



## The impact of a novel resident leadership training curriculum

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### Abstract

**Background:** Today's complex health care environment coupled with the 80-hour workweek mandate has required that surgical resident team interactions evolve from a military command-and-control style to a collaborative leadership style.

**Methods:** A novel educational curriculum was implemented with objectives of training the residents to have the capacity/ability to create and manage powerful teams through alignment, communication, and integrity integral tools to practicing a collaborative leadership style while working 80 hours per week. Specific strategies were as follows: (1) to focus on quality of patient care and service while receiving a high education-to-service ratio, and (2) to maximize efficiency through time management.

**Results:** This article shows that leadership training as part of a resident curriculum can significantly increase a resident's view of leadership in the areas of alignment, communication, and integrity; tools previously shown in business models to be vital for effective and efficient teams.

**Conclusion:** This curriculum, over the course of the surgical residency, can provide residents with the necessary tools to deliver efficient quality of care while working within the 80-hour workweek mandate in a more collaborative style environment. © 2004 Excerpta Medica Inc. All rights reserved.

*Keywords:* Alignment; Communication; Curriculum; Integrity; Leadership

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In today's complex health care environment, surgical residents must possess certain leadership skills that are instrumental in successful team interactions to deliver patient care within an 80-hour workweek mandate. The traditional focus of residency training, however, has been on development of clinical judgment and technical skills [1,2]. This was highlighted by our previous report that showed that general surgery residents do not feel confident or competent in basic leadership skills [3]. Furthermore, any learned leadership skills by residents were based mainly on a military command-and-control style, which, although vital in certain clinical scenarios in medicine, has been shown in business models to be an ineffective leadership style that is not applicable to most interactions [4–6]. In an attempt to

change this surgical culture of command-and-control style applied to all interactions to a more collaborative leadership style, we introduced a novel educational curriculum focused on teaching leadership skills aimed at improving alignment, communication, and integrity, integral tools to practicing a collaborative leadership style.

Integrity has been defined as a total commitment to the highest personal and professional standards. Integrity means establishing a set of values and adhering to those values. Integrity provides the solid foundation for developing trust within a unit. Conversely, a lack of integrity can quickly destroy the moral fiber of a unit, and negatively impact morale.

Communication skills are integral to the success of any team. In health care, it is vital to delivering safe and effective patient care. These skills are increasingly in demand because now resident cross-coverage is necessary secondary to the decrease in work hours. Finally, alignment has been

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**Internal  
Strength Scorecard**

Please read each statement below and indicate, by choosing a number, how much you agree by using the following scale:  
 1 = strongly agree, 2 = agree 3 = mildly agree  
 4 = mildly disagree 5 = disagree 6 = strongly disagree

<p><input type="checkbox"/> Our team members are skilled and competent.</p> <p><input type="checkbox"/> This team suffers from lack of training or experience.</p> <p><input type="checkbox"/> Team members strive to develop skills that can benefit the team.</p> <p><input type="checkbox"/> There are team members who have the skill or knowledge to back me up, if necessary.</p> <p><input type="checkbox"/> Team members have been carefully selected to create the right mix of skills.</p> <p><input type="checkbox"/> I have challenging goals for my performance on this team.</p> <p><input type="checkbox"/> I always know what I'm supposed to be doing on this team.</p> <p><input type="checkbox"/> I know what I want to achieve on this team.</p> <p><input type="checkbox"/> Our team works hard.</p> <p><input type="checkbox"/> We are committed to superior team performance.</p> <p><input type="checkbox"/> We all accept personal responsibility for the success of the team.</p> <p><input type="checkbox"/> Team members offer help when I need it.</p> <p><input type="checkbox"/> Team members recognize that I have a life outside of work.</p> <p><input type="checkbox"/> This team often laughs together and knows how to have fun</p> <p><input type="checkbox"/> I have at least one good friend on the team.</p> <p><input type="checkbox"/> Voicing disagreement on this team is risky.</p> <p><input type="checkbox"/> When we disagree, we usually work out our differences in an honest, healthy way.</p> <p><input type="checkbox"/> My opinions seem to count to the team.</p> <p><input type="checkbox"/> Team members cooperate with each other rather than compete.</p> <p><input type="checkbox"/> This last year, I have had opportunities to learn and grow as a member of the team.</p> <p><input type="checkbox"/> We often stop to consider how we can work better as a team.</p> <p><input type="checkbox"/> We always follow through on our plans for improving the team.</p> <p><input type="checkbox"/> I receive appropriate rewards for performing well on this team.</p> <p><input type="checkbox"/> It is never difficult to get answers to important questions about my work.</p> <p><input type="checkbox"/> I know what my team members expect from me.</p> <p><input type="checkbox"/> I'm proud to be a part of this team.</p> <p><input type="checkbox"/> My team members encourage my development.</p> <p><input type="checkbox"/> Gossip is not a problem on our team.</p> <p><input type="checkbox"/> I feel connected to my team members.</p> <p><input type="checkbox"/> I feel that I can communicate to other team members effectively about patient care</p>	<p><input type="checkbox"/> The mission and purpose of the organization makes me feel my job on the team is important.</p> <p><input type="checkbox"/> We do not have a difficult time reaching decisions.</p> <p><input type="checkbox"/> We follow a well-defined and systematic decision-making process.</p> <p><input type="checkbox"/> My team members are committed to doing quality work.</p> <p><input type="checkbox"/> Everyone on the team participates in decision processes.</p> <p><input type="checkbox"/> The team leader is skilled and experienced.</p> <p><input type="checkbox"/> The team leader gives members the freedom to make their own decisions.</p> <p><input type="checkbox"/> The team leader praises or rewards members when they perform well.</p> <p><input type="checkbox"/> I always know how well I am performing on this team.</p> <p><input type="checkbox"/> The team leader gives members valuable feedback to help them improve.</p> <p><input type="checkbox"/> I have an opportunity to do my best every day on the team.</p> <p><input type="checkbox"/> We have a clear overall team purpose.</p> <p><input type="checkbox"/> Our organization fully supports this team and its mission.</p> <p><input type="checkbox"/> The team considers the impact of what we are doing on other parts of the organization.</p> <p><input type="checkbox"/> I am not burdened by other responsibilities that reduce my ability to contribute to this team.</p> <p><input type="checkbox"/> I have the materials and equipment I need to be a strong member of the team.</p> <p><input type="checkbox"/> We have the technological resources necessary to do our work.</p> <p><input type="checkbox"/> We usually have access to the information we need.</p> <p><input type="checkbox"/> We are meeting our team objectives.</p> <p><input type="checkbox"/> So far, our team has been a great success.</p> <p><input type="checkbox"/> My team members seem to care about me as a person.</p> <p><input type="checkbox"/> I'm valued for my contribution to this team.</p> <p><input type="checkbox"/> "Sign outs" can effectively convey severity of illness</p> <p><input type="checkbox"/> "Sign outs" compromise patient care</p> <p><input type="checkbox"/> I am doing less "scutt work"</p> <p><input type="checkbox"/> There is a high service to education ratio</p> <p><input type="checkbox"/> I feel that I am taking good care of my patients</p> <p><input type="checkbox"/> I am missing out on OR time</p> <p><input type="checkbox"/> Overall I am working less</p> <p><input type="checkbox"/> I lead a more balanced life</p> <p><input type="checkbox"/> I enjoy my work.</p>
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Fig. 1. Internal strength scorecard.

Table 1  
Change in resident perception of skills after completion of leadership curriculum

Tool	% Increase	P value
Alignment	13	0.04
Communication	12	0.02
Integrity	12	0.04

defined as having a mission (eg, effective and safe patient care), and ensuring all of the team members strive to achieve that mission. Our objective was to determine the impact of this curriculum on each participant's view of leadership.

## Methods

Six months before the mandatory start date of the 80-hour workweek policy, a validated 34-question Internal Strength Scorecard Survey was administered to all general surgery residents to determine a baseline assessment of each participant's view of leadership skills in the areas of alignment, communication, and integrity (Fig. 1). A focused program was implemented with objectives of training the residents to have the capacity/ability to create and manage powerful teams through alignment, communication, and integrity while working 80 hours per week. Specific strategies were as follows: (1) to focus on quality of patient care/service while receiving a high education-to-service ratio, and (2) to maximize efficiency through time management.

After completion of the program, the survey was re-administered. Statistical analysis was performed using analysis of variance and the Student *t* test.

## Results

There was a statistically significant increase in the Internal Strength Scorecard Survey scores with regards to alignment (A), communication, and integrity after completion of the leadership training program (pre-alignment = 55% ± 3.4%, postalignment = 68% ± 3.6%,  $P < 0.04$ ; precommunication = 54% ± 2.9%, postcommunication = 66% ± 3.3%,  $P < 0.02$ ; pre-integrity = 56% ± 3.1%, postintegrity = 68% ± 3.4%,  $P < 0.04$ ) (Table 1).

## Comments

According to John F. Kennedy, "leadership and learning are indispensable to each other" [7]. Yet until recently, the surgical residency training curriculum has lacked leadership training. In today's complex health care environment, leadership skills are necessary to be a successful surgeon, whether it be in a community or academic setting. Accord-

ing to Craven [8], although intellect and good technical skills are essential, they alone do not ensure success as a surgery resident. Confidence, stamina, tenacity, and patience are imperative. Good leadership, motivational, and decision-making skills also are vital characteristics. This has been recognized by the Accreditation Council for Graduate Medical Education and now key leadership skills are required to be taught as part of defined core competencies that include interpersonal skills, communication, professionalism, patient care, knowledge, practice, and systems-based management (<http://www.acgme.org>).

In health care, it is clear that no single leadership style is appropriate in every situation. A good leader understands the environment, evaluates the given situation and circumstances, and applies certain skills to achieve desired goals [5,6,9]. For example, in the trauma bay or the intensive care unit, a command-and-control style leadership may be necessary for life-saving measures but may not apply to daily team interactions. Because of the 80-hour workweek mandate, resident teams now have to rely on each other via cross-coverage, on physician extenders, and on various health care providers to provide effective patient care. Furthermore, during the course of their training, residents are faced with various clinical, educational, personal, and administrative requirements and responsibilities, all of which require certain leadership skills and reliance on the team to achieve an adequate balance [10]. In addition, Gawande [11] recently have reported that surgical outcomes are critically dependent on entire teams of personnel, and not merely individual surgeons, which may require changes in surgical training. These interactions require a collaborative leadership style with certain skills sets such as effective communication, alignment of the team toward providing good patient care, and integrity of each individual person on the team. Collaborative leadership recently has been reported in primary care residency training. Through this collaborative care curriculum, following some of the Accreditation Council for Graduate Medical Education core competencies, Frey et al [12] were able to show a high level of physician confidence in the core skills addressed and their use for future practice.

We previously reported that surgical residents do not feel that they are learning enough leadership skills [3]. In this article, we describe a novel leadership curriculum aimed at changing a command-and-control style to a more collaborative style of leadership and show that a resident's view with regard to alignment, communication, and integrity changed with a significant perceived increase. Limitations of this study, however, include the short duration (6 mo) of the curriculum and the inability to determine if the perceived increase in leadership skills resulted in improved team interactions as well as improved quality of patient care. Tools that will allow us to measure the effect of the leadership curriculum will need to be developed.

In summary, leadership training as part of a resident curriculum can significantly increase the resident's view of

leadership in the areas of alignment, communication, and integrity, tools previously shown in business models to be vital for effective and efficient teams. This curriculum, over the course of a surgical residency, can provide residents with the necessary tools to deliver efficient quality of care while working within the 80-hour workweek mandate in a more collaborative-style environment.

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