Improving Patient Safety and Parent Satisfaction in a Community Hospital Pediatric Unit

Suzan Griffis Knowles, RN-BC, BSN, CCAP (NICU Nurse Manager), Ellen Shipley (IT Project Manager), James Nolan (IT Systems Analyst), Linda Wing (IT Systems Analyst), Bill Whitaker (IT Trainer), Steve Rima (Bio Med Director), Lori Prantner (Vice President Women's and Children's Services), Paul Hayes (GOO)

Valley Medical Center, Renton, WA

CHALLENGE
For years the Valley Medical Center Pediatric Unit struggled to maintain an adequate patient census due to the changing in-patient pediatric population seen across the country and a lack of centralized monitoring for children with respiratory illness or other conditions requiring continuous monitoring. Additionally the NICU, occasionally needed access to over flow beds; a need which could not be accommodated without bedside monitors and centralized monitoring.

In order to grow the pediatrics program, ensure patient safety and serve the community the hospital committed to investing in technology, unit renovation and partnerships. Valley Medical Center's 13-bed Pediatrics Unit is the only one located between Seattle and Tacoma. Newly renovated, the area was designed for families with state-of-the-art security, centralized monitoring and nurse call system. The challenge was to provide reliable monitoring of at-risk neonatal and pediatric patients and avoid transfer of patients without incurring alert fatigue for the nursing staff along with increasing parent, nursing, and physician satisfaction.

SOLUTION
The team created a plan to implement the use of Philips event management technology and the Avaya phone system to alert nursing staff of cardio respiratory monitor alarms and/or patient call lights. The staff was provided training within a several week time frame of implementing the system, allowing them to leverage their new skills. Several staff members received additional training in the assignment feature and were able to support their peers as “super users” of the system. For several days after implementation on 2/10/2010, the IT department provided on site IT support which allowed the nursing staff to focus on providing patient care while learning to use the new system. Very few technical issues were experienced and the Go Live was felt to be uneventful by all members of the team. The technical support of the Philips event management team was a key in making mindful decisions regarding the programming of the system alerts and features.

RESULTS
• Increased average daily census by 7.8% increase (0.5 days).
• Improved parent satisfaction by 19.3% increase at a 90% confidence interval in the “response to call light” question. (11.8 points)

CONCLUSION
Implementing the Philips secondary alert notification solution has allowed the unit to fully leverage the central cardio-respiratory monitoring system. In doing so, the Pediatric Unit has quantitatively, increased both the average daily census and parent satisfaction. Additionally the unit now provides a safe outlet for convalescing newborns during times of high NICU census. Qualitatively, physicians report improved confidence in the nursing staff and the hospital’s ability to care for medically fragile children.

LESSONS LEARNED
• Working with Philips clinical personnel on mindful choices of alerts is paramount to success and avoiding alert fatigue: current alerts include: Low O2 Saturation, Extreme Brady and Apnea.
• Training staff close to the time of activation proved essential in application of the education.
• Using the identified IT resources during the initial Go-Live allowed staff to focus on patient care while applying the new technology.
• Identifying “Super Users” within the staff to receive additional training provided the staff with an additional resource.
• Future plans include expanding care to include recovery from moderate sedation for our pediatric patients further decreasing the need for patient transfer to other facilities.

Valley Medical Center (www.valleymed.org) is a 303 bed not-for-profit medical center and health care network.