, as well as an increase in their out-of-pocket costs and hospital stays. This intervention is designed to help hospitals deliver reliable, evidence-based care to prevent deaths from heart attack. Overall, Colorado hospitals already adhered to standards of care for heart attack patients, such as administration of aspirin and beta-blockers early and at the time of discharge from the hospital.

However, many noted marked improvements during the campaign including a reduction in time to administer life-saving medications and perform procedures to reduce further damage or prevent death from heart attack. San Luis Valley Regional Medical Center showed dramatic improvements in the time to administer medications to patients who suffered heart attacks.

3. Preventing Ventilator-Associated Pneumonia

Ventilator-associated pneumonia (VAP) is a lung infection that can occur in patients who are on ventilators to help them breathe. The infection is very serious — about 15% of patients on ventilators get ventilator-associated pneumonia, and about half of them die from it. Many of the organisms that cause these types of pneumonias are antibiotic-resistant, making them difficult to fight after an infection has set in.

Hospitals can implement simple steps to reduce the risk of ventilator-associated pneumonias such as raising the head of the patient’s bed to between 30 and 40 degrees, giving the patient medications to prevent stomach ulcers, preventing aspiration of fluids, and using and seeing if patients can breathe on their own when waking up after surgery. The goal is to get patients off the ventilator and prevent an infection from setting in.

Hospitals that worked to apply these conditions consistently during the Colorado 100k Lives Campaign reported success that continues. Exempla Saint Joseph Hospital went eight months without a VAP, whereas only 1% of patients in other hospitals in the state had no VAPs. Sky Ridge Medical Center reported three consecutive quarters without a VAP.

4. Preventing Infections After Surgery

Reducing infections at surgical sites has been a priority in health care for many years. Many of the organisms that cause these types of pneumonias are antibiotic-resistant, making them difficult to fight after an infection has set in.

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5. Preventing Central Line Infections

Patients who need a lot of blood tests and get intravenous medications in a hospital may have a central venous catheter, or “line,” put into one of their veins. Lines can stay in place for days or weeks, and sometimes can cause infections when bacteria spread to the patient’s bloodstream — a dangerous complication.

Doctors and nurses can help prevent these infections by using proper hand washing, wearing sterile clothing, washing the patient’s skin when the line is put in and checking the line for infections daily.

At the end of the 100k Lives Campaign, Colorado hospitals had reduced their rate of nosocomial bloodstream infections by 34% compared to baseline levels. The American Hospital Association has set a goal of reducing central line infections. Exemplar Lutheran Medical Center showed a 62% reduction from 2001 to 2007. North Colorado Medical Center has had no infections for more than two years and Valley View Hospital has gone 35 months without a central line infection.

6. Preventing Infections After Surgery

Most patients who have surgery die due to another, but about three out of 100 patients get infections. Infections after surgery can be serious, leading to death.

Hospitals can prevent surgical site infections by reliably implementing standard care for all surgical patients including the use of appropriate antibiotics, appropriate postoperative care, using the appropriate antibiotic, and monitoring the patient’s hematocrit and white blood cell count on a daily basis. This intervention is designed to help hospitals deliver reliable, evidence-based care to prevent deaths from heart attack. Overall, Colorado hospitals already adhered to standards of care for heart attack patients, such as administration of aspirin and beta-blockers early and at the time of discharge from the hospital.

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The 2005-06 campaign was part of a nationwide effort of the Massachusetts-based Institute for Healthcare Improvement (IHI) to reduce mortality rates in American hospitals and save 100,000 lives across the United States over 18 months. In this effort, the IHI set the 100,000 lives-saved goal after a 2004 study by the Institute of Medicine estimated that as many as 98,000 patients die each year in U.S. hospitals due to medical errors, and that many more acquire infections in hospitals.

The campaign was well received — more than 1,500 hospitals nationwide participated, representing 96% of all hospital beds in the state. The hospitals were from communities large and small, urban and rural, each receiving a grant of $35,000 from The Colorado Trust to help put the evidence-based improvements in place. There was no prescribed approach to implementation, each hospital was encouraged to tailor interventions to best match its unique needs and the patient population it serves.

The Colorado Trust, along with the Colorado Foundation for Medical Care, a leading state health care quality improvement organization, to provide technical support to participating hospitals. Numerous health care industry organizations also endorsed the campaign, including The Colorado Trust, Colorado Hospital Association, Colorado Rural Health Association and Colorado Medical Society.

The Colorado Trust’s role in the campaign was to help strengthen existing patient safety efforts in Colorado hospitals through implementation of six standards in care designed to reduce medical errors and infections, and improve patient outcomes.

The Six Interventions: Colorado Hospital Successes

The Colorado 100k Lives Campaign was an initiative of The Colorado Trust to help strengthen existing patient safety efforts in Colorado hospitals through implementation of six standards in care designed to reduce medical errors and infections, and improve patient outcomes.

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Hospitals can implement simple steps to reduce the risk of ventilator-associated pneumonias such as raising the head of the patient’s bed to between 30 and 45 degrees, giving the patient medication to prevent stomach ulcers, preventing skin breakdown and infections, and suing if patients can breathe on their own when waking up after surgery. The goal is to get patients off the ventilator and prevent an infection from setting in.

Hospitals that worked to apply these three interventions continuously during the Colorado 100k Lives Campaign reported success that continues. Exempla Saint Joseph Hospital went eight months without a VAP case, while Sky Ridge Medical Center reported three consecutive quarters without a VAP.

5. Preventing Ventilator-Associated Pneumonia

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4. Preventing Medication Errors

One the most common types of medical mistakes is when patients take too many, too few or the wrong medication in the hospital or after discharge. Medication errors can lead to serious complications, including death. High 95% and Heart Valley Hospital reported zero VAP cases over the course of the campaign.

Heart Attack Prevention

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However, many noted marked improvements during the campaign including a reduction in time to administer lifesaving medications and perform procedures to reduce further damage or prevent death from heart attack. Saint Luke’s Valley Regional Medical Center showed dramatic improvements in the time it takes to administer aspirin, beta-blockers and at the time of discharge from the hospital.

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The Six Interventions: Colorado Hospital Successes

The Colorado 100k Lives Campaign was widely accepted as evidence-based standards of care that reduce hospital mortality and complications. Many Colorado hospitals were already implementing some or all of the interventions prior to the campaign. However, many of the measures were employed only partially or inconsistently in the hospital setting. The Colorado 100k Lives Campaign gave hospitals the tools to ensure 100% compliance on all of the hospital staff, providing for the best possible outcomes for every patient.

Deploying Rapid Response Teams

A Rapid Response Team is a group of nurses and doctors trained to rapidly assess patients whose condition appears to be worsening. The teams operate in non-critical care settings, such as post-surgery, during medical tests or when a patient is recovering from an illness.

Immediate assessment of a patient showing either a sudden or gradual worsening in their condition can reduce codes (patients who stop breathing or experience cardiac arrest) and non-critical codes in non-acute care settings. The intervention is fairly safe and effective in what it otherwise is a serious health event.

While a few Colorado hospitals had implemented some form of a patient rapid response system prior to the start of the 100k Lives Campaign, a majority implemented a team as a result of the campaign.

Hospitals that worked to apply these conditions continue to save lives and improve health outcomes into the future.

Preventing Central Line Infections

Ventilator-assigned pneumonia (VAP) is a lung infection that can occur in patients who are on ventilators to help them breathe. The infection is very serious — about 15% of patients on ventilators get ventilator-assigned pneumonia, and about half of them die from it. Many of the organisms that cause these types of pneumonias are resistant to antibiotics, making them difficult to fight after an infection has set in.

Hospitals can implement simple steps to reduce the risk of ventilator-assigned pneumonias such as having the head of the patient’s bed to between 30 and 40 degrees, giving the patient medication to prevent stomach ulcers, preventing infections, and checking on patients of VAP daily and seeing if patients can breathe on their own after waking up. The goal is to give off patients of the ventilator and prevent an infection from setting in.

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Lessons Learned: Sustaining Success

Many of the participating hospitals reported that they chose to sustain the Commit to contribute to their success in the Colorado 100k Lives Campaign. While many hospitals had been applying some or all of the interventions prior to the campaign, all types of hospitals — rural and urban, for-profit and nonprofit — noted that a lack of resources and time had been major barriers to comprehensive and sustained implementation of the six interventions. Trust funding provided for staff, purchase of infrastructure equipment and technology, community outreach and education efforts, and networking and education opportunities for hospital staff.

In addition to funding, these three broad areas that hospitals contributed to their success in applying the interventions and will help sustain their success moving forward.

Hospitals Helping Hospitals

One key aspect in the success of hospitals during the campaign was the ability to learn from other hospitals that had contributed to their success in applying the interventions and will help sustain their success moving forward.

Hospital Culture

Despite some of the challenges hospitals faced in applying the interventions, a number noted a marked shift in internal efforts, community outreach and education efforts, and networking and education opportunities for hospital staff.

In the final analysis, defining the upcoming birth of their third child. Already 37 weeks into her pregnancy, Sarah was scheduled for a cesarean a week later. She had no complaints and was feeling good.

When Glenwood Springs resident Sarah Hassell went in for a routine pre-operative appointment with her obstetrician, she was feeling happy and confident about the upcoming birth of her third child. Already 37 weeks into her pregnancy, Sarah was scheduled for a cesarean a week later. She had no complaints and was feeling good.

On the night of the baby's delivery, Sarah called the hospital and requested that her baby be delivered in the hospital rather than at home. The doctors agreed, and the baby was delivered via cesarean section.

Baby Grace Hassell, the baby was delivered in the hospital rather than at home. The doctors agreed, and the baby was delivered via cesarean section.

She was wheeled into the operating room within 10 minutes, where doctors found that the umbilical cord was wrapped around the baby's neck and chest.

Sarah said that her husband, John, had already planned to name their daughter Grace. After this event, she believes they are doubly blessed.

“I couldn’t believe it happened so fast,” says Sarah. “I knew it was real life.”

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“When physician Mary Glode, MD, examined Sarah that evening, she discovered that the baby had lived,” said Dr. Glode, who sent Sarah across the street to Valley View Hospital to have a fetal non-stress test done, just to be sure.

Sarah arrived at the hospital and was taken to the operating room. She was wheeled into the operating room within 10 minutes, where doctors found that the umbilical cord was wrapped around the baby’s neck and chest.

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“Thankfully, the rapid response protocol for OB patients at Valley View would quickly put the way the was intended to that day: Doctors got the baby ready in just final minutes. The total time from the decision to get a delivery of baby Grace was 12 minutes.

There is no question that my daughter wouldn’t be here if it weren’t for the rapid response of the hospital,” said Sarah. “I will be eternally grateful for what they did that day.”

Fortunately, a new protocol had recently been put in place at the hospital through the Colorado 100k Lives Campaign, giving nurses authority to activate a Rapid Response Team when needed. This change in culture is seen as a critical element to improving patient safety and outcomes, and full compliance of campaign interventions into the future.

Commitment of Leadership

Hospitals are often faced with a variety of improvement efforts that compete for staff, infrastructure and technological resources; however, quality improvement generally and patient safety in particular have become leading objectives of Colorado hospital leadership. Increasingly, hospitals have professionals dedicated to identifying and executing practices designed to improve patient safety and outcomes.

Hospitals participating in the campaign indicated that the commitment and involvement of hospital leadership is a critical component of patient safety efforts, and essential for creating sustainable change.

Changes at this scale require leadership, not just good-will in the workforce. In the final analysis, defining the upcoming birth of their third child. Already 37 weeks into her pregnancy, Sarah was scheduled for a cesarean a week later. She had no complaints and was feeling good.

When physician Mary Glode, MD, examined Sarah that evening, she discovered that the baby had lived,” said Dr. Glode, who sent Sarah across the street to Valley View Hospital to have a fetal non-stress test done, just to be sure.

Sarah arrived at the hospital and was taken to the operating room. She was wheeled into the operating room within 10 minutes, where doctors found that the umbilical cord was wrapped around the baby’s neck and chest.

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“Thankfully, the rapid response protocol for OB patients at Valley View would quickly put the way the was intended to that day: Doctors got the baby ready in just final minutes. The total time from the decision to get a delivery of baby Grace was 12 minutes.

There is no question that my daughter wouldn’t be here if it weren’t for the rapid response of the hospital,” said Sarah. “I will be eternally grateful for what they did that day.”

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Many of the participating hospitals reported that inicio of the Colorado 100k Lives Campaign stimulated a culture change. They noted that the six interventions provided an opportunity to stop and analyze their strengths and weaknesses, bringing depth to improvements already underway. For example, the umbilical cord was wrapped around the baby’s neck and body.

Dr. Glode agrees. “I can’t predict what would have happened to this baby had all of these pieces not been in place,” she says. “But I truly do believe that was an incredible save.”

Lessons Learned: Sustaining Success

When Glenwood Springs resident Sarah Hassell went in for a routine pre-operative appointment with her obstetrician, she was feeling happy and confident about the upcoming birth of her third child. Already 37 weeks into her pregnancy, Sarah was scheduled for a cesarean section a week later. She had no complaints and was feeling good.

But as soon as Sarah sat down to meet with Dr. Mary Glode, everything changed. “I heard an irregular fetal heart rate that concerned me,“ said Dr. Glode, who rushed Sarah across the street to Valley View Hospital to have a fetal monitor set up. But just a few hours later, at 4:30 a.m., when doctors found that the umbilical cord was wrapped around the baby’s neck and body.

Thankfully, the rapid response protocol for OB patients at Valley View worked just the way it was intended to that day. Doctors got the baby out in just four minutes. The total time from the decision to give a cesarean to delivery of baby Grace was 12 minutes.

“I didn’t believe it happened so fast,” says Sarah. “I know it saved her life.”

Sarah and her husband, John, had already planned to name their daughter Grace. After this event, they believe she is doubly blessed.

“Changes at this scale require leadership, not just good-will in the workforce. In the final analysis, defining the organization’s strategic intent and priorities is the responsibility of those who govern the organization,” said Donald Berueke, MD, President and CEO, Colorado Trust.

The colorado trust committed to patient safety. colorado 100k lives campaign

Colorado hospitals committed to patient safety. colorado 100k lives campaign

Hospitals participating in the Colorado 100k Lives Campaign identified that the commitment and improvement of hospital leadership is a critical component of patient safety efforts, and essential for creating sustainable change.

Sustaining Success

Hospitals participating in the Colorado 100k Lives Campaign indicated that sustainability was critical for making patient safety improvements sustainable. Many of the participating hospitals reported that the six interventions contributed to their success in applying the interventions and will help sustain their success moving forward.

Hospitals Helping Hospitals

One key aspect in the success of hospitals during the campaign was the ability to learn from other hospitals that implemented the six interventions. Rural hospitals in particular found value in being able to connect and share with other hospitals through regular campaign meetings and intervention-specific telephone calls.

In addition, five Colorado hospitals were identified as “mentor hospitals” by IHI and worked closely with other hospitals in Colorado and other states to spread their knowledge and expertise. These hospitals included St. Joseph Hospital, North Suburban Medical Center, Parkview Medical Center, St. Mary’s Hospital and Valley View Hospital.

Despite some of the challenges hospitals faced in applying the interventions, a number noted a marked shift in internal culture. In the final analysis, defining the organization’s strategic intent and priorities is the responsibility of those who govern the organization.”