Factors Affecting the Leadership of Process Improvement Teams in Sterile Processing
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Introduction

The purpose of this paper is to identify the factors that affect the ability of the Sterile Processing Department (SPD) manager to lead a process improvement (PI) team. Exterior factors such as technology advancements in medical instrumentation are putting more pressure on SPD to contain or reduce costs and manage reprocessing operations with limited resources. Another exterior factor affecting hospitals is health care reform and Medicare reimbursement. The manager of SPD is often charged with leading a team that will focus on some form of process improvement activity which has a direct impact on their operation as mandated by the hospital administrative team. Thus the sterile processing manager's ability to lead a team with a focus on process improvement is very important to the success of the team and attaining the goals set forth by management.

Researchers have found a number of factors that contribute to team effectiveness. These include effective team leadership, positively managing conflict, and successful team members (LaFasto & Larson, 2001; Lencioni, 2002). According to Wolf (2008), successful process improvement and enhanced performance involve visionary leaders who are available, approachable, and do not micromanage. The ability of a team to implement effective change is key to successful PI activities (Kotter & Cohen, 2002).

In order for SPD managers to lead effectively a process improvement team they need to understand and become competent in the skills needed to lead the PI team. In this research, the qualitative and quantitative data were obtained from a group of healthcare Central Service managers and supervisors using a survey with closed and open-ended questions. The purpose of this research was to identify the factors that affect the ability of the sterile processing manager to lead a process improvement team. The two research questions used were: (1) What skills and behaviors do team leaders

need to possess to facilitate the sterile processing PI team? and (2) What skills and behaviors does the sterile processing PI team need to succeed?

The results of the research concluded that leaders of sterile processing performance improvement teams must have technical knowledge of the sterile processing discipline as well as aspects of leading a team such as ensuring a collaborative climate is maintained. This research also concludes there are common team member characteristics seen in successful PI teams, such as being open to express a point of view and being supportive. The team leader must also demonstrate behaviors such as ensuring a collaborative environment for the group and focusing on the team goal. Participants indicated that an effective team leader must be aware of common barriers that challenge a team such as lack of communication, resources and time, as well as resistance to change. The findings also showed that the PI team leader must be skilled in problem solving, establishing clear group norms, goals and hold team members accountable for decisions which are made together as a group.

Challenges for SPD Teams

Hospitals are faced with incredible pressure to sustain themselves in tough economic times while ensuring quality patient care is maintained. The Perioperative services areas (the departments where patients have procedures e.g., surgery or the Gastrointestinal GI lab) are the largest source of revenue for hospitals. The Sterile Processing Department (SPD) supports these departments by reprocessing the reusable medical devices that are used in the surgical procedures. The SPD does not generate revenue for the hospital, but is the key to the success of the areas that do produce revenue and provide patient care (Swanson, 2008). Often the SPD is overlooked when resources or staffing are upgraded, and the importance of the products and services that SPD provides is mis-understood. The need for process improvement in SPD seems to be never ending.   Leading diverse work teams in today's hospitals presents a challenge

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to any leader. Leading teams in process improvement (PI) projects involving the sterile

processing department presents unique challenges with specific barriers to team

effectiveness. In order for a sterile processing PI team to be successful, the leader must

recognize the characteristics of effective team members and demonstrate competency in

facilitating the group's activities. This paper examines the skills and behaviors of both

team leaders and members participating in sterile processing PI groups. The research

outcomes show the highest ranked characteristics that leaders need to facilitate PI

teams. Other outcomes pertaining to leaders were their ability to manage conflict and

manage the barriers that affect the PI teams. Outcomes pertaining to team experiences

show the importance of a clear purpose, norms, process, accountability and group

decision making. The research also disclosed the types of conflict sterile processing PI

teams commonly experienced.

One of the greatest challenges facing sterile processing managers today is

optimization of workflow in the SPD area. "Costs associated with ineffective and

inefficient workflows often go unexamined, unmeasured and therefore, unmanaged. In

an increasingly competitive world, poor workflow compromises the effectiveness of the

operation and impacts the level of customer service that you can provide" (Johnson,

2005, p. 30). The objectives of reducing operating budgets and providing quality patient

outcomes are facing every sterile processing manager. The ultimate SPD performance

goal is providing products to customers that are 100% clean, complete, sterile and

delivered on time (Kimsey & Barton, 2005). Establishing and leading teams of

individuals from different areas in the medical center and determining ways to meet

these objectives are also a challenge to most SPD managers. The areas of research

focused in this paper can be categorized under the following headings: performance

improvement in healthcare, performance and quality improvement in SPD,

management of change and conflict, leading change, skills and behaviors of a good

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team member, leading teams and managing the five dysfunctions of a team and problem solving and conflict resolution within teams.

Performance Improvement in Healthcare.

In the article, "Finding the Frontier of Hospital Management", the authors Griffith and Pattullo (2009) compare the performance of hospitals receiving the Malcolm Baldrige National Quality Award (MBNQA) to those that have not received the award. "The application for the MBNQA requires hospitals to complete a 50 page document that includes, (1) Leadership; (2) strategic planning; (3) focus on patient, other customers and markets; (4) measurement analysis and knowledge management; (5) workforce focus; (6) process management; and (7) results. Scoring is based on evidence of approach—appropriateness, effectiveness, replicability, and knowledge foundation of work methods" (p. 58). "The process documented in the applications describe an approach to management that is a radical departure from hospital traditions, which have tended to emphasize static domains of authority rather than formally measured performance, goal setting, and continuous improvement" (Griffith & Pattullo 2009, p. 69). Hospitals that adhered to the Baldrige criteria showed higher scores in patient, physician and employee satisfaction surveys. These hospitals seem to be in a constant state of process improvement and focus on sustainability of customer and employee satisfaction as well as quality patient care and financial stability. In another study conducted in 2004 using twelve top performing HCA (Hospital Corporation of America) healthcare facilities, consultants found seven central findings linked to successful business performance. "Perhaps we have tried to make the work of improving business performance and developing our people much more complicated than it needs to be" (Wolf, 2008, p. 38). The first of seven findings revolve around leadership. According to Wolf, successful process improvement and enhanced performance involve visionary leaders which are available, approachable and do not micromanage. Consistent and effective

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communication is the second characteristic for success with emphasis on sharing both good and bad news, which creates a greater level of ownership and accountability among staff and management.

Staff development and selecting employees for fit and appropriate job assignments is the third key to top performing organizations. Utilizing a strong employee orientation process for new employees who includes visibility from leadership is key according the findings. The fourth category for success is having an agile and open culture. This translates to individuals taking accountability for good and bad outcomes. A family environment is reinforced which includes a blame free approach to problem solving. Service being the number one priority is the fifth finding. Surveys and interviews revealed the staff and physician members were able to articulate and demonstrate this value. Patients are placed first and service recovery whether it occurs at the bedside or some other point of contact is supported by staff and the senior leadership of the organization. The sixth finding pertains to constant recognition and community support. This was observed through celebrations throughout the organization. Leaders and staff showed their appreciation for each other by formal and informal recognition. Also the high performing hospitals showed commitment to the community, which included outreaches and being a resource for the community. Lastly, the successful facilities displayed solid relationships with physicians. Senior leadership addressed issues with physician behavior and involved physicians in the quality outcomes and measures for the facility (Wolf, 2008, pp. 39-40).

Performance and Quality Improvement in Sterile Processing

Ellen Gray (2009) a director of Sterile Processing at a large medical center in Springfield, Missouri states, "Quality improvement has never been more important due to increasing outbreaks of drug-resistant infections, anticipated decreases in reimbursement for preventable infections and the economic downturn" (p. 58).

Embarking on a quality and process improvement journey can sometimes seem like a large undertaking, but it can be simplified by taking one task at a time and not biting off more than the team could chew (Gray, 2009). Another aspect to consider is ensuring that measuring criteria is relevant and useful. Margaret Wheatley (1998) explains in her article "What Do We Measure and Why" that striking a balance between obtaining feedback about performance and collecting endless amounts of data that is not valuable in the change process is the cause of many failed programs. "Far too many organizations have lost the path to quality because they have burdened themselves with unending measures The path of measurement can lead us dangerously far from the organizational qualities and the behaviors that we require" (Wheatley & Kellner-Rogers, 1998, para. 8).

The five questions that Wheatley recommends to create measures that represent feedback is a useful in determining if an assessment tool is appropriate for sterile processing quality and process improvement. "If we understand the critical role played by feedback in living systems, and contemplate these distinctions, we could develop measurement processes that support the behaviors and capacities we require, those that enhance the vitality and adaptability of the organization" (para.12).

1. Who gets to create the measures?

2. How will we measure our measures?

3. Are we designing measures that are permeable rather than rigid?

4. Will these measures create information that increases our capacity to develop, to grow into the purpose of this organization?

5. What measures will inform us about critical capacities: commitment, learning, teamwork, quality, and innovation? (para. 13-17).

Process improvement in sterile processing often takes some sort of significant or sentinel event to create the urgency for change and process improvement. According to

Dan Johnson (2005), a healthcare professional consultant, it often takes a crisis created

by forces outside the organization such as growth of surgical volumes, limited space for

reprocessing operations, or inadequate equipment to motivate a healthcare facility to

obtain the necessary resources for change and sustained process improvement.

> But it doesn't have to take a crisis. Forward thinking managers can drive the change effort by recognizing that their current processes are less than perfect. Organizations that are healthy are often in a better position to make dramatic improvements simply because the resources are available and the process can move forward without an extreme sense of urgency (p. 34).

Management of Change and Conflict

The Association of operating room nurses (AORN) published an article written by

Scott Swanson (2008) which explains the need for changing paradigms in sterile

processing departments. A mandate for change in sterile processing is a result of

advancing technology in surgical instrumentation and pressure to manage costs and

resources within the health care facility.

> Until recent years, some healthcare administrators held the private and rarely expressed belief that staff members in sterile processing departments (SPD) were nothing more than glorified dish washers. Despite the dramatic changes in healthcare over the past 10 to 20 years, the need for change in SPD has been overlooked, and the essential role the SPD plays has been misunderstood. (Swanson, 2008, p. 241)

In the book *Understanding Organizational Behavior,* by George and Jones

(2008), Kurt Lewin is quoted as warning, "that resistance to change will quickly cause an

organization and its members to revert to their old ways of doing things unless the

organization actively takes steps to refreeze the organization with the changes in place.

It is not enough to make some changes in task and role relationships and expect the

changes to be successful and endure. To get the organization to remain in its new state,

managers must actively manage the change process" (Lewin as cited in George &

Jones, 2008, p. 620-621). Sterile processing departments are no different from the

above mentioned organizations that implement a change in process or practice. Thus

the need for sterile processing managers to understand and manage the change process is a priority for success in today's healthcare environment.

Leading Change

The role of leading change in a sterile processing department requires someone to be a bridge between the affected departments and apply constant pressure to drive movement. The change leader must influence the stakeholders and could use the eight steps mentioned in the Kotter and Cohen's (2002) book *The Heart of Change.* The way people react and behave in the change process can be the most fundamental problem in the entire process. "People are sensitive to the emotions that undermine change, and they find ways to reduce those feelings. People are sensitive to the emotions that facilitate change, and they find ways to enhance those feelings" (p. 180). The key to leading change in sterile processing and the surgery departments is the people.

The eight steps for successful large scale change are:

1. Increase urgency
2. Build the guiding team
3. Get the vision right
4. Communicate for buy-in
5. Empower action
6. Create short-term wins
7. Don't let up
8. Make change stick   (Kotter & Cohen, 2002, p. 7).

When initiating change within a sterile processing department, there is a great possibility of conflict. It can be described as passive aggressive opposition vs. outright rebellion and refusal of the staff to change. Observations of the SPD staff demonstrating the "ostridge hiding its head in the sand" type of behavior whenever management tries to initiate change has been reported by many SPD managers. Often SPD staff members

are not held accountable for not participating and/or supporting the changes.   Step

seven and eight in Kotter and Cohen's list may be the most difficult to complete when

initiating change in the SPD environment, but it can be done.

Managing Conflict and Resistance to Change

There are many different causes of conflict in a sterile processing department. In

Supervision Principles: Leadership Strategies for Healthcare Facilities, the author

attributes some of these causes to administrative errors, honest differences in goals,

ideas and values among employees (IAHCSMM, 1997). Many experts believe conflict

may be disruptive to a department but also may be beneficial to a department. It is also

believed that the sterile processing manager or supervisor must manage the conflict not

avoid it in order for the change process to stick. One of the most common scenarios in a

sterile processing department is the promotion of an SPD technician to a supervisory

position. This action can cause conflict among the SPD staff members (IAHCSMM,

1997). "New supervisors may have many of the same wants and needs as their staff

members. However, upon promotion supervisors must become leaders and enforce the

facilities policies and procedures. This can, at best, be difficult since the line employees

and supervisor were members of the same peer group" (IAHCSMM, 1997, p. 207).

When speaking about the resistance to change in the sterile processing department the

saying "but we have always done it that way" is very common. Maintaining the status

quo is a resistant behavior that employees will display and managers must develop

strategies to address this behavior.

Skills and Behaviors of a Good Team Member

Authors LaFasto and Larson (2001) collected 15,000 assessments of team

members by their fellow teammates to develop a list of six factors that distinguish

effective from ineffective team members. They divided the six factors into two groups,

working knowledge and teamwork. Under working knowledge, two factors seen were:

experience and problem-solving ability. Under the teamwork group the four factors

were: openness, supportiveness, action orientation, and personal style (p. 5).

Collaboration is another key concept in good team member qualities. Sometimes teams

work smoothly other times skills must be taught and behaviors must be changed in order

for a team to be successful.

> Some can, some can't, some won't. Unfortunately, we are all part of the mix. We
> are all involved in the pursuit of objectives that are best obtained, and sometimes
> only obtainable, through the collaborative efforts of everyone. If we are dealing
> with people that who are open, supportive, action oriented, and positive, the job
> is a whole lot easier. But given the incredible variety of people in the workplace,
> those we work with have attitudes, behaviors, and personalities that blend with
> ours to varying degrees. As we consider relationships, however keep in mind
> that the quality of every relationship begins with the individual.
> (LaFasto & Larson, 2001, p. 28)

The Collaborative Team Member rating sheet found on page 29 of *When Teams Work

Best* by LaFasto and Larson is an effective tool for leaders responsible for team training

(2001).

Leading Teams and Conflict

The purpose of a team leader according to LaFasto and Larson is to add value to

the team's efforts. The results of over 6,000 team member surveys obtained by LaFasto

and Larson resulted in six leadership competencies for an effective team leader.

1. Focus on the goal

2. Ensure a collaborative climate

3. Build confidence

4. Demonstrate sufficient technical know-how

5. Set priorities

6. Manage performance (LaFasto & Larson, 2001, p. 99).

LaFasto and Larson present an interesting perspective on team problem solving.

"All teams experience a collision of people, motivation, and ideas. But it is precisely the

diversity of viewpoints that makes teams worthwhile. Team problem solving is not

harmony; it is the constructive integration of diverse perspectives. Productive team

problem solving consists of sharing different perspectives and shaping them into a

reasonable decision" (2001, pp.66-67). In order a team to be effective the problems and

conflicts must be resolved or managed. LaFasto and Larson offer a simple five step

model for effective problem. The model was designed to address the most common

challenges in problem solving which will allow the team to focus energy on the goal or

the team project.

1. Identify the problem

2. Create a collaborative setting which includes: agreeing on principles for the

    discussion and surface any assumptions and biases.

3. Identify and analyze the issues

4. Identify possible solutions

5. Resolve the single question (LaFasto & Larson, 2001, p. 85).

Sterile Processing Team Make-Up

Ninemeier (2008) discusses the different generations in central service.

There are four generations of employees working side-by-side in today's
healthcare industry. Central Service managers should learn about each of these
generations and their differences because they will continue to need employees,
regardless of their age, to staff many available positions which they supervise.
(para.1)

The other factors that affect the sterile processing team is educational and on the

job experience. Some sterile processing staff members have had no formal education in

sterile processing clinical skills but have years of experience working in an SPD

department. Some have had formal training but have no clinical "hands on" experience,

and some have had neither one.

Research Purpose and Questions

The purpose of this research was to identify the factors that affect the ability of the sterile processing manager to lead a process improvement team. Data were gathered from a sample population of central service managers using an online survey.

Research Question 1: What skills and behaviors do team leaders need to possess to facilitate the sterile processing PI team?

This research question focuses on discovering the skills needed by leaders to lead a team of sterile processing staff members and other hospital staff members from departments such as surgery that may interact with SPD in providing services related to care of patients. SPD managers responsible for leading teams must possess skills such as effective communication, active listening, managing conflict, motivating employees, and time management in order to achieve the desired outcomes from team activities. According to Cloke and Goldsmith, managing conflict is one of the most important skills managers can possess (2005).

Research Question 2: What skills and behaviors does the sterile processing PI team need to succeed?

This research question focuses on discovering the behavioral, environmental, psychological and spiritual challenges with leading a group of diverse staff members from the SPD department and other departments with interest in the SPD performance improvement goals. Author Patrick Lencioni (2002) explains one of the reasons that teams fail in organizations is they unknowingly fall prey to five natural but dangerous pitfalls, which he refers to as the five dysfunctions of a team. "The five dysfunctions are; absence of trust, fear of conflict, lack of commitment, avoidance of accountability and inattention to results" (p. 188). If a sterile processing manager responsible for leading teams is aware of these challenges and can put strategies in place to manage situations as they arise then performance improvement teams can be successful.

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Research Methodology

In this research the qualitative and quantitative data were obtained from a group of healthcare Central Service managers and supervisors with active membership in the International Association of Healthcare Central Service Materiel Management (IAHCSMM). The IAHCSMM is the oldest and largest non-profit organization dedicated to providing education and support to professionals working in the healthcare field of Central Service and Materials Management. This organization was established in 1958 by a small group of forward thinking surgical staff and a creative female business leader who later became the executive director. The IAHCSMM headquarters is in Chicago Illinois, and there are approximately 14,000 members at large representing all fifty states in the US and several foreign countries. Members of this organization currently consist of professionals working in the healthcare industry including entities such as hospitals, ambulatory surgery centers, dental offices, medical supply manufacturers and third party reprocessors (IAHCSMM, 2007).

Description of the Participants

The 48 participants who participated in the study were made of up of 34 females and 14 males with the title of director, manager or supervisor in a Central Service or sterile processing operation. All participants were from the US. The ages of the participants were: 1 aged 20-29; 5 aged 30-39; 11 aged 40-49; 24 aged 50-59 and 7 were aged 60 and above. The degree of education varied from high school graduate to graduate level (see figure 1). The levels of education of the participants were: High School - 9; Associate - 13; Bachelor's -14; Master's - 11; and Doctorate -1.
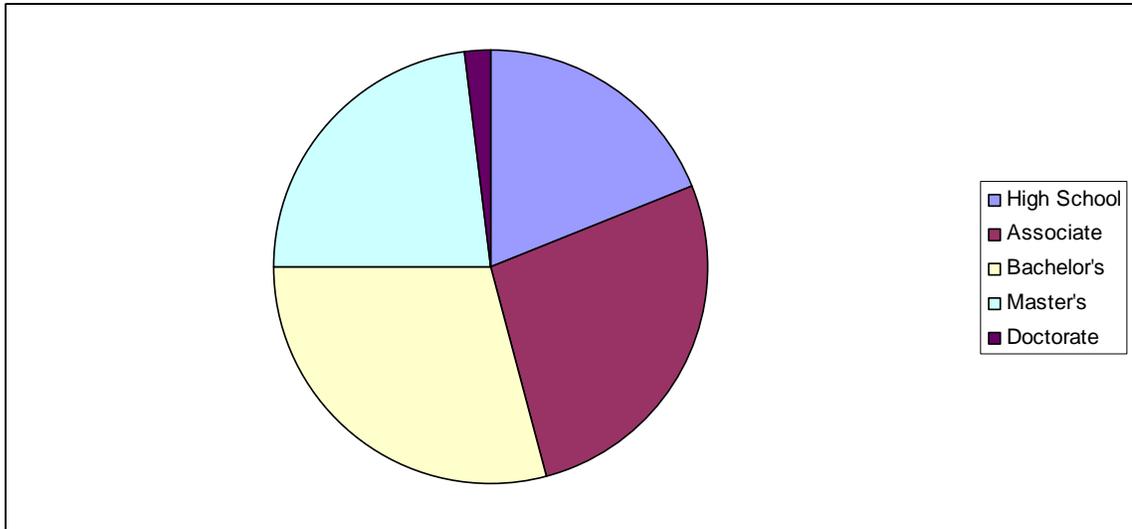
Figure 1. Highest Level of Education Obtained

Participants held a variety of professional certifications with some participants holding more than one certification (see figure 2). Forty-four participants were CRCST (certified registered central service technicians). Fifteen had a certification in Healthcare Leadership (CHL) obtained from IAHCSMM. Four had CIS (certified instrument specialist). Six were Fellows in Central Service (FCS). Twenty-six had other certifications not listed above.
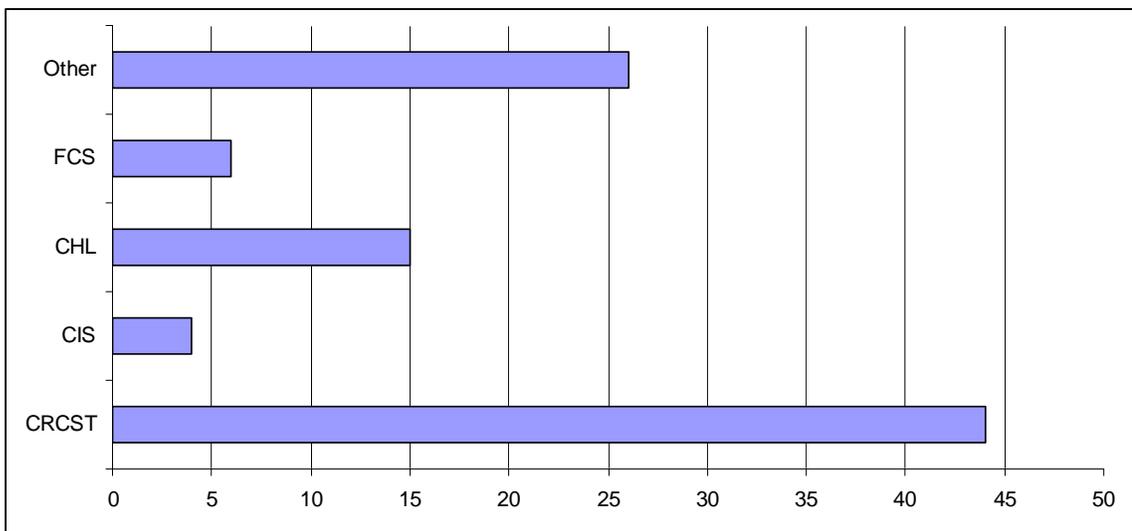

Figure 2. Certifications

Participants' years of experience were: 4 with 1-5 years; 5 with 6-10 years; 10 with 11-15 years; 12 with 16-20 years; and 7 with 21 years or more (see figure 3).
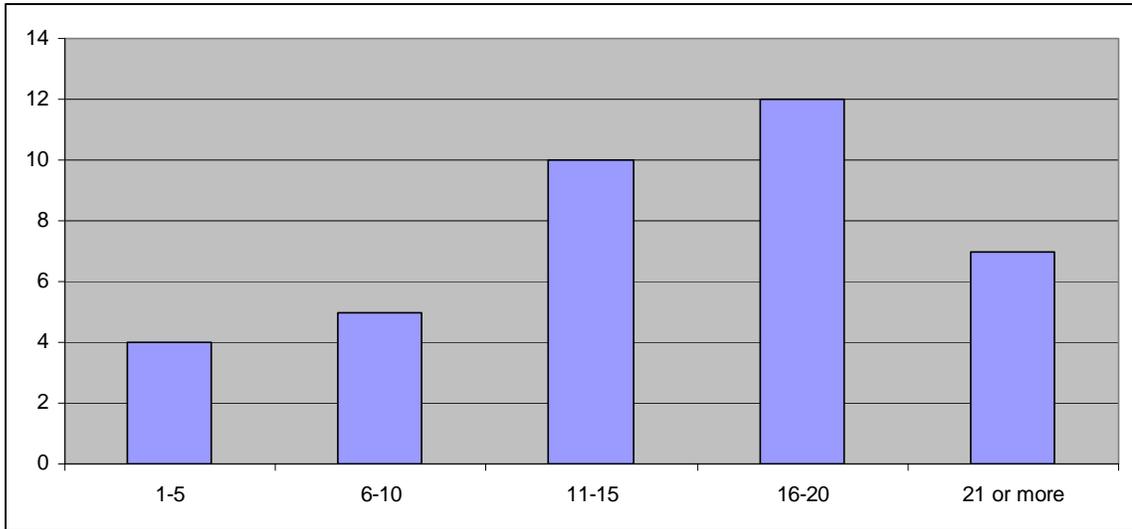

Figure 3. Years of Experience

The number of process improvement (PI) teams over the past two years was also included in the first section of the survey. Thirty had participated in 1-5 teams; 8 had participated in 6-10 teams; 5 had participated in 11-15 teams; and 4 had participated in 16 or more teams. Participants led or facilitated PI teams with the following results: 5 have never led or facilitated a team; 37 have led or facilitated 1-5 teams; 4 have led or facilitated 6-10 teams; 1 had led or facilitated 11-15 teams and 1 led or facilitated 16 or more teams.

Participants from this organization were selected for data collection because of the depth of knowledge and experience of the managers and supervisors. Some of these individuals are considered subject matter experts from the Central Service profession and were well suited for the surveys distributed for this research. The participants were all required to be in a Central Service management position for a minimum of one year.

The data for this research were gathered from a survey using the SurveyMonkey

software. "Survey research is a type of field research that involves the use of a

questionnaire to collect information from a sample of respondents. When the sample of

survey respondents has been carefully selected, information collected from the sample

can be used to draw inferences about the larger population from which the sample was

drawn" (Brown & Visser, 2009, para. 1). The survey consisted of seven questions

pertaining to demographics of the participants; three ranking questions; one open ended

question; two "yes" "no", and two questions which required selecting from a list. Survey

questions were mainly developed from LaFasto and Larson's (2001) book *When Teams*

Work Best: 6,000 Team Members and Leaders Tell What it Takes to Succeed. All of the

questions were related to the participants' experiences in participating in process

improvement teams. Sample questions are shown in Tables 1 and 2. See Appendix C

for a full copy of the survey completed by participants in this research.

Table 1
Survey Question 4

Rank the following team member characteristics that you feel contribute to the success
of a sterile processing PI team. 1=most important to 7=least important. If a behavior is
missing feel free to write it in the "other' space provided.

Experience
Problem solving ability
Open (to express point of view, deal with problems, etc.
Supportive
Action oriented
Positive personal style
Other

Table 2

Survey Question 7

Select the key type(s) of conflict that were experience by the team.

Interpersonal relations (team member personalities, etc.
Resource constraints
Lack of relevant data
Lack of value alignment
Time constraints
Lack of communication with other teams or key stakeholders
The team did not experience any conflict
Other

Data Collection Process

  The names and email addresses of 135 potential survey participants were obtained from the International Association of Central Service Materials Management (IAHCSMM). Sixty one participants began the survey with forty eight completing it for a response rate of 36%. A cover letter (see appendix B) with a link to the survey in SurveyMonkey was emailed to participants who included directors, managers and supervisors of hospital Central Service departments with a minimum of one year of experience. Permission was obtained from the IAHCSMM to utilize the contact information from members that attended the most recent annual meeting of IAHCSMM held in May of 2010 (See appendix A). An informed consent was included on the first page of the survey (See appendix B). Participants clicked "yes" to indicate their consent and to proceed to the actual survey.

Research Results

  This research investigated the factors that affect the ability of the sterile processing manager to lead a process improvement team. The manager of the Sterile Processing Department (SPD) is often challenged with leading a team that focuses on some form of process improvement activity which has a direct impact on the department's operation. These improvements are often mandated by the hospital administrative team or to be in regulatory compliance. Thus the sterile processing

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manager's ability to lead a process improvement team is very important to the success of the team and attaining the performance goals. To answer the first research question the data revealed the skills and behaviors needed by team leaders to successfully lead a sterile processing performance team. The data to answer the second research question provided the skills and behaviors the sterile processing PI team needs to succeed.

Results for Research Question 1:   What skills and behaviors do team leaders need to possess to facilitate the sterile processing PI team?

Survey question three invited participants to rank seven behaviors listed in order of importance (1= most important to 7= least important). Participants were also asked to write in any behavior they felt was missing from the list in the space provided for "other". The responses were reversed scored then a mean score was derived for each behavior. The mean scores for the behaviors ranged from 3.8 to 5.87. The individual mean scores for each of the ranked characteristics were as follows: 5.87 focus on the goal, 5.54 set priorities, 5.38 ensure a collaborative climate, 5.15 builds confidence, 5.08 manages performance, 5.04 demonstrates sufficient technical know-how, 3.8 for other. Some of the characteristics listed under other were: holds employees accountable, trust, customer service, follow-up and recognizes team members. The three highest ranked characteristics were focus on the goal, set priorities, and ensure a collaborative environment (see figure 4).
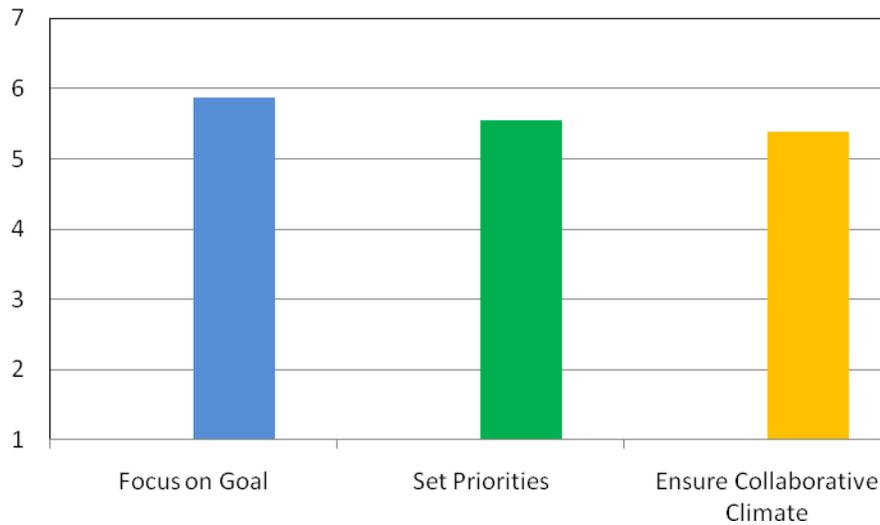
Figure 4. Team Leader Behaviors

Survey question eight solicited participants to provide a "Yes" or "No" response if the leader effectively managed conflict on the team. Forty-two participants responded "Yes" and 6 responded "No" as seen in table 1.

Table 1
Leader Managing Conflict

8. Did the leader effectively manage conflict on the team?	Number
Yes	42
No	6

Results for Research Question 2: What skills and behaviors does the sterile processing PI team need to succeed?

Survey question one invited participants to rank ten factors that made the team experience effective in the order of importance (1= most important to 11= least important). Participants were also asked to list any behavior they felt were missing in the space provided for "other". The responses were reversed scored then a mean score was calculated for each factor. The range of scores was 5.53 to 10.23. The mean scores for each factor is as follows: clear team purpose - 10.23; clear norms, approaches and processes - 9.04; clear and challenging performance goals – 8.92; each

person is held accountable - 8.79; decisions are made together – 8.62; everyone

participates in discussions – 8.6; diversity of opinions is valued – 8.16; constructive

criticism is used positively – 8.08; informal, comfortable, relaxed atmosphere – 7.74;

leadership shifts from time to time – 6.94; other – 5.53. The top five factors were clear

purpose; clear norms, approaches and processes; clear goals; each person is held

accountable; and decisions are made together (figure 5). Fill-in responses for the space

provided for participants to list choices that were not listed or as "other" included

positive team members, commitment, and knowledge of each other's work environment,

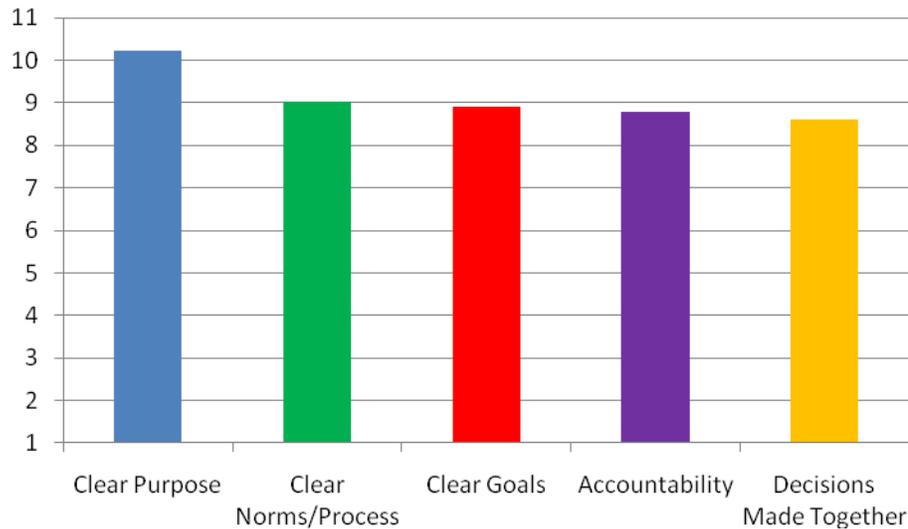active participation, clear and timely communication.

Figure 5. Factors for an Effective Team Experience

Survey question number two was an open ended question asking about common

barriers affecting the effectiveness of sterile processing PI teams. The multiple

responses were analyzed for content and six common themes emerged (See table 2).

Table 2
Three Barriers that Affect the Effectiveness of Sterile Processing PI Teams.

2. Common Themes	Number
Lack of respect and understanding of Central Service and pertinent regulatory standards	13
Lack of support and participation from surgical services areas	9
Lack of communication	9
Lack of time	9
Lack of resources (tools, equipment, funds, people)	8
Resistance and fear of change	7

Survey question four asked the participants to rank the characteristics

contributing to the success of a sterile processing PI teams order of importance (1= most

important to 11= least important). Participants were also asked to list any characteristic

they felt was missing in the space provided for "other". The responses were reversed

scored then a mean score was derived for each characteristic. The mean scores for the

characteristics ranged from 2.6 to 6.29. The mean scores for each of the characteristics

is as follows: 6.29 for open to express point of view and deal with problems; 5.83 for

problem solving ability; 5.64 for being supportive; 5.49 positive personal style; 5.44

action oriented; 4.96 for experience; and 2.6 for characteristics such as education,

commitment or the ability to deal with regulations that were captured under the "other"

category. The top three characteristics (open to express point of view and deal with

problems, problem solving ability, and being supportive) are pictured graphically in figure
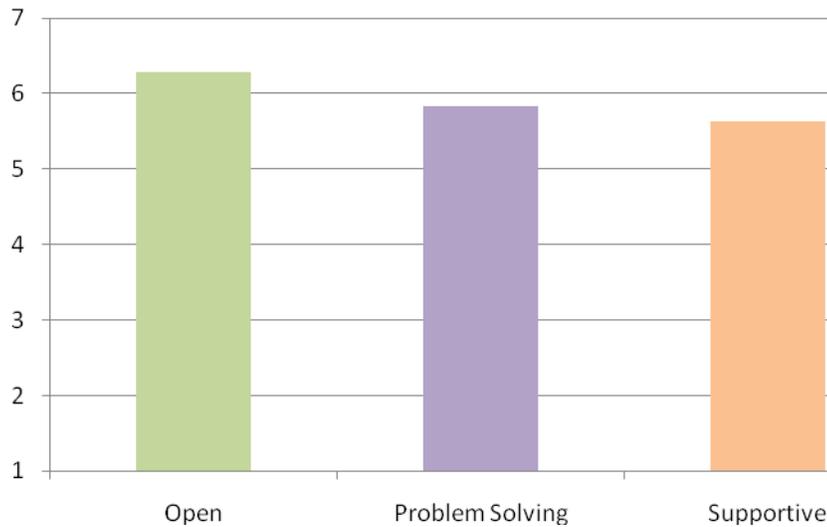
6.

Figure 6. Team Member Characteristics

Survey question five inquired if participants had used a formal change or performance quality improvement model or system when working with the performance improvement team. Thirty-eight participants answered "Yes" and 10 answered "No" as seen in table 3.

Table 3
Quality Improvement Model

5. Was there a formal change or performance/quality improvement model or system used with the team?	Number
Yes	38
No	10

Survey question six asked participants to select the formal change or performance quality improvement models used from five choices provided. Participants were also asked to list any choices they felt were missing in the space provided for "other". Participants were offered the following selections: Six Sigma, Lean, TQM, CQI, and no formal method. Participants selected the following models with the following totals: Six Sigma - 11; Lean - 11; no formal method - 10; CQI - 8; Other - 5; and TQM - 3. One individual listed HPI (Health Policy Institute) and three individuals listed PDCA (plan, do, check and act) under the choice for "other" (see figure 7).
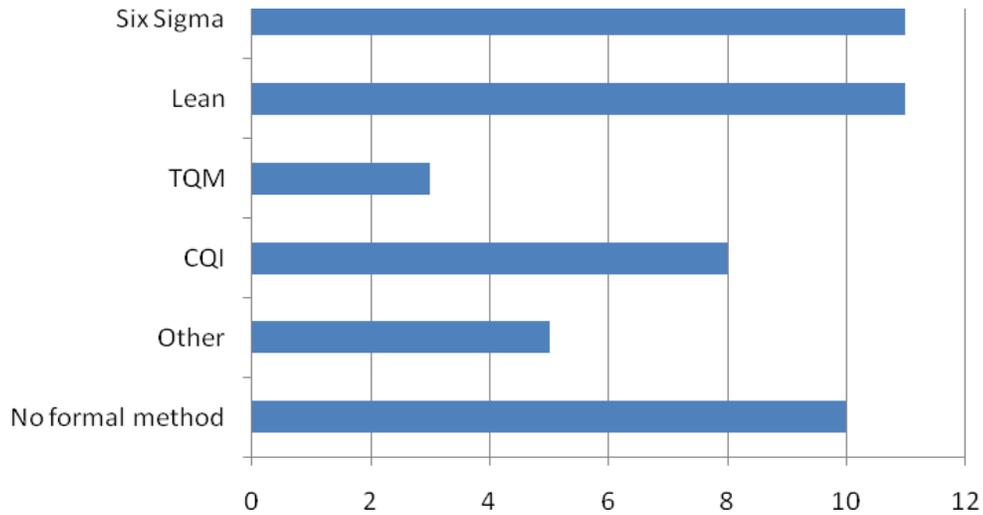
Figure 7. Quality Improvement Model Used

Survey question seven asked participants to select the key types of conflict they experienced in the PI team from a list of eight choices. They could select more than one choice. Participants selected the following types of conflicts: 24 selected Interpersonal relations, 23 selected resource constraints, 11 selected lack of relevant data, 9 selected lack of value alignment, 23 selected time constraints, 20 selected lack of communication with other teams or stakeholders, 4 selected the team did not experience any conflict and 3 selected other. Fill-in responses under other included experience would not welcome change, own agenda, communication style that shifts away from resolution and action (see table 4).

Table 4 *Types of Team Conflict*

7. Select the key type(s) of conflict that were experienced by the team?	Number
Interpersonal relations (team member personalities etc.)	24
Resource constraints	23
Lack of relevant data	11
Lack of value alignment	9
Time constraints	23
Lack of communication with other teams or key stakeholders	20
The team did not experience any conflict.	4
Other	3

Survey question nine asked participants to select from a list of five descriptions, which best fit their overall feeling about the PI team success. The majority of respondents (85%) felt the team was extremely successful or successful and meet 75% to 100% of the team objectives (see table 5).

Table 5
PI Team Success

9. From the list below, select the choice that best fits your overall feeling about the PI team success.	Number
The team was extremely successful and met 100% of the objectives	15
The team was successful and met 75% of the objectives	25
The team was moderately successful and met 50% of the objectives	6
The team was slightly successful and met 25% of the objectives	2
The team was not successful in meeting any of the objectives and was a waste of time.	0

Summary of Findings

The research described in this paper investigated the factors that affect the ability of the sterile processing manager to lead a process improvement team. The survey completed by sterile processing professionals focused on behaviors and characteristics of both leaders and team's members. The research also included identification of barriers that affect the effectiveness of a team and models or systems used for performance/quality improvement.

According to LaFasto and Larson (2001), the purpose of a team leader is to add value to the team's efforts. The results of over 6,000 team member surveys obtained by LaFasto and Larson resulted in six leadership competencies for an effective team leader. The six competencies are; focus on the goal, ensure a collaborative climate, build confidence, demonstrate sufficient technical know-how, set priorities and manage performance.

In this research the participants, when asked to rank from the list of leadership competencies from LaFasto and Larson, ranked the six behaviors in order of

importance. The three highest ranked choices of the participants were; focus on the goal, set priorities, and ensure a collaborative climate. Participants were also invited to provide a behavior that was not on the list as a fill in. Some of the other behaviors provided by participants were; holds employees accountable, trust, customer service, follow-up and recognizes team members. The role of leading change in a sterile processing department requires the team leader to be a bridge between the affected departments and apply constant pressure to drive movement. Kotter and Cohen (2002) suggest the change leader must influence the stakeholders. The way people react and behave in the change process can be the most fundamental problem in the entire process. Team members are sensitive to both the emotions that undermine change, as well as those that facilitate change, and they find ways to enhance those feelings which in-turn affects the direction of the team. The key to leading change in the sterile processing and surgery departments is the people.

Katzenbach and Smith (2003) listed a number of factors for an effective team experience. These factors include areas such as team purpose and clear goals, establishing norms, approaches and a process that allows all members to participate as well as holding participants accountable. Having a relaxed comfortable atmosphere, valuing the diverse opinions of members and using constructive criticism are also important. Lastly, having the leadership shift from time to time provides fresh perspective for the team.

In the research participants ranked a list of ten factors in the order of importance that made the team experience effective. The top five choices were; clear team purpose, clear norms, approaches and process, clear and challenging performance goals, team member accountability and decisions made together.
Participants provided additional factors which included positive team members, commitment, knowledge of each other's work environment, active participation and clear

and timely communication. The top five choices of the research participants are very similar (and two are identical) to the five dysfunctions of a team as identified by Lencioni.

Lencioni (2002) explains one of the reasons that teams fail in organizations is they unknowingly fall prey to five natural but dangerous pitfalls, which he refers to as the five dysfunctions of a team. The five dysfunctions revolve around a lack of trust, commitment, accountability, fear of conflict, and inattention to results.

Participants were asked to list three common barriers that affect the effectiveness of the sterile processing PI team. The research data showed six common themes: lack of respect and understanding of Central Service and the pertinent regulatory standards, lack of support and participation from the surgical services areas, lack of communication, time and resources and resistance "fear" of change. Two common barriers identified in the research matched two of the five dysfunctions stated by Lencioni (2002).

LaFasto and Larson have found six factors that distinguish effective from ineffective team members. They divided the six factors into two groups, working knowledge and teamwork. Under working knowledge, two factors seen were: experience and problem-solving ability. Under the teamwork group the four factors were: openness, supportiveness, action orientation, and personal style (2001). Collaboration is another key concept in good team member qualities. Sometimes teams work smoothly, other times skills must be taught and behaviors must be changed in order for a team to be successful.

Participants in the research were asked to rank six team member characteristics that contribute to the success of the sterile processing team. Openness to express point of view, deal with problems etc. was the top choice followed by problem solving ability and being supportive. Positive personal style was next followed by action oriented, and experience. Participants were also asked to list any other characteristics they did not

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find in the list provided. Education, commitment and the ability to deal with regulations were the top three write in choices.

In an article published by RWD Technologies, a Central Sterile Processing department engaged in five years of process improvement activities using Lean and Six Sigma methods. The IAHCSMM Central Service Leadership Manual outlines the Plan-Do-Check-Act process improvement method which is commonly used in Health care facilities to implement change or performance/quality improvement initiatives.

The research participants were asked if a formal change or process/quality improvement model was used with their teams. The response was that 80% of participants had experience using some type of PI model. Participants were also invited to select one out of six choices for the specific type of PI model. The Six Sigma and Lean models were the most popular making up 45% of the total responses for a particular method. Participants were provided an option to list any other method they had experience with that was not on the selection list. Three individuals listed the Plan-Do-Check-Act (PDCA) as a choice used in their healthcare facility which was not included in the section list.

LaFasto and Larson (2001) present an interesting perspective on team conflict resolution and problem solving. They found that although a diversity of opinions may lead to conflict, working to integrate the different perspectives leads to better decision making and ultimately success of the team. In order a team to be effective the problems and conflicts must be resolved or managed. LaFasto and Larson offer a simple five step model for effective problem solving. The model was designed to address the most common challenges in problem solving which will allow the team to focus energy on the goal or the team project. Parts of the model include; identify the problem, create a collaborative setting which includes: agreeing on principles for the discussion and

surface any assumptions and biases, identify and analyze the issues, identify possible

solutions and resolve the single question.

In the research participants were asked if the leader of their sterile processing

performance improvement team managed conflict on the team. The majority of

participants (88%) reported the leader effectively managed conflict on the team.

Research participants were also asked to select from seven choices a key type of

conflict they had experience with while participating on a PI team. The top four types of

conflict selected by 47% of the participants of the research were issues with

interpersonal relations, constraints with resources or time and lack of communication

with other work teams or stakeholders.

<div align="center">Conclusion</div>

Three key areas shown by the research present challenges to both leaders of

team and team members. The three areas include skills and behaviors in which leaders

must demonstrate competence, barriers that affect the effectiveness of the sterile

processing PI team and types of conflicts that occur in sterile processing PI teams. The

recommendations listed below are intended to provide the reader with ideas and

methods that could be used in their own facilities.

Recommendation #1: Leading teams: A leaders look in the mirror. Leaders of

sterile processing performance improvement teams must have practical knowledge of

the skills and behaviors needed to be successful. They must also have technical or

clinical knowledge of the discipline to ensure regulatory compliance is maintained.

However, another important aspect of team leading in sterile processing is the clear

understanding of self and areas for growth that if not managed, could become a barrier

to success for the PI team. A definition of leadership is knowing yourself and being

authentic, mastering followership and embracing the importance of relationships. Also

the key purpose of a leader is to add value to the team's efforts (LaFasto & Larson, 2001).

One method for discovery of a leader's strengths and weaknesses is a 360 degree leadership assessment tool such as the leadership practices inventory (LPI) Kouzes and Posner (2003). Once areas for improvement are identified, leaders will participate in training sessions designed with practice scenarios with specific areas for growth for that team leader. A member of the hospital Education or Human Resource department or other designee could facilitate the training session and review each leader's specific areas for growth. At least once per year, and at the end of a team leading experience, the leader could complete a self evaluation similar to that of The Collaborative Team Leader in LaFasto and Larson (2001, p. 151-154). At the end of any sterile processing performance improvement projects, all sterile processing performance improvement team members could complete an evaluation form which includes a section on the leadership of the team. The results of both the self and team member evaluation could be reviewed by the Education or HR representative and discussed with the team leaders. The results of the evaluations could also be shared with the team leader's supervisor/manager and key areas for improvement could be incorporated into their annual performance appraisal.

Recommendation #2: *Barriers that Affect the Effectiveness of Sterile Processing PI Teams.*

One of the key findings in the research pertaining to barriers that affect the success of sterile processing PI teams is the perceived lack of understanding and respect for the sterile processing department and the staff. Historically the perception of the sterile processing department has evolved from that of a small area in the basement of hospitals, with lower skilled workers that washed bed-pans, to that of a multi-faceted department responsible for reprocessing complex surgical instrumentation and

distributing sterile supplies for assorted customers throughout the medical center. Many hospitals refer to their sterile processing department as the hub of the hospital, responsible for guaranteeing the sterility of sterile supplies and proper function and cleanliness of patient care equipment and utensils used by care givers for direct patient care. The need to create an awareness of what sterile processing does is important for team members coming from other departments or disciplines to participate on the sterile processing PI team. A team member orientation will be developed to include the DVD published by IAHCSMM which provides an overview of sterile processing as a discipline. A sterile processing department tour could be facilitated with mention of regulatory compliance requirements for each area such as, wearing (PPE) personal protective equipment as required by OSHA as part of the bloodborne pathogen regulation. Team members could also be allowed to ask questions while touring and a comprehensive process flow map developed will be available for viewing to show the individual steps for each part of the sterile processing work flow.

To address the second barrier pertaining to lack of support and participation from surgical services areas, the use of a personality and behavioral preference profile system such as the Myers-Briggs Type Indicator (MBTI) could be administered to all team members by the certified facilitator in the human resources department. Results can be reviewed with each individual team member as well as in a group using the trained facilitator. Once the team members have been oriented to their personality type, the make up of the entire team can be discussed and methods for handling team member personality traits could be discussed and role played in educational sessions.

The model introduced by LaFasto and Larson (2001) which refers to the six factors that distinguish effective and ineffective team members, could be used to establish norms for the team. Each team member can receive education about what it

takes to make a good team member in the form of reading material and group

discussions lead by a facilitator.

Before the first PI meeting, the team could complete the collaborative team

member survey rating sheet also developed by LaFasto and Larson (2001). This first

survey could be used to determine what individual needs each team member has

pertaining to the upcoming PI project they are being asked to participate. At the end of

the actual PI team experience, the same survey could be used by each of the team

members to evaluate the other team members. This could be processed through the

Human Resource department, and results formulated into team member action plans

which will be used in individual team member mentoring processes held within their

respective departments. At any time during the actual PI team meetings, if issues

identified as a team weaknesses; for example the team cannot meet the time

commitment for completion of the project, then the survey tool could be administered to

reveal individual issues or needs.

Another exercise that could be used to improve trust and assist the team in

getting past barriers, is the Team Effectiveness Exercise (seen in Lencioni, p. 198). This

exercise requires the team members to identify the single most important contribution

that each of the team members brings to the team. Each team member receives

feedback from every other team member focusing on one person at a time. The

outcome is all team member receive both constructive and positive feedback which will

assist them in becoming a better team member.

The remaining common themes pertaining to lack of time and resources will be

addressed with the stakeholders sponsoring the performance teams. Meetings with the

sponsor which is usually on an administrative level could be conducted with information

pertaining to the estimated time and resources necessary for the success of the PI team.

Staff schedule adjustments could be made to allow for participation and ample resources

be allocated by justifications submitted by the team leaders well in advance of the first team meeting. The remaining two barriers of lack of communication and resistance to change are addressed in the above exercises as well as any individualized mentoring needed. Part of the first meeting of the team could be devoted to a discussion on the eight change management steps covered in Kotter and Cohen (2002).

<center>*Recommendation #3: Types of Team Conflict*</center>

The fear of conflict is a common challenge for any performance improvement team, but in the case of a sterile processing performance team that consists of members from the surgical areas, the fear is often heightened. Typically the group dynamics in the operating room are observed to be an environment where aggressive behavior is tolerated and a type of caste system exists; where surgeons yell at nurses who yells at OR technicians who then yell at sterile processing staff who are expected to know what the surgeon is yelling about without getting any prior information. This dynamic creates fear and often immobilizes the sterile processing staff when it comes to working with the surgical staff on PI teams. The challenge for the team leader is to ensure conflict is productive verse destructive. All team members will receive education on types of conflict and methods to ensure conflict on the team is productive or healthy.

The Thomas-Kilmann Conflict Mode Instrument will be used to assist team members in understanding conflict in a work setting. Role playing sessions will also be used to demonstrate healthy team interaction around a conflict. Team leaders could also receive instruction on their role in facilitating conflict. Mining as suggested by Lencioni (2002) is one technique that could be a focus in the leadership training. Effective PI team leaders learn how to pull out underlying disagreements within the team and facilitate a discussion about them.

<center>*Recommendation #4: Auditing team functionality and susceptibility toward dysfunction.*</center>

In today's healthcare environment, emphasis on process improvement and capturing efficiencies along with ensuring quality patient care is in the forefront of every administrator. Dashboards and metrics are common sites on bulletin boards in departments within hospitals. Measuring the effectiveness of process improvement teams is an expectation from senior management and stakeholders. Measuring achievement of performance goals of the sterile processing PI team is usually straight forward but measuring the functionality of the team is more of a challenge for the team leader. Utilizing the team assessment tool from Lencioni (2002) will be part of the performance expectation for the Sterile Processing PI team. At the end of a team project or more often if the project is extended in length, the leader could administer the team effectiveness assessment and obtain a completed survey before the group disperses to their respective departments. The results of the assessment can be calculated and shared with the team sponsor and any stakeholders as deemed necessary. Areas deemed significant by the team leader or the group sponsor could be included on the team leader performance evaluation, as well as communicated to the team members to be utilized in future PI team exercises.

References

Barlow, R. D., (2008). Rediscovering excellence after being lost in transition: Christiana Care's sterile processing team reinvigorates quest for success. *Healthcare Purchasing News,* Retrieved February 05, 2010 from www.hpnonline.com/inside/2008-09/0809 CSDOY.html.

Bowen, K. M., & Visser, P. S. (2009). Survey methods. *Encyclopedia of Group Processes & Intergroup Relations.* Retrieved September 1, 2011 from http://0-www.sage-ereference.com.leopac.ulv.edu/processes/Article_n271.html

Cloke, K, & Goldsmith, J., (2005). Resolving conflicts at work: Eight strategies for everyone on the job. San Francisco, CA: Jossey-Bass.

Creswell, J. W., (2003). *Research and design: Qualitative, quantitative, and mixed methods approaches.* Thousand Oaks, CA: Sage Publications.

George, J. M., & Jones, G. R. (2008). *Understanding and managing organizational behavior* (5th ed.). Upper Saddle River, NJ: Pearson Prentice Hall.

Gray, E., (2009). What works: Sterile processing quality improvement at CoxHealth. *Healthcare Purchasing News,* Retrieved February 05, 2011, from www.hpnonline.com/inside/2009-03/58/59 WWSPQIC.html.

Griffith, J. & Pattullo, A., (2009). Finding the frontier of hospital management. *Journal of Healthcare Management,* 54(1), 57-73. Retrieved from Health Source: Nursing/Academic Edition database.

IAHCSMM, (2010). *Central service leadership manual (1st ed.).* Chicago, Il. International Association of Healthcare Central Service Materiel Management.

IAHCSMM, (2007). *Central service technical manual (7th ed.).* Chicago, Il. International Association of Healthcare Central Service Materiel Management.

IAHCSMM, (1997). *Supervision principles: leadership strategies for healthcare facilities (2nd ed.).* Chicago, Il. International Association of Healthcare Central Service Materiel Management.

Johnson, D. (2005). A roadmap to optimizing sterile processing workflow. *Healthcare Purchasing News, November 2005,* 24-26.

Katzenbach, J. R. & Smith, D. K. (2005). *The wisdom of teams: creating a high performance organization.* New York, NY: HarperCollins Publishers

Kimsey, J. & Barton, J. (2005). The sterile processing factory goal: 100 percent[3]. *Infection Control Today, 9*(4).

King, M. (2009). Survive and thrive: Guide for new SPD managers. *Healthcare Purchasing News, 33*(5), 24-26.

Kotter, J. P. & Cohen, D. S. (2002). *The heart of change, real-life stories of how people change their organizations.* Boston, MA: Harvard Business School Press.

LaFasto, F. & Larson, C. (2001). *When teams work best: 6,000 team members and leaders tell what it takes to succeed.* Thousand Oaks, CA: Sage Publications.

Lencioni, P., (2002). *The five dysfunctions of a team: A leadership fable.* San Francisco, CA: Jossey-Bass.

Ninemeier, J. D., (1997). *Supervision principles: Leadership strategies for healthcare facilities.* Chicago, Il. International Association of Healthcare Central Service Materiel Management.

Ninemeier, J. D., (2008). Managing a multi-generational workforce: *IAHCSMM CRCST self study lesson plan.* Lesson No. CRCST 103.

Swanson, S. (2008). Shifting the sterile processing department paradigm: A Mandate for Change. *Association of Operating Room Nurses. AORN Journal,* 88(2), 241-247.

Tolbert, P. S. & Hall, R. H. (2009). *Organizations structures, processes, and outcomes.* Upper Saddle River, NJ: Pearson Education, Inc.

Walker, E. (2009), Bunches, groups and teams working together. *Physician Executive Journal, October 2009, 90-91.*

Wheatley, M. & Rogers-Kellner, M. (1999, June). *What do we measure and why? Questions about the uses of measurement. Journal for Strategic Performance Measurement.*

Wolf, J. (2008). Health care, heal thyself! : An exploration of what drives and sustains high performance in organizations today. *Performance Improvement, 47*(5), 38-45.