Integrating Leadership into a Practice Management Curriculum for Dental Students

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Abstract: Curriculum evaluations by recent graduates of the Harvard School of Dental Medicine suggested the need for additional coursework in practice management. Given the complex challenges facing practitioners, the course design was expanded beyond the suggested practice management to include leadership theory and skills. Students were able to distinguish and assess their level of various leadership skills at the end of the course. The course received an overall rating of 4.23 on a scale of 1 (poor) to 5 (excellent), with 84 percent of responding students indicating that their interest—specifically in the areas of clinical efficiency, practice management, reducing medical errors, communication, business, team building, leadership, and access to care—was enhanced. The responding students assessed their current leadership skills overall at 3.84. They assessed themselves best at "Integrity" (4.48) and worst at "Managing Conflict" (3.12). They felt that "Ability to Build Trust with Others" is the most beneficial skill for a dentist, while "Ability to Influence" is the least beneficial. Eighty-eight percent of students responding indicated that it is "Very Likely" they will continue to practice developing their leadership skills. Qualitative feedback was overwhelmingly positive and indicated that students found the course life-altering and highly valued its breadth of topics.

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Founded in 1867, the Harvard School of Dental Medicine (HSDM) was the first university-based dental school in the United States. The annual incoming predoctoral class size at the HSDM is thirty-five, and the school educates both predoctoral dental students and advanced graduate students.

Over the years, HSDM students have consistently requested a practice management course as part of the core curriculum, understanding that running a successful business will be integral to their success as practitioners. While the need to develop financial expertise was our students' main interest, many recent graduates suggested that their greatest frustration in running a practice was managing staff. Given the context of the challenges facing dentists as practitioners, as community leaders, and as dental educators, we chose to build a course that would meet more than just the immediate interests expressed by the students. We saw an opportunity to sow the seeds of leadership by defining its importance in dentistry and creating an understanding that the skills associated with leadership need to be nurtured and developed over a lifetime.

We developed the course as an introduction to the art of leadership with two general perspectives in mind: the perspective of the individual as leader through the introduction of the concepts of self-awareness and self-management, captured by Goleman's 1995 book based on the theory of emotional intelligence[1]; and the bird's-eye perspective through the concepts of systems analysis and strategic thinking. The need for the bird's-eye perspective is captured by Goldstein et al.[2] in their observation that inadequate access to oral health care in the medical profession,

lack of dental health insurance, and significant oral health disparities reflect a crisis in oral health care. While many in the dental profession are on the front lines of this crisis, their clinical training alone leaves them ill equipped to contribute to a broader solution. The same holds true for ethics. While ethical dilemmas and team and systems dynamics will inevitably have an impact on clinicians, a purely clinical curriculum does little to prepare students for a leadership role. Understanding ethics through case study and comprehending the role systems and team dynamics play to increase patient safety and prevent medical errors require skills that are rarely taught at dental schools. Truly understanding cultural differences and providing our students with tools to be able to interact with all patients and staff effectively and respectfully had not been accomplished to our satisfaction in previous courses. Therefore, based on student and alumni feedback and our own experiences and building on Victoroff et al.'s findings[3] that students are interested in learning about leadership, it was clear to us that students needed to receive formal education in developing leadership skills during their dental education. Consequently, we decided to broaden the scope of the requested course from pure practice management to include leadership skills.

As Victoroff et al. have pointed out elsewhere, few dental schools offer formal leadership courses for their students.[4] In 2006, the University of Michigan School of Dentistry and the University of Southern California Herman Ostrow School of Dentistry implemented student leadership development programs. A pilot leadership program was offered to dental students at the School of Dental Medicine at Case Western Reserve University during the spring semester of 2008. Similarly, Goldstein et al. noted in 2009 that medical students receive very little formal exposure to leadership concepts or training in such skills during their pre-doctoral medical education.[2]

Leadership competence in a clinical or research setting should comprise not only theoretical and conceptual lessons but practice in the application of a broad set of skills. These include relationship building, facilitation, negotiations, communication, and development of emotional intelligence—skills that are currently not considered integral to the dental curriculum. This article describes key aspects of the course we developed to try to teach these skills to our students and the results we are achieving.

Methods

Design of the Course

The third-year (junior) course at HSDM that we developed is titled Dental Health Care Delivery: Concepts of Oral Health Leadership and consisted of ten modules divided between two topics: management and leadership. The management topic included practice management, patient-centered care, public health dentistry, and systems analysis of medical errors, including how to improve patient safety. The leadership topic included ethics, systemic intervention to reduce oral health disparities, cultural awareness, building a team environment, interpersonal communication skills, and conflict management. The course met weekly for a total of fifty-four hours over twenty-two weeks, with the time split evenly between management and leadership.

For purposes of the course, we defined management as planning and budgeting, organizing and staffing, controlling and problem solving. Following Kotter's principles, we defined leadership as setting a direction, aligning people, motivating, and inspiring.[5,6]

In the practice management portion of the course, the practice management module included standard topics such as finance, staff management, scheduling, and marketing. The patient-centered care module addressed the importance of seeing the patient as an integral part of the health care team. We thought that medical error management was topical and included that in the practice management portion of the course as a separate module. Where possible, we used subject experts to address specific topics. For example, Dr. Lucien Leape, a recognized expert on patient safety,[7-10] lectured on systemic issues that underlie medical errors, while Dr. Chester Douglass, an expert in public health dentistry,[11-14] presented two sessions to expose students to various models of care in the field as part of the public health dentistry module.

We focus here on modules in the leadership portion of the course since this is where we find limited focus in dental education.

Ethics module. In the ethics course, students had the opportunity to grapple with actual patient case studies and build awareness around an understanding of ethical principles and their application

to real-life solutions. The students were given a literature list and several case studies to review before each class. While we did use a dental-specific ethical text commonly used by dental schools,[15] in keeping with HSDM's philosophy that dentistry is a part of medicine, we predominantly used articles and concepts from medical ethics. For the ethics module, the class was divided into four groups of eight students each. Each group had to present one case study, specify which ethical principles applied to the case, and make recommendations with respect to the options best suited for practical solutions. A vigorous debrief with the entire class followed the presentation of each group.

Oral health disparities module. The students were introduced to oral health disparities in a lecture-style session that presented four different populations. In a homework assignment, the students were asked to analyze the underlying systemic issues that resulted in the oral health disparities of each population and then to design an intervention that would alleviate the disparity at an individual or population level.

Cultural awareness module. For the students to assess their cultural awareness, they completed two online surveys (https://implicit.harvard.edu/implicit/ and http://cccm.thinkculturalhealth.org) prior to the module. After that, the chairperson of the Cross-Cultural Care Committee of Harvard Medical School provided practical tips and a framework to integrate students' new cultural awareness into patient care.

Team-building module. A former patient safety officer of Partners Healthcare, an integrated health care system in Boston, led a dynamic lecture-style discussion around building a team environment in a clinical setting. The lecture highlighted the evidence that trusting team dynamics decreases medical errors and thus improves patient safety.

The course to this point provided students with the theoretical skills to analyze the effects that leadership or the lack thereof has on health care settings and patient care. The course concluded with two modules that included a series of role-playing and other exercises in which students had an opportunity to practice their leadership skills. The two skill-building sessions we offered were on interpersonal communication and conflict management.

Communications module. This module was based on research and teaching methods developed in the Program on Negotiation at Harvard Law School. The course was designed to be facilitative and to draw real-life experiences from students. Students were put through a series of communications exercises that drew attention to their lack of skill in situations in which emotions run high and they are likely to feel stuck. These situations are contrasted with experiences in which conversations go well and both parties are curious and interested in what the other party has to say. The exercises were designed to mimic difficult conversations that would arise in a clinical setting with patients and staff. Students were offered a framework for dealing with these difficult conversations. The goal was for them to develop a new understanding of the concept of communication, to develop self-awareness of their behavior and mindset when they get stuck in a challenging conversation, and to view interpersonal communication as an evolving and ongoing development process much like the practice of dentistry.

Conflict management module. This module was designed to highlight each student's conflict management style and to offer tools and strategies for students to expand their repertoire with respect to more effectively managing conflict. Each student was given the Thomas Kilman Instrument (TKI; https://www.cpp.com/en/tkiproducts.aspx?pc=142) to take in class. The TKI describes five conflict management styles. Each style was reviewed with respect to its merits and liabilities depending on the situation. A facilitated class discussion along with case studies was used to highlight when it is most appropriate and least appropriate to exercise each style.

Student and Course Assessment

Students were graded based on one paper and one written examination, as well as on class participation and attendance.

Students had an opportunity to assess the course using two tools. The school asks all students at the end of every course to complete a course evaluation in the form of a standard questionnaire. They have several weeks to complete this evaluation and do so online, individually and anonymously, on their own time. This standard course questionnaire consists of nineteen questions regarding the educational process and logistics of the course, four questions evaluating the course director, and twelve questions about resources used by the students for the course; it ends with an opportunity to rate each instructor as well as

add comments for each instructor. All questions are rated on a five-point scale ranging from excellent to poor. Of all the standard questions, we considered only the questions regarding strengths, weakness, and recommendations as well as the comments as being relevant to our study.

We also developed an additional customized evaluation to assess what skills students perceived as most valuable to them now and in the future. This evaluation was administered at the end of the last class as part of the session. It was completely voluntary and anonymous, and students were allowed to leave without completing the evaluation. See Figure 1 for the customized questionnaire. The Harvard Medical School Institutional Review Board approved the use of this data for inclusion in a manuscript.

Results

All students passed this course. Grading was heavily dependent on participation and attendance in class. Attendance was consistently high. Six of the thirty-five students (17 percent) attended all

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Please answer the following questions by circling the number next to each that best corresponds with your assessment: 1=very poor; 2=poor; 3=fair/moderate; 4=good; 5=excellent.

1. How would you assess the following leadership competencies in yourself?
   - Compassion   1   2   3   4   5
   - Advocacy skills   1   2   3   4   5
   - Inquiry skills   1   2   3   4   5
   - Empathy   1   2   3   4   5
   - Ability to influence   1   2   3   4   5
   - Self-management   1   2   3   4   5
   - Relationship management   1   2   3   4   5
   - Authenticity (transparency)   1   2   3   4   5
   - Integrity   1   2   3   4   5
   - Ability to build trust with others   1   2   3   4   5
   - Personal responsibility   1   2   3   4   5
   - Managing conflict   1   2   3   4   5
   - Leading groups/teams   1   2   3   4   5
   - Dealing with difficult personalities   1   2   3   4   5
   - Likelihood to exercise leadership   1   2   3   4   5
     during a crisis

2. Of the skills listed above, which do you think will be most beneficial to you as a dentist?
3. Of the skills listed above, which do you think will be least beneficial to you as a dentist?
4. How likely do you think it will be that you continue to practice developing your leadership skills?
   Very likely   Somewhat likely   Not very likely

Please answer questions 5 through 7 with a few bullets or short sentences:
5. If you are likely to continue developing your leadership skills, which of the skills listed above do you think you are most likely to focus on developing? And why?
6. What new awareness did you develop in this course?
7. What would you have liked to have learned in this course that was not included?
8. General comments (feel free to use the back of the paper).

Figure 1. Customized student questionnaire developed for this study

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twenty sessions. Ten students (29 percent) missed one session, and ten students missed two sessions. Half of all absences were excused because students were presenting a paper at a conference or were ill or because of religious holidays. Overall, average attendance was 89 percent, with a range of 77 percent to 97 percent. Students participated actively in the class, with a subset being consistent leaders in the discussion. Six students received an honors grade, and two students received a marginal pass, mainly due to poor participation in class.

Standard Questionnaire

Thirteen of the thirty-five third-year dental students completed the standard questionnaire and gave the course an overall rating of 4.23 on a scale of 1 (poor) to 5 (excellent). Eighty-four percent of these students indicated that the course enhanced their interest in the subjects covered, specifically in the areas of clinical efficiency, practice management, reducing medical errors, communication, business, team building, leadership, and access to care. These students noted major strengths and weaknesses of the course and gave several recommendations. See Table 1 for these results.

Customized Questionnaire

Twenty-six students completed the customized student questionnaire; results showed that these students assessed their current leadership skills overall at a 3.84 on a scale from 1 (poor) to 5 (excellent). On average they assessed themselves best at "Integrity" (4.48 score) and worst at "Managing Conflict" (3.12 score); see Table 2.

The responding students felt that, of the fifteen skills discussed, the "Ability to Build Trust with Others" is the most beneficial for a dentist, receiving one-third of the responses, while "Ability to Influence" and "Likelihood to Exercise Leadership during a Crisis" are the least beneficial skills, each receiving 22.2 percent of the responses. Twenty-two of the twenty-five responding students (88 percent) indicated it as "Very Likely" that they would continue to practice developing their leadership skills. The skill they most frequently indicated they would focus on for future development is "Leading Groups/Teams" (18.8 percent), with "Dealing with Difficult Personalities" a close second (12.5 percent). See Table 3 for the assessment of the fifteen leadership skills from this questionnaire.

Additional comments on the customized questionnaire were similar to those on the standardized questionnaire (see Table 2). In their feedback,

Table 1. Students' responses on the standard and customized questionnaires

Strengths	Weaknesses	Recommendations
Standardized Questionnaire		
Excellent guest speakers	Too many group presentations	Ethics sessions too slow
Course organization	Too much reading	More discussion on how to run a private practice
Intense class participation	Ethics cases too uncommon	
Not too time-consuming	Need more time with guest lecturers	More time for paper assignment
Variety	Paper assignment not clear	Decrease the reading
Discussions		More medico-legal stuff
Clear expectations		Fewer group presentations
New material		
Diversity and breadth of exposure		
Course director always present		
Customized Questionnaire		
Excellent course	Too much focus on presentations	More on negotiation and quality
Created awareness of leadership skills that need to be developed	Too much reading	More on way dental insurance works and can be changed
Phenomenal guest speakers		More on actually running a practice
Life-changing!		More on communication

Table 2. Responding students' assessment of their current leadership skill as reported on the customized questionnaire

Leadership Skill	Average Score	Leadership Skill	Average Score
Compassion	4.36	Authenticity (transparency)	4.04
Advocacy skills	3.64	Integrity	4.48
Inquiry skills	3.96	Ability to build trust with others	4.32
Empathy	4.20	Personal responsibility	4.12
Ability to influence	3.48	Managing conflict	3.12
Self-management	3.80	Leading groups/teams	3.40
Relationship management	3.92	Dealing with difficult personalities	3.20
Likelihood to exercise leadership during crisis	3.60	Overall assessment	3.84

Note: Scale is 1 (poor) to 5 (excellent).

Table 3. Responding students' assessment of the importance of leadership skill as reported on the customized questionnaire

Leadership Skill	Most Beneficial Skill		Least Beneficial Skill		Focus for Future Development	
	Points	%	Points	%	Points	%
Compassion	3	9.1%	1	5.6%	3	3.8%
Advocacy skills	0	0	2	11.1%	7	8.8%
Inquiry skills	1	3.0%	0	0	5	6.3%
Empathy	2	6.1%	2	11.1%	3	3.8%
Ability to influence	0	0	4	22.2%	6	7.5%
Self-management	1	3.0%	2	11.1%	3	3.8%
Relationship management	7	21.2%	0	0	4	5.0%
Authenticity (transparency)	1	3.0%	2	11.1%	2	2.5%
Integrity	3	9.1%	0	0	4	5.0%
Ability to build trust with others	11	33.3%	0	0	4	5.0%
Personal responsibility	0	0	0	0	3	3.8%
Managing conflict	0	0	0	0	7	8.8%
Leading groups/teams	0	0	1	5.6%	15	18.8%
Dealing with difficult personalities	3	9.1%	0	0	10	12.5%
Likelihood to exercise leadership during crisis	1	3.0%	4	22.2%	4	5.0%
Total overall	33		18		80	

students indicated that there were specific aspects of practice management that they would have liked to see. In particular, they indicated that they would like to hear from "real practitioners." Additionally, they were eager for more information on leadership skills, including negotiation and communication. They greatly appreciated the guest speakers and the breadth of topics covered in the course. Students reported that the course made them aware of the leadership skills that they needed to further develop.

Discussion

A variety of reasons support the inclusion of a course for dental students on leadership concepts and their implementation in the dental curriculum. This is not only because of potential shortages in qualified leaders within academic dental institutions as noted by Slavkin and Lawrence,[16] but also because of significant challenges every clinician and researcher will face within his or her practice with colleagues,

staff, and patients. The need for cultural competence, demand for patient safety, and ability to understand team dynamics and address oral health disparities are only a few of the current challenges that need to be addressed thoughtfully and skillfully.

The qualitative and quantitative data gathered in the form of two end-of-course evaluations suggest that we have created a successful approach to introducing dental students to concepts of leadership in the oral health arena. Qualitative feedback from both questionnaires was overwhelmingly positive and indicated that the students found the course life-changing and highly valued its breadth of topics. In particular, the last two sessions in which students had an opportunity to develop self-awareness and practice leadership skills were met with great enthusiasm. Students were able to distinguish and assess their level of various leadership skills at the end of the course.

It is interesting to note that although the students indicated that the skill "Ability to Build Trust with Others" is the most beneficial leadership skill for a dentist, it is not the skill they stated they will mostly focus on for future development. Students assessed their level of competence in this area at 4.32 (on a scale of 1=poor and 5=excellent), which suggests that they already feel comfortable performing this skill. Additionally, students reported that they are highly uncomfortable with "Managing Conflict," yet this is not their number one priority as part of their future development. This is consistent with students' feedback from the customized survey that they do not view this skill as beneficial. Surprisingly, the students' main focus for future development was around "Leading Groups/Teams." In their explanations, they indicated this was because they expected they would work in a team environment. However, they did not give this skill any points as being beneficial for a dentist. It seems there is a disconnect between being a dentist and being the leader of your own practice, department, or research laboratory. Similarly, responding students gave the leadership skill "Dealing with Difficult People" a rather low score, but it was the second most noted focus for future development. Perhaps, when completing the custom questionnaires, the students recognized that different skill sets are required for practicing dentistry than for effectively managing an office/lab, etc. However, there is more to practicing dentistry than just the technical skills,

and it appears that the students are not yet completely grasping that.

From immediate feedback during the sessions as well as both of the course evaluations, we learned that the students did not like the group assignments around the ethics sessions. They also asked for more legal information in order to better understand the interplay between ethics and the law. Additionally, they felt that the reading assignments were excessive. For the next course, we will include a medico-legal guest speaker who is a practicing dentist and an attorney. We will cull the reading list to a more manageable size. Additionally, as suggested by the students in both questionnaires, we will add a negotiation module, as well as two sessions with a practice manager from a large group practice to discuss practice management from a real-world perspective.

Although we have only just begun, we believe we succeeded in our goals to influence our students' understanding of leadership skills, to define their importance in dentistry, and finally to develop a distinction that leadership skills—much like the technical skills of a clinician—need to be nurtured and developed over a lifetime. Given the fact that a number of students have asked to participate next year in the sessions they missed previously, we believe we have significantly raised their enthusiasm and curiosity around the concept of leadership and their interest in becoming effective leaders.

Conclusion

This article has summarized a new course that was introduced to expose predoctoral dental students to leadership concepts and skills training as part of and a prerequisite to good practice management. This course appears to have met the expectations of the third-year dental students. The wide breadth of topics allowed students to explore the difference between practice management and leadership and understand the challenges the dental profession and the individual dentist/researcher/academician faces as CEO of his or her practice, department, or organization. We will continue to offer this course to the next group of third-year dental students and believe that the fundamentals of this course are readily transferrable to other dental schools.

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