

Dental school student and faculty perspectives about changing to comprehensive patient-care clinic management

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Abstract

Purpose: Some dental schools have modified the curriculum to better meet students' educational needs while providing comprehensive patient care. Like other organizations, their inability to adapt to changes has been of concern to scholars. Frequently, organizations focus on technical aspects and minimize the human component. Qualitative studies are essential to describing how faculty and students respond to large-scale planned programmatic change so that findings can be used to guide implementation efforts.

Method: Fullan's theory of action framed this study. Multi-case narrative inquiry was used to explore faculty and students' experiences during the first year of their new clinical education model. Focus group meetings elicited perspectives about the program's effectiveness.

Results: There was congruence between programmatic goals and implementation: interdisciplinary teaching and communication, collegiality and collaboration, varied student learning, and faculty mentoring. However, the clinical management system and the lack of training hampered the progress of implementation and change. There were also disagreements about competency attainment.

Conclusions: Aspects of Fullan's model were shown while components: that systems learn, capacity building prevails, and learning the work were not evident. The temporal nature of participants' experiences shaped their stories. Providing comprehensive patient care while ensuring that students acquire skills for becoming competent general dental practitioners is indeed a delicate balance.

Keywords: Interpersonal behaviors and communication, Professional education, Qualitative research

One primary concern among science of organization scholars is understanding the processes of change.¹

The high rate of failure among organizations to adapt to change interventions and cope with change needs has been a central concern.^{2,3} Placing too much emphasis on the structural or technical aspects of change, failure to appreciate the human side of change,⁴ or underestimating the ability of the organization's culture to cope with the change process are reasons why high rates of failure have been reported.⁵ How higher education faculty cope with change has been a major concern among higher education scholars.^{6,7} Few studies have described the qualitative impact of large-scale programmatic changes in dental education among US students and faculty.⁸⁻¹⁵ This study presents an overview of their experiences during changes in the pre-doctoral clinical educational approach at one dental school located at a research-extensive university. The clinical education program transitioned from a departmental, specialist care model to a multi-disciplinary comprehensive patient-centered care approach.¹⁰ There have been a lack of studies in dental education that have provided evidence-based documentation of participants' actual experiences during the change process. Well documented in the educational literature are the types of stressors that change initiatives typically evoke: anxiety, increased interpersonal demands, and concerns about role and task changes.^{1,16-18} Other stressors reported include how information is shared, sufficiency of resources, and coordination of services.¹³ Studying the impact of change can illuminate predictable and unforeseen occurrences. In this descriptive qualitative study, we explore the impact of the TEAM (Together Everyone Achieves More) model during its first year of implementation on faculty mentoring, teaching, and students' learning experiences. Among the goals of the redesigned model, this study focused on describing if and how the model led to:

- Evidence of faculty mentoring and modeling professional behavior.

- Evidence of interdisciplinary teaching and communication, collegiality and collaboration, and variety of student learning opportunities.

Change initiative

The dental school's previous clinical education model consisted of six clinics that provided specialized care in endodontics, prosthodontics, periodontology, operative dentistry, treatment planning, oral and maxillofacial surgery, and diagnostic sciences. Students rotated between clinics with their patients to provide treatment-planned services. A lack of continuity in faculty supervision and mentoring was a key impetus for developing the TEAM program. The purpose of the new program was to provide an integrated approach to patient care and sustained relationships between faculty mentors and students. Additionally, the program was designed to facilitate students' acquisition of clinical competencies, and a consistent setting for treatment. The model employs a total of 10 TEAM leaders. Working in pairs, they are responsible for guiding the clinical development of 16 students in each of the five clinical care groups. TEAM leaders serve as advocates for the students' education and supervise all aspects of the patient's general dental care, including operative, fixed, and removable prosthodontics and periodontics. They monitor individual student clinical progress towards competency and graduation and work with patient care coordinators to assure timely treatment and patient screening, treatment planning, and patient assignment. Additionally, TEAM leaders meet biweekly with students to discuss patient care, to provide seminars, and evaluate case presentations.

To recruit the initial group of TEAM leaders an open invitation was sent to the faculty. The associate dean for clinic affairs appointed seven clinical track faculty while the other three TEAM leader positions were hired following a national search. Non-TEAM faculty, specialists in prosthodontics, periodontology, endodontics, operative dentistry, treatment planning, oral and maxillofacial surgery, and diagnostic sciences rotate among the TEAM clinics. They provide consultation in treatment planning, diagnosis, and patient care on a daily basis but do not have direct responsibility for students.

Theoretical framework

Scholars have suggested documenting the internally driven nature of change.¹⁰ To illuminate related issues and potential solutions, higher education

cultures have been characterized as having: multiple power and authority structures, complex decision-making processes and ambiguous goals, as being values-driven, and having tenured staff who are relatively independent of their environment. The desire to maintain a legacy or respond to 'modern imperatives'¹⁹ has created a conflict of 'histories' and 'futures.'²⁰ Professional schools of healthcare in academic settings can be characterized in the same manner. The modernization of healthcare schools and the necessity to ensure that clinical educational programs mirror the reality of dental practitioners are dependent on how the change process is perceived and implemented.²¹ Lessening the dissonance between existing and envisioned organizational cultures has thwarted the effective implementation of change initiatives. Nearly four decades ago,²² Schon theorized about the inherently conservative nature of organizations and individuals' resistance to change. Building upon Lewin's three-stage model of change: (a) unfreezing the organization's existing equilibrium, (b) moving to a new position, and (c) refreezing in a position of new equilibrium,^{23,24} Schein proposed a new conceptualization of change that focuses on the centrality of the employees learning processes as they develop new attitudes and behaviors. More recently, the progenitor of the theory of education change, Fullan, proposed a theory of action based on six practices: love your employees, connect peers with a purpose, capacity building prevails, learning the work, transparency rules, and systems learn.⁹ While the change process discussed in this paper is grounded primarily on Fullan's theory of action, it draws upon relevant tenets proposed by other theorists. This study is based on planned change.¹⁸ Planned change is characterized as 'changing established ways of... acting through implementing particular plans.'²⁵ Implementing new ways of providing clinical educational experiences for students and patient care was central to the planned change. The focus of the change effort was structural and technical, thus mirroring Lewin's theory of unfreezing... transformation... refreezing. The change step-up process was intended to follow specific steps in order to increase the efficiency in patient treatment planning, patient care, and increase achievability. Objective expectations and other measures of change were documented, but are not reported in this paper.

Methods

Participants

Senior dental students at a doctoral research-intensive university were invited via email to participate

in the study. Of those who responded to the invitation, a convenience sample of nine students, seven females and two males, was selected. All TEAM leaders were invited and all participated, including eight male and two female leaders. The entire non-TEAM faculty, members of the school's dental faculty ($n = 33$) were invited; three males and six females agreed to participate.

Data collection

Three focus group meetings were conducted with the students. Two focus group meetings were held separately for each faculty group. The seven focus group meetings held during the first year of the new program's implementation lasted approximately 90 minutes each. Students were interviewed for four and a half hours, while the combined faculty interviews were 6 hours. Focus group meetings elicited participants' perspectives about the effectiveness of the comprehensive clinical care program. Specifically, students were interviewed to ascertain how and if the program had impacted their: (a) confidence in delivering patient care, (b) stress levels, (c) ability to achieve clinical competencies, (d) receipt of active mentoring and monitoring of their academic achievement, and (e) variety of clinical experiences. The TEAM leaders and non-TEAM faculty were interviewed to elicit their perceptions of how well the program promoted their ability to: (a) mentor, (b) demonstrate professional behavior for students, as well as good dentist-patient relationships and clinical judgment, (c) model critical thinking skills, and (d) show interdisciplinary teaching and communication.

The researchers were a professor and two graduate students from the institution's College of Education. The first author is an experienced qualitative researcher with extensive experience in teaching professional education faculty and conducting research in the clinical and classroom dental school environments. The graduate students, also experienced qualitative researchers, transcribed, coded, and analyzed the data. The first author conducted the focus groups, while the graduate students recorded field notes. Debriefings by the researchers followed each session. All focus groups were audio-taped and transcribed verbatim.

Limitations

The university's institutional review board approved the study (IRB #2008-U-904) and individuals signed letters of informed consent prior to their participation. As is commonplace in qualitative research, there was no attempt to quantify descriptions or statistically test goal attainment.

Dimensions of goals attainment can include objective or descriptive reports. As an example, surveys produce results that are often assumed to be empirical even though they do not imply causation and may lack corroboration. Qualitative studies seek to describe, not test hypotheses. The findings in this study are rich, thick descriptions of the 28 participants' storied experiences.

Data analysis

As described by Rodwell, this study used a constructivist approach to analyze data that included basic unitizing, coding, and categorizing.^{26,27} The narrative, as part of this case study, relates the participants' stories and provides rich descriptions required of qualitative research. The inductive analysis began with data deconstruction^{26,28} and the use of open coding within the transcripts.²⁹ Next, via the constant comparative method, units of data were identified and preliminary themes were developed as data coalesced into identifiable categories.^{27,28} Data units that did not completely fit the conceptual definition were moved to better-fitting themes. Some themes were then combined to create other themes in which the data held similar conceptual properties. Remaining outlying themes were deleted. Data from each focus group transcription were analyzed as a distinct and separate set before proceeding with the next focus group transcription. This approach was justified because it was anticipated that the student, TEAM, and non-TEAM faculty groups would have inherently different perspectives. Because of the study's narrative nature and the multiple cases involved, the presentation format is referred to as a 'multiple-case study narrative' with the primary goal of creating an understanding of participants' experiences over time, in places, and in social interactions with milieu.^{26,30} Pseudonyms are used for all participants.

Results

For each participating group, themes followed by representative examples are presented. Table 1 presents a comparison of findings across participant groups.

Students

Academic issues

Academic issues were students' perceptions of program requirements, including clinic operations and how student progress was monitored. Most of the students complained that the new TEAM program requirements were not clearly articulated and could only be found in the 'voluminous

Table 1: Comparison of findings among participants

	Students	TEAM	Non TEAM
<i>Successful outcomes</i>			
Antagonism toward faculty decreased	X	X	
Comprehensive patient care increased	X	X	X
Decreased unnecessary patient management	X	X	X
Faculty modeled critical thinking skills		X	
Cooperation among faculty	X	X	X
Increased clinic revenue	X		
Student collaboration increased	X	X	
Student competition decreased	X	X	
Student confidence increased	X	X	X
Students hear multiple perspectives about treatment planning	X	X	X
Students received more clinical experiences	X	X	X
<i>Remaining challenges</i>			
Competencies drive treatment	X		X
Current clinical management system does not fully support TEAM program	X	X	
Deficiencies in pre-clinical curriculum		X	
Dental college culture is departmental	X		
Some competencies completed on others' patients	X	X	
Grading needs is not aligned with program goals	X		X
Need more personnel in clinic	X		
Inconsistency in treatment planning across clinics		X	X
Not enough time to work individually with students	X	X	
Assigned faculty not in the clinic impedes student work	X	X	
Receptionists and patient coordinators need training	X		X
Seniors are behind in completing competencies	X		X
Students do not monitor completion of competencies	X	X	X
Need same supplies in each clinic	X	X	
System for awarding competencies is not standardized		X	
TEAM leaders need greater authority	X	X	X
TEAM leaders are overwhelmed	X	X	X
Transparent process for selecting TEAM leaders needed			X
Unprofessional student behaviors	X	X	X
Variation in calibration among TEAM leaders			X
Bimonthly educational meeting are ineffective	X		

manual.' They felt stressed by constantly changing requirements. Because they were seniors, they found themselves against the wall, unable to imagine fulfilling requirements in time for graduation. Some students claimed that certain faculty did not even know the requirements, others lamented that departmental requirements drove treatment. Vicki described her frustration,

I started ... trying to play the game, I have enough patients to fill up, maybe two weeks. ... to graduate on time maybe, I'm going to ... start prioritizing those patients that have pros [prosthodontics] in their future ... it bothers me, but I ... feel forced to do this.

Approximately 7 months into the new program all of the students reported that requirements in one of the departments were clarified. Meanwhile, others complained about, what they called, 'evolving requirements.' Students also admitted that it

was easier to meet competencies even if on others' patients. They also complained that the program was competency-driven rather than focused on promoting comprehensive patient-centered care. Michael explained, 'I have approached people on my TEAM or in my clinic ... [to] ask the patient if ... I can do the competency ... [on them].' However, students believed that they would graduate because they sensed that, ultimately, departments would modify expectations to accommodate their progress.

Clinic operations

Under the TEAM model, making appointments had become easier and long patient waitlists had been eliminated. Students reported making 'multiple appointments with patients at one time' and completing multiple procedures in one sitting. In contrast, several factors compromised the flow of their clinic work. For example, when non-TEAM faculty

arrived late, or could not be found, this impeded providing timely treatment. Additionally, students found that TEAM leaders were unaware when an assistant was not doing his or her job. Such behaviors interfered with appointment scheduling, distributing supplies, and answering the phone among other tasks.

Monitoring student progress

Initially, students reported that TEAM faculty were not monitoring their progress or providing enough feedback. Students found them too busy to sign off on their competencies, asserting that they were ‘just checkers.’ By the end of the academic year, TEAM leaders had become quite knowledgeable about students’ skill level. For example, TEAM leaders took the initiative to point out when complicated procedures were necessary and identified students who needed additional help.

Benefits of TEAM program

Students reported positive changes to patient care management, collaboration among students, and modeling practitioner work habits. For example, students no longer felt caught by vacillation and faculty indecision, students reported receiving a broader base of clinical expertise and felt more competent to make proper referrals. They witnessed increased communication between departments and some observed greater revenue for the clinic.

Management of patient care

By the end of the first year, students reported that the continuity, efficiency, and effectiveness of patient care had increased because key faculty members were available to them on a daily basis. They also stated having a better understanding of how to sequence treatment planning.

Collaboration among students

Students noted increased collegiality and decreased student competition. Andrea pointed out that the program encouraged students to work together, share, and have better relationships whereas before they had competed for chairs, patients, and procedures. Dabria proffered, ‘I learn a lot from just watching my classmates.’

Modeling practitioner work habits

Students felt that the TEAM program allowed them to demonstrate more professional behavior (i.e. dealing with problem situations and lab issues on their own more frequently). Yet they also described instances of unprofessional behavior, such as peers who disappeared after lunch and did not return. They recommended that all students receive their

start check at the same time and remain in the clinic to assist others. Overall they found that the new program, had led to: (a) timeliness of patient care, (b) *just-in-time* consultations with faculty, (c) TEAM leaders thinking on a practice level, and (d) discussion of treatment options in real-time. Sally commented that the availability of multiple consultants helped them ‘think outside the box.’

Relationships with TEAM leaders

Students reported appreciating the opportunities to work together with multi-disciplinary faculty in the same clinic, but they maintained there was not enough time to talk with individual faculty. For example, the bimonthly meetings actually lessened the amount of personalized attention that faculty could give to students. Despite this disadvantage, dentist–patient relationships improved as TEAM leaders began to know patients and their cases better. Andrea explained, ‘... they take responsibility, ... interest, see the patient through [the entire treatment process], they see what works, what doesn’t and, with the student.’

Susan agreed and explained how the TEAM leaders’ constancy impacted patient treatment, ‘So he is [TEAM leader] always there every time [my patient] has an appointment.’ Overall students commented that TEAM leaders provided individual guidance and greater mentoring related to completing procedures. At times, they were even available to meet with students outside of clinic hours.

TEAM leaders helped students weigh the pros and cons of potential treatment options and make final decisions about treatment plans. Dabria encountered a situation where the prosthodontics faculty did not want to cement a crown but was willing to defer to the TEAM leader’s decision. ‘Even though they were disagreeing ... someone had the authority to have the last word’ and there was no conflict. Students noted that the TEAM leaders were dependable, that they were always there at the start of each clinic day and stayed until procedures were completed.

Stressors

Students expressed frustration that they did not receive preferential treatment like previous seniors arguing that the TEAM leaders needed to relieve some of their stress. They were also annoyed by the lack of speed and efficiency of the clinical management system and that they were unable to check completion of program requirements. In contrast, they were pleased that they no longer had to call patients for appointments. Students dreaded their bimonthly TEAM meetings and cited its lack

of uniformity. For example, one student pointed out that some groups were assigned papers while others were not. By the end of the year, complaints about departmental requirements resulted in curriculum changes. Still, students perceived TEAM leaders as overwhelmed, overstressed, and unable to get back to students in a timely manner because there were just too many of them to supervise.

Suggestions

Students expressed a desire to receive more feedback from their TEAM leaders rather than daily grades on a scale of 1–3 numbers that, in their view, were assigned arbitrarily. They recommended a system of assigning patients based on students' needs to complete competencies. Also, they suggested equalizing the distribution of patients across clinics and subspecialty groups (prosthodontics, periodontology, operative, and treatment planning) and using a calendar to show the availability of coverage for each specialty in each clinic. Adding one faculty member who was cross-trained, a dental hygienist, and one more patient care coordinator per clinic so that an assistant could remain in the supply room during clinic hours were cited as important needed changes. Dadria justified the need for more assistants explaining, '...for me to take my gown off, go grab what I need [from the supply room], put my gown on, it just takes too much time.' They urged changing the educational component of the bimonthly meeting, suggesting guest speaker presentations about new products available for general dentists.

TEAM leaders

Academic issues

Curriculum-based matters such as difference of opinions about awarding competencies, and problems associated with the infrastructure were the dominant academic issues. Although TEAM leaders believed that the model allowed for individualized and student-centered instruction, they pointed out that pre-clinical curriculum deficiencies forced them to teach some basic skills and content in mini-instructional sessions during morning huddles. Dr. Miller elaborated, '... As we come in closer contact with students, their instructional voyage had to be at the clinical level ... some of the deficiencies in the curriculum are beginning to reveal themselves ... and this system is exposing that.' There was evidence of disagreement between TEAM faculty and faculty from one department regarding how competencies were awarded.

TEAM faculty reported that some faculty tended to award competencies without having observed student performance frequently; they wanted a voice in making these decisions. They also complained about receiving directives from a department when their faculty were not providing clinic coverage on given days.

TEAM faculty stated that equipment was outdated and described the physical space as inadequate. Expressing frustration with the aging technology, Dr. Perea explained, '...you can sit there and wait 10 minutes for X-rays.' More than half of the faculty reported a need for more dedicated lab space asserting that a lack of appropriate facilities and a place to talk with students limited their teaching of critical thinking skills. They also pointed out that each clinic needed to have the same supplies and equipment available.

Unprofessional student behavior was also cited, such as: (a) not showing up for morning huddle, (b) wasting supplies, and (c) working on other students' patients to fulfill competencies, without conferring with either the patient or TEAM leader. Dr. Nolan illustrated this problem stating that student conversation about this matter was akin to, 'I've got to get this done before the end of the semester. I'm going to do your patient, and you are going to do my patient.' He added, 'they don't talk to me about it necessarily.' However, TEAM leaders also recognized program successes: increased clinic revenue, greater breadth of students' clinical experiences, and greater access to chairs.

Communication

TEAM leaders opined that communication was more individualized and patient friendly. Keeping patients situated in the same clinic also led to improved care. To the contrary, they claimed that they did not have enough opportunities to sit down and work with individual students; they wished for more downtime to debrief. They noted that departmental faculty had become more cooperative with students and that they consistently provided input on patient treatment. At the beginning of the program, Dr. Nolan explained the excitement of seeing a periodontist and prosthodontist talking together to provide interdisciplinary input to the student. 'While this could be difficult for them ... I think that's when it's at its best. ... [it's] an excellent educational opportunity for the students.' Dr. DiMatteo described the cooperation between TEAM leaders and faculty on behalf of students, '... they come talk to us if there's an issue ..., [such as] the student wasn't prepared or [if the student did a good job or] was ... running late.'

Interactions with students

Clinically supervising the same students fostered improved interpersonal relationships and provided a platform for mentoring. They found that students began to approach them and looked to them for leadership and guidance. Dr. Scott explained, 'This system enables students to have a home or a port in the storm ... they can get input from all of the faculty [across] the disciplines and ... it gives them ... a certain sense of security'

Collaboration among faculty

TEAM leaders believed that the clinical program offered a more collegial and collaborative atmosphere. For example, Dr. Miller pointed out, '... with a few exceptions, the discipline faculty have been real good. We work quite well with discipline faculty.'

Instruction

Faculty strived to teach students reasoned judgment and assess progress in clinical skills. TEAM leaders took personal ownership of their students' growth because they witnessed either their progress or the lack of it. Faculty reported they could influence students' development earlier in the process by identifying and staying on top of students who struggled. Dr. Eaton explained that, '... you see the same students ... and so you can really monitor their progress effectively.' Dr. Baker indicated the importance of monitoring students

I've got one of my junior students who would do oral ... every day and keep treatment planning but ... I kept saying you need to do a procedure. The other day she was going to finish up a treatment plan and was ready to dismiss the patient ... [only] two hours [into the four hour clinic session] ... [I suggested] why don't you do these two fillings or at least do one of them, and she ended up doing both of them. ... she would have postponed it. I knew that.

Still, the lack of agreement between the TEAM leaders and departments about determining if and when students had met competencies and students challenging competencies too early remained a lingering problem.

TEAM faculty reported that they began modeling critical thinking more often. They discussed strategies they used such as having the student describe the problem, identify alternatives, and taking discussions outside of the clinic area to review and question how a student handled a procedure. Some stated that creating treatment plans for complex cases were opportunities to develop critical thinking skills, while others complained that a lack of time compromised teaching

critical thinking. Dr. Miller suggested that the development of students' critical thinking was dependent on multiple episodes of dialogue and that such skills take time and effort to foster. He described his perspective

I think ... it's like a continuing dialogue with students who present you with individual problems at certain times and ... it's like a dialogue that goes on constantly. Different students require different approaches. Some students are extremely bright in this area and then others are not. So I have to be very, very sensitive to [explaining] step 1, step 2, step 3.'

TEAM leaders' roles

TEAM faculty wanted increased authority to award operative competencies. Dr. Kavanaugh explained this quandary, 'Sometimes you get students that are challenging competencies too early ... they may be doing an okay job that day but I think there are other days ... we may not feel as comfortable giving a competency.'

He pointed out that it might be easier for students to pass competencies when they declare them, but questioned their readiness especially if they had not performed that clinical procedure correctly on multiple occasions.

TEAM faculty reported feeling less pressured when engaged in treatment planning and that, 'Now, we can reexamine treatment plans and other things that may crop up regardless of what discipline that problem is coming from.'

Suggestions

To advance the program, TEAM leaders recommended: (a) improving inter-departmental communication, (b) developing a forum for all faculty to talk about the TEAM program, (c) establishing clear, concise repercussions for certain unprofessional student behaviors, and (d) continuing to study the program for several years to determine its success.

Non-TEAM faculty

Evaluation of student progress

The non-TEAM faculty reported that seniors were behind schedule due to patient availability and insufficient depth in the pool. There were not enough patients consenting for full treatment to supply both juniors and seniors completion of competencies. Dr. Dawner also questioned what role the faculty should play if they knew that the patient pool would not allow students to complete discipline-based competencies prior to graduation.

Associated with this issue, the departments still determined whether competency benchmarks were completed. Non-TEAM faculty wanted an agreement about who determines whether competencies had been met as well as who could sign off on them.

Non-TEAM faculty felt that: (a) students were minimally accomplishing goals, (b) a perception of increased clinical activity was erroneous since many seniors were behind in procedures (i.e. some seniors had only completed one out of five crowns), (c) incomplete grades in periodontology were at an historic high, (d) students did not utilize time efficiently to complete more procedures, and (e) some TEAM leaders took work that juniors should have been doing and gave it to seniors who needed to complete certain competencies. Overall, non-TEAM faculty believed that seniors had not attained more knowledge and experience in the program.

Clinic operations

Non-TEAM faculty reported that receptionists and coordinators needed training and the inability among coordinators to view each other's calendars caused scheduling issues. This lack of information led to an imbalance in assigning patients to dental students. There seemed to be a lack of uniformity in job responsibilities among coordinators. For example, some confirmed appointments while others did not; some students were still scheduling patients themselves their. When coordinators were out of the office, no one covered their responsibilities.

Non-TEAM faculty reported students' lack of professional behavior. They were displeased about students starting late, wearing inappropriate attire, and exhibiting personal bad habits. Moreover, they also reported that: (a) some students did not know or check who they were seeing, (b) 30% of students, in their estimation, were unprepared for their patients as well as unsure of what procedures they were going to do, (c) late starts averted the possibility of talking with faculty in advance about procedures, and (d) even those students who had their instrument kits ready the night before were still unprepared for procedures. In their opinion, professionalism includes being well groomed, having the ability to decide what is best for the patient, and providing the kind of treatment that the patient needs on a given day. Seven months into the study, Dr. Lisbon noted that professionalism had increased and that students were, '... looking at the patient, finally, as a whole'

Student treatment planning

Non-TEAM faculty observed students losing track of treatment planning sequencing and that a single model for developing sequences was lacking. They witnessed some TEAM leaders single-handedly overseeing treatment planning or changing treatment plans without seeking their input. Dr. Conway complained that others were even covering his practice area. They also reported that seniors needed to exercise greater independence with treatment planning, and that TEAM faculty needed to collaborate more often. To prepare the next class of students, they suggested that TEAM leaders become more focused on juniors' progression toward treatment planning.

Benefits of TEAM program

Overall, the new model promoted opportunities for non-TEAM faculty to collaborate with TEAM leaders. Some observed that the more cooperation they had with TEAM leaders, the more teaching faculty provided. They also reported that they enjoyed being in the clinics with other subspecialists. Dr. Lindamoor described the advantage of faculty coming together in the clinics 'as showing different points of view on the same thing and giving the student... alternative perspectives...' Dr. Douglas agreed, '[It is] ... the interdisciplinary interaction they have with students... [having] a consultation with everybody at once and [having students] carry out a procedure that would normally take several appointments to do ...' They observed that students had better attitudes because they were able to see patients in the same clinic for varied procedures and have the same faculty supervise a procedure from beginning to end. The comprehensive care approach helped students look at patients holistically.

Non-TEAM faculty believed that students were being mentored in all aspects of general dentistry, were receiving more experience and variety with clinical procedures, and completing more simultaneously. They witnessed that peer mentoring led to increased teaching and learning opportunities and that juniors were observing procedures earlier and watching different students work on procedures with faculty of different specialties. Dr. Atwater affirmed that juniors were now seeing procedures performed up to three times and '...listening to the instructor tell the student what to do so when they actually came to do it the first time... they have a clearer picture of the procedure.' Overall, non-TEAM faculty reported that students were working more and that attendance had improved. They found students continuing to work even

when patients did not show up for appointments, taking more emergency cases, and witnessing different points of view demonstrated on the same case. Also, they detected increased readiness of faculty to consult with one another and on-the-spot interdisciplinary communication.

Communication

They reported that they had lost some opportunities to interact with their own departmental colleagues but had gained opportunities to interact with other faculty. Dr. Kamin described how the program expanded interdisciplinary potential by promoting, ‘... opportunities to interact ... within other practices ... areas that weren’t open before.’

Faculty roles

Non-TEAM faculty explained that their role as teacher was dependent on the TEAM leader and that their role had not changed with the new program. However, they reported having more opportunities to model clinical practice. Some felt they did not have a voice about the program, that their input was not sought. Dr. Kamin explained, ‘I think having input from all the faculty that participate in the clinic is important.’ Most of the group pointed out that their focus group participation was the first time they had been asked for their insight.

Non-TEAM faculty believed that the TEAM leaders’ job was to ensure that students were attending, achieving satisfactory grades, and having varied experiences. They reported inconsistencies among TEAM leaders such as some questioned certain procedures while others did not. They opined that TEAM leaders were less strict with students and that this led to re-dos by faculty (i.e. letting students send impressions to the lab that were not of acceptable quality, only to repeat the process later). Additionally, they suggested that TEAM leaders might have felt pressured by students who wanted to complete competencies in order to graduate. They also reported that some TEAM leaders cared about students and knew what was happening on a daily basis. Dr. Conway explained that they believed that,

... the most uniformly overworked, overwhelmed people in the school are the TEAM leaders. They’ve got all these responsibilities... I think our TEAM leaders are going to burn out ... they are just asked to do too much.

They reported that some TEAM leaders did not inform the administration that certain students

should not continue in the program nor did they have the capacity to identify and communicate student weaknesses to those students or faculty. Dr. Atwater illustrated this, ‘Instead of the TEAM leader having the power to say in January to a student, ‘listen, you are not going to graduate’. They don’t seem to have that power’

Suggestions

Non-TEAM faculty suggested: (a) implementing a two person-team: assigning a junior to every senior where the senior does the treatment planning in conjunction with the junior, (b) instituting a pass/fail system for future senior classes, (c) calibrating TEAM leaders so that they follow the same procedures, (d) having students and faculty evaluate TEAM leaders, and (e) presenting findings from this study during a faculty calibration meeting.

Discussion

Using Fullan’s theory of action¹⁶, the findings showed that love for employees was demonstrated by the dental school administrators’ willingness to study the change process as it was unfolding. The faculty groups shared a common purpose in their desire to educate students in a patient-centered approach to oral healthcare. Personal communication with the school’s dean and director of curriculum and instruction verified that findings from the study had been shared with TEAM leaders and were used to improve the program during the following year. Other components of Fullan’s model¹⁶ that were not realized include: ensuring that human and physical resources are wisely used and are re-directed when warranted to alleviate conflict (systems learn), building understanding and collaboration (capacity building prevails), and offering training when needed (learning the work). The temporal nature of participants’ experiences, changing attitudes, students’ expectations of faculty, and faculty perceptions of each other suggest that interactions among and between participants shaped their stories. Overall the findings showed that collaboration and communication was demonstrated among faculty, students, and between faculty and students. Faculty modeled for students how to resolve differences of opinion during treatment planning. Students reported that these interactions provided valuable learning experiences. Students and faculty lauded the increased efficiency in patient care, patient scheduling, the availability of patient chairs, and the students’ ability to accomplish multiple procedures during one appointment. Owing to faculty collaboration, treatment planning

had become more efficient.¹⁰ Students appreciated the ability to receive *just-in-time* consultations with departmental faculty.³¹ Students pointed out that one aim of the program was to ensure the development of general dental practitioners, but that competencies still drove the program. This often resulted in an exchange of patients so that students could fulfill requirements.

There was a distinct rivalry between third and fourth year students. The seniors felt affronted and, in particular, thought that their need to complete competencies was not a TEAM priority. They felt slighted because they were the first class of students to experience the new curriculum and saw their needs as minimized. Furthermore, at times, they were assisting juniors in completing competencies though they had not finished their own.

Most of the non-TEAM and TEAM faculty pointed out that the school's current clinical management system and the lack of training for support staff hampered the assistance that they needed. TEAM and non-TEAM faculty remarked that TEAM leaders needed more authority in signing off on competencies. TEAM, non-TEAM faculty, and students pointed out the lack of professional behavior among some students. Students reported that because TEAM leaders were very busy, they were often only able to provide limited feedback. Additionally, the disagreements between the TEAM and non-TEAM faculty regarding treatment planning and declaring competencies were unmistakable and created obvious tensions.

Conclusion

The educational literature is replete with evidence of how educational reforms add stress to the faculty experience;^{1,16-18} however, such evidence-based studies are lacking from dental education. This study reduces that gap in the literature. Although the TEAM program has shown initial successes, it is not surprising that it has not yet fully transitioned to a patient-centered comprehensive care model during its first year of operation. Research on change has shown that it can take up to 3–5 years for a program to experience authentic implementation and adoption.³² The institutional environment and its response to the change invariably contribute to how faculty experiences it. The institutional response can help them anticipate and mitigate these concerns, facilitate the development of new attitudes and behaviors among individuals,²¹ and/or build the organization's capacity for growth.¹⁶ Widely accepted in the literature about

change is that planning is necessary to anticipate the relative importance of barriers to that process.³³ From these findings it seems unclear how much time the institution spent thinking about how the change would impact individuals at a personal level. Dental school administrators considering this type of large-scale programmatic change would be wise to ensure that there is adequate training for all participants, sufficient infrastructure, faculty development, and the use of formative assessment during its implementation. Providing comprehensive patient care while guaranteeing that students acquire the skills necessary for graduating as competent general dental practitioners is indeed a delicate balance. These are among the implicit lessons learned from this study.

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