Medical Center Saves $2.4 Million, Improves Patient Flow

Background: Valley Medical Center

Valley Medical Center (VMC), Washington State's first public district hospital, is the largest nonprofit healthcare provider between Seattle and Tacoma, serving over 400,000 residents as a regional center op erating a network of 12 community clinics throughout King County. VMC's central hospital in Renton offers medical, surgical, and 24-hour emergency care as a Level III trauma center. With twelve Operating Rooms (ORs), twenty-six Admit/Discharge rooms, and thirteen post-op beds, VMC's main campus in Renton, WA performs over 9,000 surgical procedures each year.

Before Connexall, all processes were done manually - information was often out of date by the time it reached the right staff member. Admitting a patient to the perioperative process could take over twenty minutes: patient information was disseminated, confirmed and a room assigned. Each minute spent in the OR costs approximately $60; delays resulting from patient transferring, positioning, equipment allocation, and room turnover also meant sub-optimal use of staff resources and space.

Every night, the next day's schedule would be printed from VMC's McKesson PHS system and manually copied on to white- boards – a process that would take up to two hours. Requests for assistant personnel and for supplies were phoned-in by admit/discharge nurses and the circulating nurse in the OR. Staff made repeated requests or resorted to overhead pages when assistant personnel were unavailable.

Frequently, operations were completed early or ran late, which necessitated constant re-writes to the day's schedule on the whiteboard in order to retain staff availability and facility resources. Unfortunately, the only way that nurses, doctors, and assistant personnel were informed was if they walked by the whiteboard and noted the changes!

In the family waiting area, volunteers would use the desk phone to call the OR desk to gain patient status for families awaiting news.

The Solution

The Connexall Team collaborated with Valley Medical staff to develop a unique OR solution tailored to their specific needs. Now, each of the eighteen newly-renovated ORs has its own touch-screen computer, and six plasma screens have been deployed in key areas (including one in the family waiting area). The entire perioperative arena is integrated by a SpectraLink NetLink Wireless System and Avaya wireless phones.

Plasma screens were placed in strategic locations to display customized

information. The nursing desk now views the full details, of patient's information, relevant procedures, doctor's name and OR number. To conform to privacy laws, the screen in the family waiting area only displays patient id and status. Lastly, the plasma screens in the OR wing display surgery schedules, assistant personnel information, and OR status.

Connexall retrieves patient information from the McKesson PHS system and displays details on each plasma screen. As a patient's status changes or a surgery is added, Connexall automatically displays these updates and additional surgical cases throughout the facility. This has streamlined the scheduling of OR resources and provided timely updates for the families waiting for progress reports. Morning reports are now displayed through virtual wallboards on nurse computers throughout the OR area.

Circulating nurses and anesthesiologists can now request supplies and assistant personnel by a simple double-click on their monitor. Requests are sent directly to the person responsible, who acknowledges the request, alternatively escalating it if they can't attend to it immediately, or calling back the requester at the touch of a button if clarification is required. Staff know that help is on the way once a request is acknowledged. Similarly, updates to the OR schedule are displayed in real time – easily: no white board required!

A line separator has made staffing assignments easier than ever, too. Connexall's integration ensures that the anesthesia team, nurse circulator, scrub techs, and float staff are always informed of who, when and where assignments are for.

Connexall Results Summary

- In the first year alone, Valley Medical saved $2.4 million through better patient flow, workflow, and a more efficient use of staff resources and OR time.
- Supply and assistant personnel requests are expedited, reducing the per procedure time.
- Staff receive procedure completion notification automatically, reducing room turnover time.
- Patient status is tracked and reported in real time throughout the perioperative arena.
- Real-time OR status and relevant data is displayed on plasma screens located throughout the surgical wing.
- Overhead paging in the OR department is dramatically reduced, ensuring that true emergencies are not missed and patients, health care, professionals and support staff enjoy a more serene environment.
- Families are immediately informed of most recent patient status and the number of calls made to OR coordinators has been significantly reduced
- Patient satisfaction has increased as a result of better care and reduced response times to urgent requests.

Into the future

With Connexall well established at Valley Medical, the administration continues to find efficiencies and improve workflows. Among the options currently under consideration are integrating scheduling and staffing software (to the current OR solution to further reduce manual data entry), adding wallboards to make it easier for staff to find the information they're looking for, using Connexall with RFID tags, and implementing staff sign-in and -out with Connexall's virtual call points.

Additionally, Connexall is expected to assist in plans for developing a new system for emergency call cases. With the click of a button, automated requests will be sent to teams of available surgical and perioperative support staff – ensuring that appropriate staff, procedures, and resources can be expedited when emergency operations are needed.

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