CASE STUDY: HOW BAYHEALTH SYSTEM TRANSFORMED ITS CENTRAL STERILE DEPARTMENT

Introduction

Bayhealth healthcare system, with hospitals located in Dover and Milford, is Delaware's leading healthcare system dating back to the 1900s. The system's leadership is committed to the mission of "strengthening the health of the community, one patient at a time." Bayhealth provides a wide range of services, inpatient care, and a plethora of outpatient services at both facilities with access to 24-hour emergency departments. The ultimate long-term strategy is to leverage the case volume and upgrade surgeon satisfaction through cultural transformation of perioperative services throughout the system

Situation

Operating room personnel routinely delayed cases, reporting holes in wrappers and missing and broken instruments. Surgeons were reporting evidence of bio-burden on instruments to leadership. Although continual errors were reported, there was no mechanism for auditing in place to determine the root cause of the errors. IUSS processes were higher than national benchmark levels with no documented evidence of the reason. The sterile processing department was suffering from a staff shortage and high turnover in staff and leadership. The results of the issues were exhibited throughout the system operating rooms. SPD was responsible for sterilization of 15 operating rooms at two hospitals and an ambulatory surgery center located adjacent to the main hospital and several clinic sites. In the midst of the acute problems, the system was building a new hospital. The system needed SPD staff to be trained and prepared for certification and insights of how to organize the department to run more efficiently. Moreover, leadership needed to regain the trust of surgeons and the community. Senior leadership recognized the acuity of the situation and reached out to Surgical Directions to help stabilize the department and provide a short and long-term plan of action.

Solutions

To address the complex systemic issues, Surgical Directions recommended a multifaceted approach including building a culture of safety, developing robust SPD processes, and providing educational resource guidance:

- Deploy interim subject matter experts to work side by side with staff members
- Stabilize the SPD department's daily operational challenges
- Launch a formal assessment of the workflow processes and staff members skillsets
- Conduct Surgeon and Staff Townhall meetings to establish transparent messaging across the enterprise
- Assemble performance improvement teams, administration, surgeons, nurses, anesthesia, and staff included in the transformation
- Develop dashboard metrics reports to support recommendations for change
- Install lean daily management boards to measure safety
- Conduct a job fair to recruit and fill open positions with SPD professionals

Results

The department transformation was led by the Surgical Directions team in close collaboration with senior leadership.

- Built a staffing plan to meet productivity goals. (See Staffing Plan table below.)
- Reduced traveler expenses by hiring 12 full-time employees. In addition, sourced candidates to hire a department manager and two supervisors, one for each facility. Trained employees to become more efficient
- 79% reduction of department errors:
  - Holes in wrappers
  - Missing or wrong instrument
  - Incorrect Assembly
  - Missing tray/set

Staffing Plan

Summary of Finance's FY20 Reconciliation and Current Position Control					
Job Code/Descripton	**FY18**	**FY19**	**HR 7/25/19**	**FY20 Approved**	**Variance: HR/7/25 to FY20 Approved**
0311 - Technician I, Sterile Processing	22.06	22.03	25.80	22.95	-2.85
0459 - Technician II, Sterile Processing	5.00	5.00	8.50	5.00	-3.50
0458 - Lead Technician, Sterlie Processing	1.00	1.00	3.90	1.00	-2.90
0212 - Supervisor, Ster-ile Processing	4.00	5.00	5.00	5.00	0.00
0938 - Manager, Sterile Processing	1.00	1.00	2.00	1.00	-1.00
2816 - Educator, Sterile Processing	0.00	0.00	2.00	0.00	-2.00
All Job Codes	**33.06**	**34.03**	**48.2**	**34.95**	**-13.25**

*Staffing Plan table

Reduction of department errors

CSP Dashboard	Column labels											
Type of Error	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Total
Other	0	3	1	5	3	1	4	0	2	3	2	24
Assembled Incorrectly	6	8	11	22	3	0	7	3	8	6	1	74
Bio-Burden	4	3	4	5	4	1	2	4	0	2	1	30
Broken Instrument	0	0	2	0	0	0	0	0	0	2	0	4
Container issues	15	6	8	9	5	1	11	4	2	10	6	81
Hole in wrap	5	5	4	6	4	2	6	5	2	0	1	40
Incorrect or mislabled Instruments	4	0	3	8	0	1	1	1	2	2	0	22
Incorrect or mislabled tray	0	0	2	0	0	0	0	1	0	0	0	3
Missing or wrong instrument	2	5	8	34	14	2	13	17	8	9	6	118
Missing tray/set	0	1	2	5	1	0	0	0	0	1	0	10
Tray/Item Unsterile	6	1	0	3	1	1	3	5	1	0	2	23
Vendor/Loaner Issue	0	0	1	0	0	0	0	1	1	0	0	3
Wet Tray	0	0	1	0	0	0	0	1	1	1	0	4
Wrong Tray Picked	0	1	0	0	0	0	0	0	0	0	0	1
Grand Total	42	33	47	97	35	9	47	42	30	37	1	437

*January - March education training