Christiana Care Health System began integrating TeamSTEPPS training into selected high risk, high acuity areas beginning in 2007. In 2008, we began planning to expand this effort beyond trauma into Perioperative Services. There are four surgical sites at Christiana Care—two acute care hospitals and two ambulatory surgicenters. Volume = 45,000 surgeries/year. Our baseline AHRQ Hospital Survey on Patient Safety revealed opportunities for improvement in communication and teamwork within Perioperative Services.

- In addition, Human Factors consultant observations in the ORs revealed:
  - a tendency toward assumption based care
  - a time-out process that tended to be perfunctory and lacked cognitive engagement

Clinician focus group feedback revealed:
- Information shared during the time-out process was not viewed as meaningful by all team members
- Each team member had information about some aspects of the patient and anticipated procedure; that information did not have a consistent structure or format in which it could be reliably shared with the entire team

Using Kotter’s change theory and the Plan Do Check Act (PDCA) model, we convened a team of perioperative personnel from each site (PA, CRNA, staff nurses, nurse managers, anesthesiologist, surgeon, staff development specialists, surgical tech) and sent representatives of this team to Team STEPPS training. During the course of our planning, we became aware of the World Health Organization Safe Surgery Saves Lives campaign, and the development and testing of the World Health Organization Surgical Safety Checklist. We accepted the Institute for Healthcare Improvement’s “Sprint” challenge to test this tool in one OR at least once by April 2009.

The implementation team met regularly, engaged key stakeholders, and piloted tests of our communication tool (based on the World Health Organization Surgical Safety Checklist) in
selected procedures and service lines over time. This provided us with opportunities to seek and incorporate user feedback to develop our current customized tool. With a strong foundation from rapid cycle testing, we proceeded with full implementation of this three part structured communication in all of our ORs (total=49) including 13 ORs at our two ambulatory surgicenters, and 36 inpatient ORs at our two acute care hospitals, which was accomplished in September 2009.

**SOLUTION:**

Our solution was to incorporate this evidence-based Surgical Safety team communication tool into our team training intervention for Perioperative Services staff and physicians. This tool provides a structured format in which team communication of key elements of care can reliably occur, and also helps to meet universal protocol requirements in a more meaningful way than our previous “time-out” process.

Our methodology included holding multiple information and training sessions with users, where their feedback could be integrated into final tool development. We integrated the TeamSTEPPS “Know the plan, share the plan, review the risks” framework into the process.

We implemented the first test in one of our ambulatory surgicenters in conjunction with our outpatient laparoscopic cholecystectomy team. Following successful roll-out to this area, and repeated use by specific team members, we added additional test sites for our pediatric service line, then robotics, and next began our final push for systemwide implementation. In addition to a robust training and communication plan, we held two combined grand rounds presentations just prior to kick-off targeted to OR nurses and techs, anesthesiologists, surgeons, residents, physician assistants, and CRNAs.

**OUTCOMES:**

On Sept. 29 and 30, 2009, the customized Surgical Safety team communication tool was implemented system wide. Large posters with the expected information to be communicated were produced and placed in each OR. Structured communication among team members is now conducted pre-induction, pre-incision, and immediately post-op prior to leaving the OR.

Results have demonstrated a number of “good catches” such as allergies being identified, pre-op antibiotic orders being clarified and appropriately administered, specimen collection needs being accurately identified, surgical site correction prior to incision, equipment function and needs being reliably identified. Other qualitative benefits include clinician reports of a more collegial atmosphere in the ORs.

Patient satisfaction surveys during the initial pilots revealed that patients agreed they felt safer due to the use of the Surgical Safety communication. Clinicians similarly reported improved team knowledge of the plan of care and agreed that use of the tool did not negatively impact efficiency of care delivery. See attachments. We are currently in the process of developing a
Perioperative Services report card incorporating NSQIP, SCIP, and other measures to track trends over time. Collection and analysis of subsequent AHRQ HSOPS data will follow.

For a demonstration, visit http://www.orlive.com/christianacare/videos/dramatic-advance-in-parathyroidectomy2 to view the pre-incision portion of the briefing at the 6:48 minute mark in the video.
Check Patient Satisfaction

Question 3: The surgical team’s review of the safety checklist prior to the start of surgery made me feel safe.

<table>
<thead>
<tr>
<th>Question No. 3 Responses</th>
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<tbody>
<tr>
<td>47.1% Strongly Agree</td>
</tr>
<tr>
<td>52.9% Agree</td>
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</table>

n=18

Based on data from next day telephone survey responses after patient discharge from Christiana Surgicenter; 100% agreed that use of this team communication made them feel safe.

Check Safety First

Overall responses: Use of the WHO team communication tool improved knowledge of the plan of care by all team members

<table>
<thead>
<tr>
<th>Question No. 3 Responses</th>
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<tbody>
<tr>
<td>3.2% %Strongly Agree</td>
</tr>
<tr>
<td>51.4% %Agree</td>
</tr>
<tr>
<td>45.4% %Neutral</td>
</tr>
</tbody>
</table>

n=92 Almost 90% of respondents agreed that the use of this tool improved team knowledge of the plan of care; there were no negative responses.
Check Results

By team member role: Use of the WHO team communication tool improved knowledge of the plan of care by all team members

- **PA**: 60.0% Strongly Agree, 21.4% Agree, 18.6% Neutral
- **Nurses**: 78.6% Strongly Agree, 21.4% Agree, 0.0% Neutral
- **CRNA**: 33.3% Strongly Agree, 60.0% Agree, 6.7% Neutral
- **Surgeon**: 66.7% Strongly Agree, 33.3% Agree, 0.0% Neutral
- **RNFA**: 92.9% Strongly Agree, 0.0% Agree, 0.0% Neutral
- **Surg Tech**: 60.0% Strongly Agree, 40.0% Agree, 0.0% Neutral
- **Anesthesiologist**: 93.3% Strongly Agree, 6.7% Agree, 0.0% Neutral
- **Medical Student**: 33.3% Strongly Agree, 66.7% Agree, 0.0% Neutral

**n=92** All members of the team gave predominantly positive responses