2 Leadership in Surgery

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Surgical Leadership in a Time of Change

Surgery currently holds a central place in the complex American health care system, but change is everywhere. Approximately 100 million procedures are performed annually by 275,000 surgical specialists. Surgical services are expensive, costing $500 billion each year, and operative procedures are uniquely remunerative to hospitals, typically accounting for 40% of hospital revenue. The technical aspects of surgical practice have evolved very rapidly in the two decades since the widespread adoption of laparoscopic cholecystectomy. Laparoscopic approaches have supplanted most open operations, now joined by thoracoscopy, endovascular therapy, and image-guided surgery. Scientific advances have also changed the intellectual underpinnings of surgical practice. Insights into the structure and function of the human genome are reflected in personalized medicine, to be joined shortly by personalized surgical therapy. Postgraduate surgical training has been forced to evolve as techniques and knowledge have changed, creating both opportunities and new challenges. The surgical workforce has changed tremendously over the past 10–15 years, both demographically and in practice phenotype.

Effective surgical leadership is required for Surgery to remain relevant to the future practice of medicine. Failing that, Surgery may be reduced to a technical specialty, and vulnerable to loss of identity and to displacement from decision making regarding delivery of care. Surgical leadership must be future-oriented, applying lessons from the past to circumstances yet to come. At its best, leadership involves creation of a positive future by communicating the idea that cooperative, team-based behavior always achieves more than individual or self-motivated behavior. Leaders create the future by:

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1. Developing a compelling vision;
2. Communicating a positive view of future possibilities;
3. Seeking consensus in support of that vision;
4. Developing diverse talent needed for the pursuit of future accomplishments;
5. Demonstrating commitment over time to achievement of that vision.

The Leadership Imperative

As a first step in considering surgical leadership, it is important to consider the activities with which surgeons are engaged, and then to ask how these tasks promote leadership.

The Clinical Mission

Surgeons express the clinical mission in care of individual patients and health systems are organized to facilitate the provision of operative care. Operating room suites are central physical features of every hospital in this country. Operating room construction is highly regulated and uniquely expensive, making disproportionate claims on hospital capital and operating funds. Personnel requirements exceed those of other areas of hospital operations, magnified by the 24/7 nature of surgical activity at most large hospitals. In addition, operating room functions make large demands upon other services, including radiology, blood banking, and pathology. In many systems, ambulatory clinics and emergency rooms are explicitly designed to efficiently funnel patients to surgical providers.

Within this system, surgeons have possessed unique degrees of professional autonomy and flexibility. Anesthesiologists, operating room nurses and surgical support personnel are assigned to a daily surgical schedule and are committed to finishing the cases presented. With many fewer constraints, surgeons may schedule elective operations at their discretion and in ways that maximize professional gain while minimizing personal conflicts. Surgeons are allowed greater degrees of freedom in equipment and supply requests than other physicians. For example, most operating rooms maintain an extensive list of “doctor preference cards” that outline the needs of each surgeon for commonly performed operations, the preferences often substantially different for operations that are largely similar. Even though operating room personnel are highly skilled and expensive, surgery does not begin until the surgeon is ready. As these few examples illustrate, the operating room is a highly artificial environment designed to maximize productivity of surgeons. Unfortunately, these hierarchical aspects of surgical care, long part of surgical culture, are not conducive to leadership development. This autocratic form of surgical leadership, so common in the past, is rapidly vanishing and is being replaced instead by a collaborative culture based on open communication and mutual respect.

Within the operating room, the importance of communication and interpersonal relationships has been recognized in recent years through team-building efforts.

Surgical checklists, pre-incision time outs and postoperative debriefing are all expressions of the same incredibly simple, but powerful idea: every member of a surgical team has unique insights and value is gained by sharing information. The results have been impressive. As reported by the Safe Surgery Saves Lives Study Group, the institution of a multidisciplinary surgical safety checklist, including medications, marking of the operative site and postoperative instructions significantly improved operative results [1].

Surgical care is now multidisciplinary care. Long the domain of surgical oncologists and transplant surgeons, multidisciplinary clinics and case conferences increasingly dominate cardiovascular surgery, bariatric surgery, pediatric surgery, and many other disciplines. Success in multidisciplinary settings requires the practitioner to be knowledgeable of the others' disciplines, to appreciate and respect alternative perspectives, to resolve clinical ambiguity and to engage in multilateral negotiation. These attributes are precisely the characteristics required for modern surgical leadership.

Surgical leaders must interpret the demands of surgery to others. Provision of surgical care is resource and capital intensive and may conflict with other health system demands. For example, in hospitals with high occupancy, admissions from the emergency department may compete for beds devoted to elective surgical cases. Ongoing changes in hospital reimbursement shift financial risk progressively to health systems and may convert surgical services from revenue generating units to cost centers. Adoption of bundled payment systems will require substantial internal readjustments. The interpersonal skills exemplified by multidisciplinary care are directly relevant to navigating these coming changes.

Most importantly, surgical leaders must imagine and empower a future in which treatment of the next generation of patients is better than contemporary care.

The Research Mission

In academic medical centers, innovation is the chief source of differentiation and competitive advantage, and surgeons must actively engage in scientific discovery to remain relevant. In contemporary basic investigation, however, there is no surgical research, just research. Basic investigation is reductionist and mechanistically oriented. Western blotting and polymerase chain reaction and transgenic animal models apply equally to investigators from Surgery, Immunology or Biochemistry. In addition, methodological advances in genetics, metabolomics and biocomputation, among many others, make it impossible for any single investigator to master all techniques. Basic science is now and forever a team sport. As such, success in basic science requires equal measures of analytic talent and personality. As clinical medicine has become multidisciplinary, so too has biology.

Similar changes have occurred in clinical and health services research. The performance of an operation constitutes a clear transition in care, and a cause and effect relationship between intervention and outcomes like complication or death is less equivocal than for non-surgical treatment. The link between operation and outcome

has been the intellectual lynchpin of surgical health services research. To date, the clarity of this relationship has allowed health services research to remain largely "surgical". This situation will not persist. The creation of national data repositories and the influence of ideas from economics and social research have changed and enriched this field. Soon there will be no surgical health services research, just health services research.

A uniquely powerful opportunity for surgical investigators exists at the intersection of health services research and quality improvement. The potential for large-scale collaborative investigation is exemplified by the Michigan Surgical Quality Collaborative (MSQC), a consortium of 72 hospitals in the state of Michigan, each led by a surgical champion (Fig. 2.1). The range of investigations undertaken by MSQC has spanned topics as varied as surgical infections, intraoperative technical coaching and economic analysis. The MSQC has also spawned other large-scale, high-impact research collaboratives with direct relevance to contemporary patient care, for example the Michigan Opioid Prescribing Engagement Network (M-OPEN). The motto of these groups is compelling: Collaboration is the New Competition.

An inevitable tension exists between the clear demands and tangible rewards of clinical surgery and the uncertainty of research. A long line of past patients and a seemingly unlimited number of future patients confront the surgeon. The emergency department demands attention every day. The emotional rewards of a well-executed operation are immediate. Financial results are obvious. In contrast, novel ideas are fleeting and rare. Surgical leaders can shape the research mission through personal research accomplishments and scholarship. They also support investigation by displaying intellectual engagement, perseverance and curiosity. As with clinical care, surgical leaders must imagine and fund future investigation.

Fig. 2.1 Patient care collaboratives in Michigan

The Teaching Mission

Surgeons involved in undergraduate medical education and in postgraduate training are uniquely privileged. Beyond the patients they treat directly, these individuals influence the lives of thousands of others, cared for in turn by their trainees. Cognitive development in surgical training is not different from that associated with other medical disciplines. The principles of adult learning apply equally to both groups of learners. In contrast, the technical aspects of surgical training have no parallels in non-surgical disciplines. The teaching of surgery requires special traits of the instructor—patience, the ability to instill confidence in another person, communication through both verbal and non-verbal cues, and the self-possession required to help another succeed.

Training to be a surgeon can be emotionally trying, and not for the obvious reasons that the hours can be long and physically fatiguing or that surgical emergencies are stressful. Surgery is difficult because committing to an operation imparts responsibility to the surgeon for another person's life. Not all patients can be cured; palliation may be elusive; complications occur. Failure is intrinsic to the practice of surgery. The best teachers of surgery are empathic to their trainees and are able to guide emotional maturation. These traits are surely the substrate of leadership.

The Talent Development Mission

Surgical leaders are talent scouts. Most physicians are ultimately drawn to the intellectual foundations of the disciplines they choose, but many are initially attracted to the field by the example of a more senior mentor. Talented young people are stimulated by environments that are open, accepting of differences and rewarding. A small research project becomes a presentation at a symposium, which begets a larger project, which blossoms into an investigative career.

For any department of surgery, success is due to the talent, commitment, and vision of its faculty. A crucial role of surgical leadership is to help every individual develop to his or her full potential. The mission should be to:

1. Prepare each surgeon to achieve the highest excellence in clinical care, research, and education.
2. Build a diverse and inclusive culture in which all individuals advance and thrive.
3. Recruit the best and brightest clinicians and scientists.
4. Create innovative strategies for ongoing professional growth and scientific discovery.
5. Mentor and sponsor diverse phenotypes to enhance cognitive diversity and productivity.
6. Develop the most talented and progressive future leaders.
7. Expand outreach and service to local, regional, national, and global partners.

Fig. 2.2 The Michigan Promise

The Michigan Promise represents a longitudinal investment in the faculty of the Department of Surgery at the University of Michigan (Fig. 2.2). This multifaceted approach is designed to encompass these missions. The Michigan Promise is a long-term commitment to faculty development and an effort to change the face of American Surgery for the next generation. There are six areas of focus—Environment, Achievement, Leadership, Recruitment, Innovation and Outreach.

For these missions, defined strategies exist within these domains with each initiative open to all faculty members within the department across rank, track, and specialty. The Michigan Promise is designed to accelerate achievement and ensure that the environment allows all individuals to achieve excellence and professional satisfaction. Because faculty play a central role in executing the mission of the Department of Surgery, these efforts are integrated as a core value of equal importance to other core departmental values. Each initiative within the Michigan Promise is coordinated and executed through the Department of Surgery Office of Faculty Life, addressing challenges of achieving excellence in clinical care, teaching, research, diversity, and equity in modern academic medicine.

Diversity, equity and inclusion are an explicit part of The Michigan Promise. The faculty collectively believe in the power diversity—that combining different perspectives and integrating diverse cognitive repertoires is key to our future success. As one example to achieve this, the department created a committee tasked with overseeing all faculty recruitment. Members are trained in implicit bias awareness and are chosen to represent the diversity in the department. Candidate pools are enriched for diversity by outreach and interview processes and questions are standardized.

The program reinforces an open and welcoming environment in which everyone is provided the opportunity to advance and lead. To achieve this, the department has implemented implicit bias training and has been engaged heavily in consciousness raising. Leaders must ensure that individual barriers are addressed and eliminated, and that all individuals are empowered to reach their highest potential.

Leadership must ensure the intentional development of young faculty. To achieve this, the department provides launch teams; an early career Leadership Development Program; and an early career visiting professor program with partner institutions. Equally important is leadership development of mid-career and senior faculty. To achieve this, the department provides a unique Leadership Development Program; an Innovation Development Program with an Innovation Prize; an opportunity for a directed 2-month sabbatical to develop new skills; and Leadership Masters Classes.

These professional development programs are responsive to each faculty member's needs, and include support, mentorship, and sponsorship throughout an academic career. The programs are dynamic, and incorporate innovative strategies from other disciplines tailored to the demands of academic surgery. Through these efforts, the faculty should be well equipped and positioned to become leaders locally, nationally, and internationally.

Initial Faculty Experiences

During junior faculty years, those immediately following the completion of residency or fellowship training, formal administrative responsibilities should be minimized. Every surgeon upon entering independent practice must develop personal clinical judgment, determine how he will comport himself in an operating room, and must establish ties to referring physicians. Complications occur in every practice and the young surgeon must learn to face them forthrightly and with equanimity. In teaching hospitals, the young faculty member must switch from receiving instruction to providing guidance. The first years are especially important in research; lack of focus and productivity at this juncture can permanently short circuit an investigative career. In the most positive sense, these years should be a self-directed investment in future productivity. While many of these activities are the building blocks of leadership, and while every year provides opportunities for leadership, personal development requires time and focus.

Surgery is the most public form of medical practice. As an obvious example, surgical procedures are performed in an operating room with a scrub nurse and a circulating nurse, anesthesiology care giver and often one or more trainees. At another level, the direct relationship of surgical complications to the performance of an operation makes public examination of imperfect results routine. A weekly morbidity and mortality conference is a staple of every surgical training program in this country. The risk inherent to surgery, its public nature and the resultant scrutiny thrusts surgical leaders into positions of judgment. Credibility in this regard is contingent upon the leader's clinical abilities. Strong cultural norms in American Surgery make it very difficult for surgeons that are not clinically experienced and active to assume meaningful leadership roles.

Research is the key to improving current surgical practice. Investigation is also uncertain and expensive. Surgical research is not relevant to non-academic medical centers, and has become optional or endangered at many others. Where research is important, early investigative success is an essential criterion for surgical leadership.

Clinical teaching is less embattled than research and is a foundation of most departments of surgery. A commitment to teaching and a record of teaching ability should be considered a prerequisite to leadership development.

Temperament and Values

While experience is influential in leadership development, in many ways temperament is more important. To succeed in these dimensions, surgical leaders must possess integrity, humility, selflessness, the ability to communicate and curiosity.

Personal integrity is the single most important quality of leadership. While integrity alone does not guarantee leadership success, the perceived absence of this quality does guarantee failure. At the simplest level, integrity means that the effective leader does what he has said he will do. For example, if the surgical leader has committed to provide resources to a newly recruited faculty member, integrity means that those resources have been accrued and will be available. If a salary has been negotiated, the money will be paid. Operating room time promised will be delivered. Promises that are made for material or financial benefits will be met. However, integrity in this sense is purely transactional. Transactional interactions do not engage group imagination or collective action, and leadership that rests solely on the authority to provide material benefit or financial transfers is fragile [2].

Beyond transactional commitments, integrity means the group perceives that the leader does what she thinks is right. This state implies that the organization understands that the leader has a moral framework that informs decisions, is consistently true to those convictions, and that she resists powerful forces within the organization that threaten group welfare. Consider the promises alluded to above. In any surgical department, there is never enough lab space, money or operating room time to satisfy the needs and aspirations of all. Necessarily, commitment of resources to one faculty recruit, salary increase to another or operating room time to a third, affects the whole organization. In addition, there are no guarantees at the time of commitment that those resources will be used productively or to the benefit of the whole organization. Decisions of the leader that are seen to arise from a moral center of gravity allow the group to accept the risks that commitment of resources always entails.

At the highest level, personal integrity requires the explicit acknowledgement on the part of the leader that he or she is fallible. No single person can be fully informed on all subjects nor error-free. This perspective requires the leader to seek a broad range of views and to make important decisions only after considering multiple viewpoints. Public vulnerability by leaders is a powerful force within an organization. Vulnerability enables a fuller expression of ideas by all group members, especially junior faculty. The differing perspectives that emerge increase organizational

performance and lead to improved efficiency, innovation and financial outcomes. This effect has been called cognitive diversity [3]. The power of cognitive diversity is grounded in leadership humility.

Integrity also has a time element. Personal integrity displayed over time creates trust. Trust is hard-earned, resilient, and very powerful in that this condition allows the group to engage with the leader's longer term vision. With trust, a belief develops that the leader will be consistent through success and failure, that the leader encountered today will express the same values in the future. Let the reader imagine a personal example. Think of a person in your life whom you trust. Imagine that you have not seen him or her in a month, a year, perhaps a decade. Trust means you believe that when you meet this person next he or she will display a consistent set of values and will treat you fairly, as you have been treated in the past.

Effective leaders work to achieve a vision for the future that maximizes the potential of others and benefits the organization, for example a department of surgery. To do so, the leader must be outward-looking and not concerned with personal advantage or benefit. There must be joy and satisfaction for the leader in the success and recognition of others. This quality of selflessness is a core ethical value in medicine in which the welfare and benefit of the patient takes precedence over the self-interest of the treating physician. This viewpoint is diametrically opposed to modern American business practices in which maximizing profit is the standard and in which placing personal interest first is an accepted ethical starting point. Selflessness cannot be taught. For surgical leaders, this quality requires a bedrock sense of personal wholeness and confidence.

Communication

Communication is absolutely essential to leadership. Effective leadership requires a commitment to continuous expression of core values, institutional objectives and future aspirations.

The most powerful communication resides in the manner in which a leader lives his or her life. For better and worse, leaders are observed and their actions (and inactions) are scrutinized. Respectful language, humility, and humane treatment of others' failings resonate strongly and positively. Positive communication of this sort allows the leader to accumulate credit in a bank of goodwill. This credit can be depleted incredibly rapidly, sometimes instantly, by crude humor, hubris, or cruelty. Perceived hypocrisy in a leader is especially corrosive. A leader cannot profess value in teaching and at the same time ignore medical students, and cannot ask others to be productive in research while not being academically engaged. The surgical leader's professional life is on brightest display in the operating room. The surgeon leader does not need to be the most technically gifted operator in the department, but he or she absolutely must be the most respectful to the nurses, the calmest when problems arise, the person with whom the anesthesiologists feel most comfortable. True surgical leadership cannot be gained solely in the operating room, but it can surely be lost.

In our verbal society, spoken communication is key, and effective leaders develop multiple styles of verbal expression. It seems obvious that talking privately with a junior house officer struggling with a major postoperative complication would differ in approach than annual salary negotiations with senior faculty. Public presentations to scientifically sophisticated professional audiences require different language skills than do talks to lay groups.

Effective communication uses a variety of verbal tools, and leaders must work to master all. Consider the power of analogy. This author might describe his work at a research seminar by saying "My laboratory studies hypothalamic control of ingestive behavior and metabolic rate. We have deep expertise in the melanocortin signaling system and have developed a number of transgenic animal models to examine signal transduction in this system." This description probably would not work with a successful business person considering laboratory endowment. Perhaps it might be better to say "I study eating. The brain has an area that acts like a thermostat. Turn the thermostat up and we feel hungry; turn it down and we stop eating. I'm trying to see if we can control that thermostat so we can cure overweight."

While verbal expression is important, listening is more important. Effective listening is not passive, and active listening is a skill that must be developed. Listening effectively involves asking questions as the other speaks to elicit deeper meaning, to clarify ambiguity and to draw forth new ideas. Active listening involves verbal encouragement and visual cues, and sometimes just sitting silently while the speaker organizes his or her thoughts. The best leaders practice a 2:1 rule; the leader listens 2 min for every minute that he or she talks. Listening is not easy; it requires practice.

Because we live in such a verbal/visual society, there is special power for leaders who can also express themselves in writing with style and clarity. Writing is hard work. Ann Patchett, the highly successful novelist, has recently written "Logic dictates that writing should be a natural act, a function of a well-operating human body, along the lines of speaking and walking and breathing. We should be able to tap into the constant narrative flow our minds provide, the roaring river of words filling up our heads, and direct it out into a neat stream of organized thought so that other people can read it….But it's right about there, right about when we sit down to write that story, that things fall apart" [4]. Aspiring leaders should not despair. Like many difficult and important skills, writing becomes easier with daily practice.

The technical complexity of surgical practice has accelerated at an unprecedented pace in the past decade, and non-operative therapy must be integrated with surgical care. Every branch of surgery has examples. Abdominal aortic aneurysms may be treated via laparotomy or endovascularly, depending upon anatomic variability and patient characteristics. The proper treatment of breast cancer requires knowledge of the cell biology of nuclear receptors and angiogenesis in additional to sentinel lymph node biopsy. Care for patients with choledocholithiasis combines endoscopic retrograde cholangiography and laparoscopic cholecystectomy, each applied expertly. As a consequence of these advances, clinical surgery has become increasingly specialized and narrowly focused. Similar forces affect surgical research. Basic investigation advances apace, and so does health services research,

but they use fundamentally different techniques. Surgical leaders are called to promote and coordinate diverse surgical specialties and to simultaneously advance surgical knowledge. The ability to do so rests upon openness to novelty and change and a habit of mind that restlessly seeks the stimulation of new ideas. Pasteur noted “Chance only favours the prepared mind.” Just so. Leadership belongs to the curious.

A Call to Leadership

For most, the call to leadership does not arrive with a clarion note, a neon sign that flashes LEAD, LEAD, LEAD or some similar epiphany. Rather, the young faculty member establishes a reputation for clinical excellence, or a robust research program, or becomes a valued teacher, and someone asks for help or collaboration or guidance. Someone asks for leadership. And a little voice whispers, “You can do this. You can reach beyond yourself. Maybe you can be a leader.” When this happens, the question to be answered is: Do I really want to help and develop others at the expense of myself? For future leaders, the answer must be yes.

Leadership Phenotype

A leadership stereotype has come to dominate American business and political culture. Leaders are characterized as extroverted, assertive, dominating, and often self-aggrandizing. Twentieth century American history provides many examples—General Douglas MacArthur, President Clinton, General Electric chairman Jack Welch to name a few. In her book, Quiet, author Susan Cain contends that these traits may not actually characterize effective leadership. She writes “Contrary to the Harvard Business School model of vocal leadership, the ranks of effective CEOs turns out to be filled with introverts, including Charles Schwab; Bill Gates; Brenda Barnes, CEO of Sara Lee; and James Copeland, former CEO of Deloitte Touche Tohmatsu. ‘Among the most effective leaders I have encountered and worked with in half a century,’ the management guru Peter Drucker has written, ‘some locked themselves in their office and others were ultra-gregarious. Some were quick and impulsive, while others studied the situation and took forever to come to a decision. The one and only personality trait the effective ones I encountered did have in common was something they did *not* have: They had little or no ‘charisma’ and little use either for the term or what it signifies’” [5].

Leadership is different than authority. The rapid change and uncertainty that characterizes modern surgical practice requires creative risk taking; effective leaders create an environment in which talented people feel safe to take risks. This confidence comes from knowing that the price of failure is not too great, and from being part of a group of like-minded people. Uncertainty requires creativity to resolve unknowns. Leaders must use influence beyond a position of authority because authority alone does not stimulate creativity.

Creativity flourishes in open and inclusive environments, workplaces where diverse faculty are empowered to achieve their best, settings that celebrate the value of diversity. To achieve this goal, organizations must focus on defining core aspects of diversity, examining gaps in diversity and systematic bias, and implementing explicit strategies to improve equality. An ongoing effort to improve cultural competence is key. Cultural competence is the ability to interact effectively with people across different cultures. The components of cultural competence are awareness of one's own cultural worldview (and biases), a positive attitude towards cultural differences, knowledge of different cultural practices, and cross-cultural communication skills. Implicit biases can perpetuate racial and gender disparities in impactful areas such as policy development, hiring, and leadership opportunities. Subtle biases can create an environment in which not everyone is or feels included. By implementing collective strategies to address implicit bias, organizations strengthen both individual faculty members and the collective group.

Achieving workforce diversity requires recruitment of groups currently underrepresented in surgery. The potential benefits of increasing diversity of academic medical faculty have been well-described. Only institutions able to recruit and retain women and underrepresented groups will be likely to maintain the best faculty and house officers.

Leadership Preparation

Many have heard the bromide that "She is a born leader" and have uncritically accepted this truism. Consider an alternative statement that "She is a born surgeon." Almost all surgeons would reject such a notion out of hand. Surgical mastery requires a lifetime of focused work. Surgical training consumes 5–10 years after medical school. Refined physical skills require thousands of hours of intentional practice to obtain and hone; mature judgment is hard earned. According to one study, surgical results improve progressively as surgeons age, peaking in the decade between 50 and 60 years [6]. Surgical mastery surely requires intrinsic talent—physical dexterity, ability to think in three dimensions and concentration—but surgical skill is acquired not intrinsic. That is why it is called the practice of surgery. So too, leadership skills. Potential leaders need to possess relevant talents, including confidence, altruism and analytical ability. Leadership skills are built on this foundation.

Aspiring leaders require additional preparation beyond those experiences described above to function optimally in our complex health care system. For many, enrollment in a formal leadership development program is beneficial. Aspects of leadership preparation programs are covered in detail in other chapters of this volume. The following elements are essential:

1. Leading change
2. Team building
3. Innovation

4. Strategy
5. Finance
6. Marketing
7. Operations management
8. Health care policy.

In 2012, the Department of Surgery at the University of Michigan inaugurated the Leadership Development Program in Surgery. The yearlong program was explicitly designed to include each of the content domains listed, and was directed at Michigan's emerging surgical leaders. The initial class included 24 mid-level faculty members in the Department of Surgery, approximately 20% of total surgical faculty. The Leadership Development Program was led by Dr. Justin Dimick, Associate Chair for Faculty Affairs in the Department of Surgery and by Dr. Christy Lemak, Director of the Griffith Leadership Center and The National Center for Healthcare Leadership within the Michigan School of Public Health. The faculty for the Leadership Development Program was drawn from the Medical School, School of Public Health and the Ross School of Business at the University of Michigan. Being able to draw faculty from three top-ten schools on the same central campus was deemed essential for the success of the program. The program, refined continuously, has now completed its fourth iteration. Fully 62% of Michigan Surgery faculty members have participated in the Leadership Development Program.

For the Leadership Development Program, participants were self-nominated. Leadership development programs intended for medical professionals benefit by having a broad representation of specialties; such diversity is helpful by providing a range of experiences and perspectives. For this program, the participants had each demonstrated personal achievement in clinical care, research and teaching and had made an overt decision to seek broader engagement. Asking potential participants to write an essay outlining their aspirations is a useful way to gauge future goals. Essays were required of participants in the Michigan Leadership Development Program.

Successful leadership development programs boost group morale and create strong teams, but team building takes time. For this to happen, potential participants must fully commit to the time needed and schedules must be rearranged to assure unbroken attendance. The instructional sessions for the Leadership Development Program consisted of a series of all-day Friday blocks. The meetings were held on-campus but remote from the hospital. Prospective participants were required to commit to all sessions and to forego any other activities—clinical work, professional travel, vacation, etc.—for all sessions. Inability to make this commitment precluded participation. Administrative leaders were then contacted to rearrange schedules so that this obligation would be met. Assurances were provided that no financial penalty would apply to any leadership program participant because of absence from other scheduled activities.

Leadership programs must begin with well-articulated visions and goals. The goals of the Michigan Leadership Development Program were to provide emerging leaders with the knowledge, perspectives and tools required to succeed in the contemporary medical environment. These goals were to be met through exposure to

thought leaders and content experts in relevant topical fields, through team-building exercises and via self-initiated team-building projects.

Leadership programs are generally benefitted by having practicing leaders provide instruction. For example, health care finance is a topic of every program. Learning how to calculate a return on investment (ROI) or the meaning of net present value (NPV) are crucial exercises. These topics have been covered by professors from the Ross School of Business and the School of Public Health. However, examining a balance sheet detached from real-world context, while crucial, is admittedly also a dry exercise for most clinicians. These topics come to life when the University Hospital CEO follows the didactic session by explaining the long-term sources and uses of hospital capital, and especially when the Department of Surgery chair uses the department's balance sheet as a teaching aid. These topics are typically not widely shared with faculty, but transparency builds trust and helps prepare emerging leaders for future responsibilities.

Many leadership programs entail the performance of projects that seek to build coherent teams and to solve currently pressing problems. These efforts are helpful to illustrate the use of the topics covered in the curriculum, for example, financial analysis or operational optimization. In the Leadership Development Program, the participants were divided into a series of teams, most with four members. Self-selected projects were proposed and then vetted by the entire group. Deliverable outcomes were required. After group approval, funding and personnel resources were provided. Projects ranged from referring physician outreach to creation of new clinical programs to development of unique electronic media for postgraduate teaching.

Formal preparation should be followed by leadership auditions. Every participant in the Leadership Development Program was provided opportunity for a larger leadership role within the Department of Surgery. In any department of surgery there are many opportunities: clerkship director, associate chair for research, division head, residency program director. The auditions were structured to give graded responsibilities and the possibility of larger leadership roles. These tests of leadership were designed to answer two fundamental questions. From the perspectives of the other members of the department: Is the developing leader growing as a leader? From the perspective of the new leader: Am I comfortable and energized by the service of others? And, is this something I want to be a permanent part of my life?

Leadership development is stimulated by feedback. A powerful tool for intermittent feedback is the 360° evaluation method. In this process, differing perspectives of the faculty leader—from supervisors, peers, direct reports, nurses, and house staff—provide appraisal of strengths, weaknesses and areas for improvement. The responses are rendered anonymous to encourage candor. Usually, both a structured evaluation instrument and written comments are provided. All participants in the Leadership Development Program were required to participate in a 360° evaluation. A series of professional coaching sessions followed to first interpret the results and then to suggest methods for leadership improvement.

All leaders need periodic feedback on their performances as leaders. The structure of the 360 method with its holistic view and anonymous evaluations helps leaders see themselves as others see them. Leadership improves with practice. What changes is the leader's capacity to use interpersonal relationships to engage others, and through this engagement, to shape events.

Leading from the Middle

The most effective leaders do not always lead from the front. If a culture is open and inclusive, and if group members are full engaged, transformational leadership comes from the middle.

As Chatman and Kennedy note, "The obvious traits such as confidence, dominance, assertiveness or intelligence, have not, it turns out, shown the level of predictive validity that one would hope for. Rather, we suggest three subtle but likely more powerful qualities that transcend particular individual differences and behaviors. They are a leader's diagnostic capabilities, the breadth and flexibility of his behavioral repertoire, and his understanding of the leadership paradox" [7]. Here diagnostic acumen is meant as the ability to determine for every situation the unique contribution that the leader could make to crafting a solution to that particular circumstance. The obvious value is that every challenge is considered on its own merits and that proposed solutions are tailored. It also follows that leaders need a broad and flexible array of behaviors to respond to an equally wide array of complex situations.

The effective leader is very self-aware, has a clear moral center, is personally balanced, and is interpersonally skilled, but ultimately, is also dispensable. Effective leaders are dispensable because they create a culture of shared decision making and attract other leaders. The most powerful strategy, the hardest to create but the most durable, is creating a culture in which leaders develop other leaders and provide experience which is useful for that purpose. As Chapman and Kennedy observe, "The ultimate test of leadership is how well the team does when the leader is not present" [7]. That is the leadership paradox.

New Leaders

A new generation of surgical leaders is emerging. Their strong surgical leadership will assure that the discipline of Surgery remains at the forefront of contemporary medical practice. Surgical leadership that is imaginative, engaged with other specialties, and open to new ideas will draw the best lessons from the past to build a positive future. This form of leadership, at its best, will motivate departure from the routine, stimulate new learning and inspire new action. Change is everywhere. Creative change requires creative leadership.

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