

Capitalizing on the treatment planning process to enhance dental education

Viyan S. Kadhium DDS  | Katherine Shin MEd | Vidya Ramaswamy PhD |
Romesh P. Nalliah DDS, MHCM

University of Michigan School of Dentistry, Ann Arbor, Michigan, USA

Correspondence

Viyan S. Kadhium, University of Michigan School of Dentistry, 1011 N. University, Ann Arbor, MI 48109, USA.

Email: vkadhium@umich.edu

1 | PROBLEM

A comprehensive treatment plan integrates all elements shaping a patient's behavior, decisions, and barriers to health.¹ Creating a treatment plan integrates evidence-based practices, critical thinking, patient-centered care, and knowledge of clinical and behavioral sciences. In dental school, treatment planning can be seen as an obstacle to the “real work” and evidence suggests that it is only briefly touched on in theory and only within the context of a specific discipline.² At the University of Michigan School of Dentistry, three courses address treatment planning (D1, D2, and D4 years) and are 13 contact hours each. Additionally, treatment planning skills are augmented during live patient experiences from D2 to D4 years.

2 | SOLUTION

A treatment planning case presentation was added to the Comprehensive Care Award criteria as a pilot to achieve eventual curriculum-wide implementation. Historically, the seven highest-ranking students (by clinical productivity) were given the award. However, scoring a Pass (in a Pass/Fail/Honors grading system) in a multidisciplinary (three or more disciplines—commonly restorative, periodontics, and prosthodontics) case presentation was an added requirement. Applicants had to present cases at the treatment planning phase and describe their rationale for treatment options, and support choices with evidence. A presentation template was provided that included the chief complaint, pertinent health history, diagnostic information including images, intraoral and extraoral photographs, and treatment plan options. A multidis-

ciplinary faculty panel asked questions and facilitated a discussion. Students and faculty were surveyed for feedback and University of Michigan Medical School Committee on Human Studies deemed this pilot study not regulated (HUM00196632).

3 | RESULTS

Fourteen students presented for the award over 2 years and one was denied based on their case presentation performance.

3.1 | Student feedback ($n = 14$)

Student results (Table 1) showed that 71% of students presenting for the award strongly agreed and 21% agreed that there was “educational value for me in the discussion time that followed my presentation.” Seventy-nine percent responded yes and 21% no to “There was, at least, one new issue raised by the attendees that I hadn't thought about deeply previously.” Additionally, 79% responded yes and 21% responded no to “This kind of clinical decision-making seminar has value for the whole class, not just comprehensive care award applicants.” Lastly, 64% strongly agreed and 29% agreed, “There was educational value for me in putting together, reflecting on the case and presenting the case to faculty.”

3.2 | Faculty feedback ($n = 23$)

The faculty results (Table 2) showed that 100% of respondents agreed, “there was educational value in the

TABLE 1 Student feedback

Questions	Responses (%)
There was educational value for me in the discussion time that followed my presentation.	Strongly agree: 71% Agree: 21% Neutral: 7%
There was, at least, one new issue raised by the attendees that I hadn't thought about deeply previously.	Yes: 79% No: 21%
This kind of clinical decision-making seminar has value for the whole class, not just Comp Care Award applicants.	Yes: 79% Unsure: 21%
There was educational value for me in putting together, reflecting on the case and presenting the case to faculty.	Strongly agree: 64% Agree: 29% Neutral: 7%

TABLE 2 Faculty feedback

Questions	Responses (%)
There was educational value in the discussion for students present at this session (presenter and any student attendees)	Yes: 100%
There was, at least, one new concern raised by the attendees about the treatment plans that had been previously overlooked by the provider	Yes: 87% No: 4% Unsure: 9%
This kind of clinical decision making seminar has value for the whole class, not just Comp Care Award Applicants	Yes: 96% Unsure: 4%
There was educational value for the presenter in putting together, reflecting on the case and presenting it to us.	Yes: 100%

discussion for students present at this session.” Additionally, 87% (yes) found that “there was, at least, one new concern raised by the attendees about the treatment plans that had been previously overlooked by the provider” while 4% (no) and 9% (unsure). Ninety-six percent (yes) found “this kind of clinical decision-making seminar has value for the whole class.” Lastly, 100% of faculty responded that “there was educational value for the presenter in putting together, reflecting on the case, and presenting it to us.”

TABLE 3 Student and faculty comments

Student comments	Faculty comments
Overall great experience. It did require a lot of research and decision making, which made it very educational for me. It truly showed the importance of treatment planning and presenting patients with all available treatment options.	This type of learning experience is vital to the development of critical thinking and decision-making skills. A deeper dive into the why definitely supports student learning!
The faculty involved in the discussion were very respectful but also brought up points that I hadn't thought of in the past.	We need this every year. Great opportunity for inputting comments on cases.
This should replace grand rounds. Smaller assigned days to attend and perhaps one cool case presentation of something you've worked on and also presentation of alternate options.	Every student should be required to do a case.

4 | LESSONS LEARNED

Students and faculty reported that this exercise taught students something new that was not in the core curriculum (Table 3)—multidisciplinary faculty facilitated robust discussions. Students reported educational value in this process.

ORCID

Viyana S. Kadhiyum DDS  <https://orcid.org/0000-0002-4473-9582>

REFERENCES

- Cobb AC. Complete treatment planning: meeting patients' needs. *Inside Dentistry*. 2015;11(8):66–70.
- Mondello S. *Treatment Planning Demystified*. Quintessence Publishing Blog. <https://www.quintpub.net/news/2019/12/treatment-planning-demystified/#.YAc-sClh3T8>. Accessed April 3, 2021.

How to cite this article: Kadhiyum VS, Shin K, Ramaswamy V, Nalliah RP. Capitalizing on the treatment planning process to enhance dental education. *J Dent Educ*. 2021;85(Suppl. 3):2014–2015.