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Reflections on a leadership development program: Impacts on culture in a surgical environment



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ABSTRACT

Background: Although a growing body of literature has focused on the impacts leadership development programs have had on the individual surgeon, little effort has been focused on understanding the impacts these programs have had on surgical culture. The purpose of this study was to explore the impacts of implementing a leadership development program on the culture of the Department of Surgery at University of Michigan, Ann Arbor.

Methods: Qualitative interviews were conducted with 14 surgery faculty in the first cohort of a leadership development program at University of Michigan. Using NVivo (version 11.4.3; QSR International, Melbourne, Australia), thematic analysis was used to locate, analyze, and report patterns within the data.

Results: Thematic analysis demonstrated that participation in a leadership development program influenced surgical culture in the following ways: (1) promoted a more participative leadership style, providing tools for surgeons to create a more collaborative environment; (2) increased the culture of diversity, with leaders in the department valuing a more inclusive and wide range of skill sets; and (3) strengthened the collegial environment as evidenced by improved morale and relationships within the department. In addition, several participants expressed difficulty in teasing out what was a direct benefit of a leadership development program versus what could be attributable to other factors, referred to here as the *chicken or egg* argument.

Conclusion: Almost all participants expressed experiencing at least some change that they believed was related to the leadership development program. This research may provide insight into the broader implications that programs like these have on surgical culture.

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Introduction

To be successful, surgical departments need to embrace a collaborative culture based on teamwork.^{1–4} Much of an institution's culture is shaped by the prevailing style of leadership within its department. As important as it is to foster a collaborative environment, changing culture, particularly in surgical settings, has been notoriously difficult. In the past, many interventions aimed at promoting change in clinical settings have been planned and introduced based on a hierarchal model of communication, a model

that is often not well suited for human interaction and has had limited success.⁵ Programs in leadership development serve as a potential avenue for promoting this change by focusing on proficiencies that receive little emphasis in medical school and minimal guidance in the field.⁶

Understanding the role that programs in leadership development have in affecting and changing institutional culture is critical to determining effective strategies for collaboration in team-based approaches to health care. Although a growing body of literature is being paid to the need and effectiveness of programs in leadership development in academic medicine,^{7–9} the majority of research has been focused on the impacts on the individual surgeon.^{3,10,11} Little effort has been focused on understanding what, if any, impacts these programs can have on surgical culture, an essential component to determining effective strategies for collaboration in team-based approaches to health care.

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This work assessed the impact of implementing a leadership development program (LDP) on the overall culture of the Department of Surgery at the University of Michigan (Ann Arbor). Herein, we present a qualitative analysis to examine the impacts of LDP on surgical culture as reported by participants from the initial cohort (2012–2013) of the program.

Methods

A LDP was created at the University of Michigan and was open to all practicing surgeon faculty at the University of Michigan. The study sample included surgeons who submitted applications voluntarily and were selected for participation. A total of 21 surgeons participated in the program: 15 men and 6 women. Participants represented a broad range of clinical areas including general, vascular, plastic, thoracic, and transplant surgery. Design and implementation of this leadership program was funded by the Department of Surgery at University of Michigan. The program was structured around four domains: leadership, team building, business acumen, and health care context. The content of the program was based on a needs assessment conducted with faculty surgeons who were selected for participation. A full description of methods can be found in Jaffe et al.²

The data presented in this study represent a qualitative evaluation of the program based on feedback provided by the original cohort of the program (2012–2013) 5 years after completion of the program. The project team, consisting of 2 University of Michigan research fellows and a qualitative analyst, utilized semistructured interviews in this study. All participants were approached in person or via e-mail and consented orally to take part in the project. Researchers made clear that participation was completely voluntary. All interviews took place in person or over the phone, were audio recorded, were transcribed verbatim, and were deidentified to protect participant confidentiality. This study was deemed exempt by the University of Michigan Institutional Review Board. All data were collected between October 2017 and May 2018.

Data collection and analysis

Semistructured interviews were conducted with 14 of the 21 surgeons who completed the LDP. Of those who did not complete an interview with our research team, 1 had transitioned into veterinary medicine, 1 had died, 2 were directors of the LDP, and 1 was the chair of the department and were thus not included in the study. Interviews with surgeons were meant to explore the strengths and weaknesses of the program, solicit recommendations for future improvements, and understand the program's impact by expanding on individual experiences. The domains covered included the following: participation, program specifics, leadership skills, culture, perspective/future career, and self-awareness. Interview participants ranged in age from 39 to 62 years, many of whom held formal leadership positions, including section heads, division chiefs, and program directors. Participants were eligible for participation if they had completed the program and did not hold a position that would introduce bias into the program evaluation. The target sample size for semistructured interviews was based on when thematic saturation was reached. Thematic saturation was determined when new themes emerged infrequently, and the code definitions remained stable.¹²

Analysis of semistructured interviews was carried out using qualitative data software NVivo for Mac (v 11.4.3; QSR International, Melbourne, Australia). Themes were established among three researchers (C.A.V, A.K, and S.S) based on the research objectives and data collected. Interrater reliability was established

through an iterative process of consensus building between three researchers for consistent and accurate qualitative analysis.

Results

Thematic analysis revealed a range of perceived changes to surgical culture that were at least in part attributable to the LDP. These changes included a more participative leadership style, an increased culture of diversity, and an improved collegial environment. Although most participants did recognize at least some change that they perceived to be related to LDP, several participants also expressed difficulty in teasing out what was a direct benefit of LDP versus what could be attributable to other factors (Table).

Participative leadership

When asked to reflect on the content of the LDP curriculum, many participants expressed positive sentiments regarding the fact that the modules were focused on competencies that are traditionally outside the wheelhouse of clinical development. Participants described how this perspective was particularly important in surgery, where leadership can often be viewed as a “quality rather than a skill set” because of so much of the position being defined by other activities. As one surgeon put it, “A lot of these are, you know, sort of business school principles that are not very available to you in medical education, and so it broadens perspectives. And then, when you have a whole group of people broadening their perspectives, the conversation changes” (participant 17).

When asked to reflect on how the LDP affected leadership style, many participants perceived that their approaches have become more collaborative and cited personal growth in a variety of areas, including the following: paying greater attention to strengths and weaknesses of colleagues, improving listening skills, decreasing agenda setting, and improving the ability to delegate. This transition has contributed to a more participatory approach to how decisions are made in the Department of Surgery at the University of Michigan. As one surgeon described when reflecting on a meeting regarding impending changes to the department:

I sat back and let a lot of the people that we brought together in the room decide how they wanted to do things, and just kind of facilitated and let them decide how they thought we wanted to institute some changes. And the decisions they came up with were not the ones that I went into the room thinking we needed to do, but I said, okay, let's try them. And they worked (participant 12).

Surgeons also described a more participative approach when responding to requests from colleagues. One surgeon asserted that becoming less reactionary and pausing to consider not only what the person is asking for, but also why, is “a much better strategy to try and fill each other's basket.” In turn, this creates an environment where “people walk away feeling that they got something that they, you know, feel okay about. Whether the decision is difficult, they still have something they can kind of hang their hat on” (participant 10). These transitions in leadership style have had an impact on the effectiveness of leadership within the department, and as one participant described it, when “people perform better as leaders, that translates to culture” (participant 17).

Culture of diversity

Surgeons also described the ways in which the department has become more diverse as a result of LDP. Specifically, participants

Table
Sample quotes from thematic domains

Theme	Sample quote
Participative leadership	<p>“A lot of these are, you know, sort of business school principles that are not very available to you in medical education, and so it broadens perspectives. And then, when you have a whole group of people broadening their perspectives, the conversation changes.” (participant 17)</p> <p>“I sat back and let a lot of the people that we brought together in the room decide how they wanted to do things, and just kind of facilitated and let them decide how they thought we wanted to institute some changes. And the decisions they came up with were not the ones that I went into the room thinking we needed to do, but I said, okay, let’s try them. And they worked.” (participant 12)</p> <p>“I remember reading where, you know, like there are different ways of negotiating, but in some negotiations, really, it’s like I have to win and you have to lose. And that’s, really, I think in today’s day and age, not, people don’t walk away from that feeling good. Someone will, but the other person doesn’t. And a much better strategy is to try and fill each other’s basket... Because then you have people walking away feeling that they got something that they, you know, feel okay about. Whether the decision is difficult, they still have something they can kind of hang their hat on.” (participant 10)</p>
Culture of diversity	<p>“You know the excellence comes in science and in, you know, grants and funding and publications and things like that, which is, I’m not saying that’s not still partially true, but I think there’s less appreciation for the kind of people that contributed in different ways, be it education, be it leadership on the health system level, program development, or, just to be honest with you, clinical stars who like kind of tended to leave here because they felt like they didn’t fit in. So that, I think, was kind of pre-LDP, and some of that has definitely changed, I think.” (participant 6)</p> <p>“There’s been an increased sort of very public recognition of the value of diversity in the department, right? So, I guess I would say that the culture of the department has probably been more publicly prodiversity and pro, you know, promotion of people, of a variety of people.” (participant 4)</p> <p>“You got to have the line of sight between your present position and your goals. And if it’s always just waiting for somebody to leave, die, or retire, it gets a little, yeah, it gets a little demoralizing. So, I think it’s been good.” (participant 17)</p> <p>“Well, I think there’s a little bit more openness. You know, it still has a hierarchy, but I think there’s an awareness that we have a unique group of people and we do desire to tap into them. You know, I think we always knew that we had a strong group of intelligent, thoughtful folks, but as sort of the world changed, we changed with it.” (participant 10)</p>
Collegial environment	<p>“I think that, in your sphere of work, on a daily basis you tend to see the same kind of group of people. And so, you know that, you know everybody, but you don’t know everybody really well. And I think having the ability to kind of be in a room and not necessarily be talking about a patient or something like that, you get to know people better. And I certainly think that is probably something that contributed to the culture as well, and I think something that definitely contributes to kind of the well-being of a faculty at large.” (participant 18)</p> <p>“I think that it substantially enhanced our mutual respect. It kind of takes away a lot of distraction so you can focus on the important work when you know that you respect the person you’re dealing with and they respect you. And that was a definite result of the LDP.” (participant 1)</p>
Chicken or the egg	<p>“LDP gave us kind of a common vocabulary and awareness of kind of these challenges and limitations and the need for developing leaders across the department in different domains and appreciating the contributions of different individuals in different ways. I also think though, we, I mean this is like a chicken or egg argument, like did this, so did that happen because of the people that were involved in it and kind of the tone of the department at the time, or did it, or did doing that create kind of people that had that skill set? I think it was a little of both.” (participant 6)</p>
No change	<p>“People still either wait for their marching orders or have to take marching orders. There’s a lot of decisions that are made that the board, you know, the people underneath leadership don’t necessarily understand but are forced to deal with. So, from that standpoint, I’m not sure that all those cultural things have changed in substance at the end of the day.” (participant 14)</p>

reflected on how their divisions felt more inclusive, with a more diverse range of skill sets being deemed as valuable or important. When asked to reflect on the environment before LDP, one surgeon stated:

You know the excellence comes in science and in, you know, grants and funding and publications and things like that, which is, I’m not saying that’s not still partially true, but I think there’s less appreciation for the kind of people that contributed in different ways, be it education, be it leadership on the health system level, program development, or, just to be honest with you, clinical stars who like kind of tended to leave here because they felt like they didn’t fit in. So that, I think, was kind of pre LDP, and some of that has definitely changed, I think (participant 6).

Contrast this to how participants reflected on the culture post LDP, where sentiments reflected a shift in the culture of diversity, “There’s been an increased sort of very public recognition of the value of diversity in the department, right? So, I guess I would say that the culture of the department has probably been more publicly pro diversity and pro, you know, promotion of people, of a variety of people” (participant 4).

Other participants described how the LDP has at least in part promoted an environment where more people are being placed

into leadership positions. These participants clarified that the increase in diversity could most easily be found in the diversity of ideas being offered. This is different to how things had been done in the past, where advancement opportunities were often based on seniority. When asked to describe how this change translates into the culture of the environment, one surgeon stated:

You got to have the line of sight between your present position and your goals. And if it’s always just waiting for somebody to leave, die, or retire, it gets a little, yeah, it gets a little demoralizing. So, I think it’s been good (participant 17).

Similar to findings discussed previously, these changes were not identified as being a complete shift in hierarchal approach but rather, “an awareness that we have a unique group of people, and we do desire to tap into them” (participant 10).

Collegial environment

Participants also described how relationships with colleagues in the department have changed since participating in the LDP. When prompted to reflect on how these relationships have changed, some surgeons pointed to areas of personal growth, such as becoming less sarcastic and having improved communication with colleagues.

A more prevailing theme, however, was how these areas of personal growth translated to an improvement in the collegial environment, including an increase in morale and strengthened relationships. In discussing how the LDP influenced relationships, one surgeon asserted that the program “changed the environment” and “the framework with which I bring conversation” (participant 3).

Another way in which the LDP helped to shift the collegial environment was the increased opportunities to network and interact with colleagues. Participants described how one of the greatest advantages of the LDP was the guaranteed protected time that offered participants the opportunity to interact in ways that are often not possible in clinical settings. Although these interactions offered personal benefits, such as opening the doors to unique research opportunities, it also led to a change in how communication happened both within and outside of the department. As one surgeon described:

I think that, in your sphere of work, on a daily basis you tend to see the same kind of group of people. And so, you know that, you know everybody, but you don't know everybody really well. And I think having the ability to kind of be in a room and not necessarily be talking about a patient or something like that, you get to know people better. And I certainly think that is probably something that contributed to the culture as well, and I think something that definitely contributes to kind of the well-being of a faculty at large (participant 18).

In addition, although a substantial number of participants described the surgical culture as being hierarchal both before and after LDP, there was some recognition of a more respectful environment being created. As one participant described, “I think that it substantially enhanced our mutual respect. It kind of takes away a lot of distraction so you can focus on the important work when you know that you respect the person you're dealing with and they respect you. And that was a definite result of the LDP” (participant 1).

Chicken or the egg

It is important to note that, although the majority of participants recognized experiencing some level of change in their department during the past 5 years, many noted that it is difficult to tease out how much of this change is attributable directly to the LDP versus other extrinsic factors. Participants cited elements, such as university level policies, other leadership opportunities, trends outside of the university, the intrinsic values of the majority of the initial cohort, and external factors, as also being catalysts for change in the department. In other words, the creation of programs like the LDP reflects a culture that already understood the need to change with programs like these helping to facilitate that process. This sentiment is captured most articulately by one surgeon who stated:

LDP gave us kind of a common vocabulary and awareness of kind of these challenges and limitations and the need for developing leaders across the department in different domains and appreciating the contributions of different individuals in different ways. I also think though, we, I mean this is like a chicken or egg argument, like did this, so did that happen because of the people that were involved in it and kind of the tone of the department at the time, or did it, or did doing that create the kind of people that had that skill set? I think it was a little of both (participant 6).

Finally, although not the dominant opinion, a couple of participants asserted that changes owing to the LDP were minimal and

that any meaningful change in surgical culture would have to be generated from more substantial changes in leadership at the top. When describing the hierarchal nature of surgical culture, one surgeon stated:

People are still either waiting for their marching orders or have to take marching orders. There's a lot of decisions that are made that the board, you know, the people underneath leadership don't necessarily understand but are forced to deal with. So, from that standpoint, I'm not sure that all those cultural things have changed in substance at the end of the day (participant 14).

Discussion

This study had two principal findings regarding the impacts of the LDP on surgical culture at the University of Michigan. First, participants described changes that they believed were at least in part due to the LDP, including an increase in participative leadership, an increase in culture of diversity, and an improved collegial environment. Second, participants expressed difficulty in teasing out which of these changes were a direct impact of the LDP versus other influences, such as university-level policies, other opportunities in leadership development, trends outside of the university, and the intrinsic values of the participants.

According to McAlearney et al,⁴ organizational leadership and clinical care have differing cultures, with the intention of training being focused on different skill sets. The main focus of clinical care has been focused traditionally on autonomous decision making, a reactive approach to problem solving, and a focus on the individuals within the context of their biologic, psychosocial, and sociologic environments. In this culture, physicians are accountable for patient outcomes and respect the process of working within the hierarchy of clinical medicine, with their rise to excellence being based on clinical success. In managerial culture, there is a more intentional focus on a collaborative approach with proactive attempts at problem solving. In this approach, decisions are built on consensus, and there is respect for a more systems-oriented and collective approach to leadership. In this culture, the rise to excellence is made through honing managerial and leadership competencies through practical experience. Although these competencies are not void from a clinical skill set, the focus of most medical training remains on fostering technical competencies.

In addition, in the past, many culture interventions in clinical settings have been planned and introduced from the “top” down and based on a hierarchal model of organization that are often not well-suited for human interaction.⁵ This type of approach often fails, calling for a need for more innovative approaches based on competencies that are often not the emphasis of clinical training. This more robust and broad skill set includes team-building communication and focuses on cultivating a “servant leadership style” that focuses on helping others find their own way to become more effective.⁵ According to the authors, these supportive behaviors lead to a culture that people get excited about and perform their best in. In addition, the relationships fostered in these environments are recognized increasingly as important in shaping both medical training and health care outcomes.^{13–16}

As indicated by the interview data, participants of the initial cohort of the LDP reported an increasing awareness of how a more collaborative approach is beneficial for not only personal growth but also for establishing a more team-based approach to medicine. Ruminating on how the competencies gained during the program allowed them to become more mindful and intentional about their behavior, participants reflected on how this translates to the larger

culture. Although many participants expressed discomfort in moving too far away from a hierarchical model in clinical care, the majority found benefits in adopting some of the qualities more traditionally found in an organizational culture model.

As Cottingham et al⁵ point out, predicting or controlling patterns of change is impossible and involves “a dynamic web of conversations within which patterns of meaning and patterns of relating evolve over time through a non-linear, self-organizing process.” This sentiment is mirrored by participants who asserted the difficulty in being able to tease out the impacts that were a direct result of the LDP versus changes that were a result of a culmination of factors that were brought about because of the culture already understanding the need to change. Despite the difficulty in being able to pinpoint the factors that operationalize change, modest interventions like LDP appear to be able to prompt reflections on everyday actions. Further, evaluations of such programs provide insight into being able to trace and support these “ripples of change” and serve as evidence that a culture of change is possible in a large public school of medicine.⁵ As several participants articulated in our evaluation, it is difficult to know exactly what influence the LDP has had on the culture of the surgery department at University of Michigan. In other words, what came first, the chicken or the egg? That being said, almost all participants acknowledged personal and institutional benefits of the program and contributed at least some of those changes to their participation in the program.

This study had a number of limitations. Although this study allowed for an understanding of the influences of the LDP on institutional culture in the Department of Surgery at the University of Michigan, these findings may not be generalizable to other environments. The cohort sampled were identified as being “rising stars” in their department, adding to nongeneralizability. In addition, having participants of a later iteration of the LDP involved in the evaluation of the program had the potential of introducing bias into the study. To minimize this risk, we relied on standardized data collection and several rounds of iterative analysis of all coded output. In addition, the qualitative analyst took the lead on the development of the code book, served as the primary coder during analysis, and led the process of building consensus on all data analyzed. Finally, the authors acknowledged the importance of input from subsequent cohorts and recommended continuing evaluation efforts as a follow-up to this study. The surgeon experiences highlighted in this study provide potentially critical insight into the impacts that leadership development programs can have on surgical culture. A better understanding of factors that influence these departments may inform future leadership development programs, improving the team-based care approach of surgical patients.

In conclusion, measuring the impacts of a leadership development program on the culture of a surgical environment is undeniably complex. Despite the difficulties in discerning what impacts were a direct result of the program versus other internal and external factors, almost all of the participants expressed experiencing at least some changes that they thought were related to the LDP, with the most substantial changes being observed in a more participative leadership style, an increased focus on diversity, and improvements to the collegial environment. To continue to increase our understanding on the impacts that programs like this LDP have in clinical environments, it is important that evaluations of these programs include an assessment of not only the personal impacts

on the physician, but the broader implications that these programs have on surgical culture.

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Conflict of interest/Disclosures

J.B.D. is a cofounder of ArborMetrix (Ann Arbor, MI), a company that makes software for profiling hospital quality and efficiency. For the remaining authors, none were declared.

Supplementary materials

Supplementary material associated with this article can be found, in the online version, at <https://doi.org/10.1016/j.surg.2019.05.015>.

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