



“Spotlight on Improvement” highlights real stories of current efforts, including: programs being initiated; practices being implemented; and outcomes being targeted and/or achieved. They’re an opportunity for learning from others as well as a spark for further ideas on how we may work together to improve health care quality in the region.”

Providence Sacred Heart:

Cardiac Level 1 Program

Background

Providence Sacred Heart Medical Center and Children’s Hospital is a 644-bed urban hospital in Spokane that provides care for patients across Eastern Washington and Northern Idaho. The significant distance between communities becomes particularly challenging when minutes are on the line for patients presenting with a heart attack. To address this challenge, the Cardiac Level 1 Program was developed in 2007 as a collaborative effort between two competing hospitals in Spokane, a critical air transport service, four cardiology groups, and rural hospitals. Today the program includes a network of 20 plus participating rural hospitals, together serving a population of 875,600 community members, as seen in figure 1.

Problem

The most severe form of heart attack is referred to as an ST-elevation myocardial infarction (STEMI) and can be diagnosed by a simple electrocardiogram (ECG). In the past, rural hospitals without an on-site cardiac catheterization lab usually administered clot dissolving medications (fibrinolytics) to their STEMI patients. However, the optimal treatment is to open the blockage with a percutaneous coronary intervention (PCI) to re-establish coronary flow as quickly as possible. Prior to the Cardiac 1 Program, there was not a standard referral protocol or coordinated communication between the rural and urban hospitals. Patients often drove directly to Spokane, resulting in a 40-50 minute time when there was no care initiated or teams being assembled.

Solution

In 2007, the Cardiac Level 1 Program began by researching other successful models and programs in the country. They then began developing and implementing a standardized treatment protocol at a pilot hospital and later expanded to all participating hospitals. A standardized protocol allows for ED providers to start reperfusion treatment (restoring blood flow) without delay and not waiting for the cardiologist to call. Another standard was a no diversion policy, which always guarantees a bed at the receiving hospital. INHS/NW MedStar, a centrally-based critical air transport, was a close partner from the beginning who identified strategies within their own process to reduce time and increase efficiency.

The transfer process is continually analyzed to identify delays and potential time-saving transfer strategies for patients from these rural communities. The areas for potential time-savings are closely tracked and managed through a feedback loop that includes a follow-up letter, sent a few days

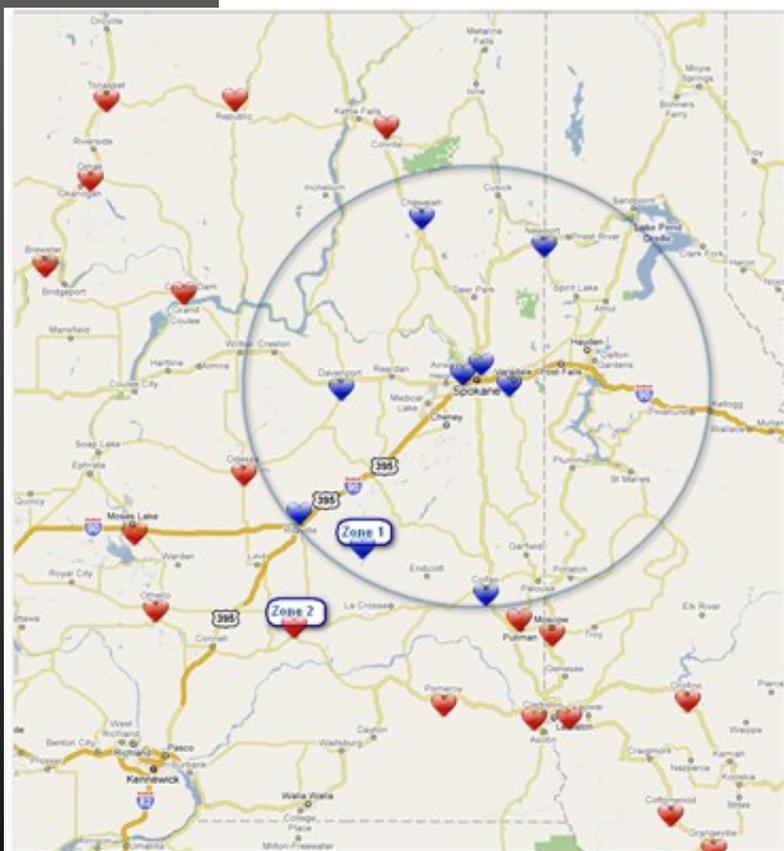


Figure 1: Providence Sacred Heart Cardiac Level 1 participating rural hospitals in zones based on distance from PCI center in Spokane

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a program for an
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Teresa Litton at

tlitton@pugetsoundhealthalliance.org

after the case, with a timeline and summary of the patients' time with the hospital and transport team. For real time feedback, a phone call is also placed to the sending hospital once the patient has reached the catheterization lab. Outcomes for two closely monitored, time-sensitive steps, Door to ECG time and ECG to Activation of transport time, can be seen in figure 2. When a patient presents at the rural hospital, a STEMI can be diagnosed within minutes and the transport team can be mobilized, providing patients quality care in the most time efficient manner.

- **Changing healthcare partners.** Spokane, like the rest of the country, is also experiencing a rapid rate of mergers and new partnerships. This means regional efforts have to continuously adapt and change strategies to the latest organizational structures.

Keys to Success

- Agreed upon standardized protocols, with timely and actionable feedback between sending and receiving hospitals is key. Opportunities to

improve emanate from the collection and analysis of each process step.

- Organizational and individual commitment is critical, especially as the program begins its 7th

year and other efforts compete for people's time and attention.

- Staffed for success—having a physician champion and project coordinator to direct improvement efforts, provide community education, and follow-through is essential.

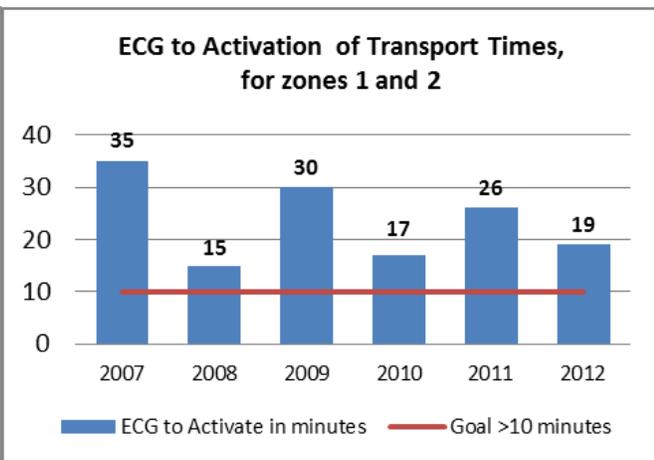
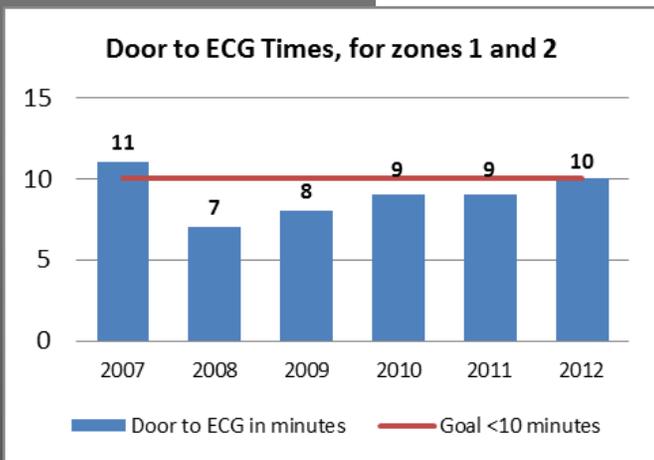


Figure 2: Door to ECG and ECG to Activation of transport times in minutes

About the Alliance

The Puget Sound Health Alliance, an Aligning Forces for Quality Community, is a non-profit made up of those who provide, pay for and use health care, working to improve quality of care at a price more people can afford. More than 165 organizations have joined the Alliance, including The Boeing Company, Starbucks, Puget Sound Energy, WA State Health Care Authority, King County and many other employers, physician groups, hospitals, consumer organizations, unions, health plans, pharmaceutical companies, associations and others.

A cornerstone of the Alliance work is the Community Checkup, a regional report to the public comparing the performance of clinics and hospitals for basic measures of quality care in the Puget Sound area.

Challenges

- **Geography.** Variation in cases because of geographical distance is a constant challenge for hospitals in Eastern Washington. To address this challenge, reperfusion strategies for STEMI patients were developed based on geographical "zones," Zone 1 hospitals are less than 60 miles from Spokane and Zone 2 hospitals are over 60 miles, as seen in figure 1. Zone 1 hospitals will usually transfer STEMI patients for Primary PCI and at the Zone 2 hospitals, STEMI patients will receive fibrinolytic therapy, unless contraindicated, and transfer for later PCI.
- **Weather.** Eastern Washington experiences harsher winters, and air transport may not be available in inclement weather so the patient will have to go by ground transport. This delay in arrival to the PCI hospital may change the reperfusion strategy from Primary PCI to use of Fibrinolytic Therapy.

For more information on Providence Sacred Heart Cardiac Level 1, contact:

Deanna Jones

Cardiac Level 1 Project Coordinator

Deanna.Jones@Providence.org

509-474-6591

Learn more at:

<http://washington.providence.org/hospitals/sacred-heart-medical-center-and-childrens-hospital/services/cardiology/specialty-services/cardiac-level-1-program/>