

Faculty Calibration: A Guide to Success 2014 AAP Predoctoral Educators Workshop Outcomes

The 2014 Predoctoral Educators (PDO) Workshop, "Faculty Calibration as Essential for the Future of Periodontal Education" focused on best practices and contemporary approaches to faculty calibration and its impact on dental student learning and attainment of independent clinical competence. This document summarizes best practices from the Academy's top education leaders.

Introduction

Faculty calibration performed on a regular basis is extremely important to ensure the stability and effectiveness of student learning. Calibration should be performed with all full, part-time and volunteer periodontal educators, including general dentists, specialists, hygienists and residents. Multiple calibration exercises should be performed prior to the beginning of the school year and several times throughout the year. Calibration is challenging in many respects, mostly because faculty have their own biases and backgrounds. The effectiveness of faculty calibration is measured most accurately by student feedback.

According to a 2011 AAP survey of predoctoral directors, 20 indicated that non-periodontal faculty members are calibrated by the periodontics department at their institutions, while non-periodontal faculty members at 22 programs were not. Two thirds of the programs indicated that a combination of faculty members educated dental students in clinical periodontics including general dentists and other members of the comprehensive care clinic and restorative department.

Calibration Challenges

Calibration is challenging for several reasons including time constraints, part-time educator and volunteer schedules, and differing opinions. It has been found that no matter how often calibration occurs or how engaging the instructor is, educators tend to revert back to the principles they are most comfortable.

According to the literature, there are inconsistencies in agreement and high variability in clinical decision making among dental faculty (Bader and Shugars 1993, 1995, Baelum and Lopez 2003, Cosyn and De Bruyn 2007). The publication goes on to state, "Disagreements [among clinicians] may be due to differing degrees of diagnostic thoroughness or strongly held personal opinions about appropriate treatment". In medicine, Berner and Graber (2008), report that the rate of diagnostic error may range from 5-15%.

It has been found that faculty will continue to vary in their diagnosis and treatment planning opinions. According to Lane, et al. (*Journal of Dental Education* accepted for publication), "despite the consensus training significant variations involving diagnosis of extent and severity exists as well variation in extent and choice of treatment planning exists."

Whatever the studies reveal does not diminish the need for calibration, and these efforts must be continued. In order for new habits to take effect and remain intact, faculty must be repeatedly reminded of what has been learned, what is agreed upon, and the need to ensure that students are taught the same way, every day, by every faculty member.

Getting Faculty “Buy-In”... Why Calibrate

Faculty agreement and “buy-in” are necessary for effective calibration. Early discussions raise awareness amongst faculty about common themes and concerns regarding everyday clinical information and the teaching of various procedures. Based on Lane’s study, and an additional study by John, et al. (2013), the following conclusions can be made:

- “The effect of consensus training among pre-doctoral periodontal educators may help decrease the variation of periodontal diagnosis and treatment planning among themselves as well translate into better agreement to dental students
- There is a need for frequent consensus training sessions emphasizing treatment planning among faculty with diverse training and experiences
- Implementing consensus-training programs at dental schools are helpful in terms of faculty calibration”

It is necessary to involve faculty so they feel a part of the process and that their opinions are heard and valued.

Getting Started

Begin with the periodontics department and move on to allied and general dentistry departments. Continue with the dental school dean and then to department chairs directors and educators, explaining the need and benefits for educational outcomes. Clinical calibration is both a short term and a long term goal and the importance of being consistent and persistent cannot be overlooked.

Successful institutions take the time prior to the first calibration session to meet with all periodontist faculty members to map out the year’s calibration schedule and identify priority topics and discussions. Calibration timing and techniques vary depending on the time constraints and needs of the faculty. Faculty calibration should be performed several times throughout the year with the first being prior to the beginning of every school year and then bi-monthly.

Calibrate Periodontal Faculty First

Over several sessions, the periodontal faculty should discuss topics and agree on the consistency of outcomes and what they think allied faculty, general practice group, etc. should be teaching.

- Agree/develop calibration schedule with periodontics department and allied dental faculty members
- Develop a consistent mode of teaching students
 - What they are expected to know about periodontics
 - What they are expected to know about dental hygiene

- Develop consensus documents
 - Terminology, e.g., prophylaxis, debridement, root planing
 - Clinical grading criteria
 - Competency cases
 - Evidence/research

Establish Consensus

Consensus must be established for any plan to be effective. Just as our students learn new concepts, facts and skills by repetition, faculty should agree and consistently educate in the same fashion. Training goes back to personal experiences, bias, and ultimately, evidence based decisions (EBD). EBD must be at the forefront of our decisions.

To achieve consensus, include faculty in the planning process. Brainstorm calibration topics that cause the most frustration and agree on proper diagnostics, treatment planning and clinical practices including periodontal maintenance therapy. Certain topics are at the top of the list including:

- Proper endodontic diagnostics
- Whether to save or extract
- Implant or bridge
- Healthy periodontium
- Gingivitis
- Dental prophylaxis
- Periodontitis
- Diagnostic techniques
- Radiographs
- Instrument set-ups used in clinics

Process of Calibration

- The schedule for the year is established prior to the start of academic year
- Prepare cases from the comprehensive care clinics or graduate clinics
- Send cases out ahead of time for review
- Participants complete worksheets prior to the session
- Present using a standardized format
- Approximately 50 minutes for discussion
- Use software voting, if possible
- Send a summary message following the session
- Staff needs constant reminders, reinforcers and practice

Calibration Formats

- Lecture and discussion
- Case-based lecture
- Clinic floor
- Faculty retreats
- Online self-study

Calibration Topics

- Agree on one comprehensive periodontal charting form for use in the pre-doctoral, graduate and the dental hygiene programs
- Revisit terminology
 - Prophylaxis
 - Debridement
 - Root planing
- Healthy periodontium, gingivitis, dental prophylaxis, periodontitis, diagnostic techniques, radiographs, instrument set-ups used in clinics
- Case Study example: save a tooth or implant procedure
- Probing depths: how deep is too deep?
- Online: case based exercises – faculty complete independently, document and email follow ups

Periodontists in the Clinic – General Best Practices

- General dentistry clinic model, in the senior year, periodontics should have a voice in the re-evaluation for next treatment steps of periodontal needs
- Periodontal faculty/residents assist in re-evaluation for the next periodontal need treatment steps

Educating through the Generations

Generational differences are a factor with faculty as well as students. Younger faculty members and students are visual, electronic, and want the information to be highly relevant via video, Internet or Youtube, etc. Older faculty members are more responsive to in-person group work. In calibration as well as teaching, multiple formats must be presented.

- Continually review treatment planning/calibration
- Generational exposure – experienced vs new faculty/recent graduate
- Training backgrounds – what was the philosophy and can a reasonable middle ground be agreed upon?
- Full-time vs part-time (this is how it is in the REAL world)
- Keep faculty aware of the didactic material being delivered to the students.

Assessment of Calibration Success

Calibration can be successful only when it is reviewed, repeated and practices on a regular basis. There are several ways to gauge success.

1. Daily assessment by faculty
 - a. Daily grades are inconsistent with inflation noted many times
 - b. Some schools have more of a global grade system that has some merit
 - c. Keeping track of daily progress is better served with competencies
2. Self-assessment by the student
 - a. May give better discussions about the evaluation or treatment on a daily basis
 - b. A teachable moment without the focus on the grade alone

3. Competencies by faculty
 - a. To track progress early in year three
 - b. Data collection and scaling competencies may need to be assessed if the patient pool does not allow for periodontal therapies to be assessed

Calibration “Lesson Plan” Suggestions

Calibration – Clinic Floor

Calibration Goal: Agree on diagnosis and treatment plan

Participants: Comprehensive Care Directors, Periodontics Faculty, Allied Dental Faculty; include dental students in clinic only

Timing: Every Clinic Day (depending on clinic ‘busyness’)

Calibration Materials: Patient, Periodontal Charting system (i.e. paper or electronic)

Preparation: Attendees are paired

During Clinic Time:

Participants: Partners examine patient, determine risk factors, perform periodontal exam, charting, etc. Partners agree on diagnosis and formulate a treatment plan using evidence to justify; involve students in the discussion

After Session:

Participants: Individually review case and the agreed upon diagnosis and treatment plan; write summary and send to calibration instructor

Calibration – Lecture with Voting

Calibration Goal: Agree on diagnosis and treatment plan using evidence-based dentistry

Participants: Comprehensive Care Directors, Periodontics Faculty, Allied Dental Faculty; include dental students in clinic only

Calibration Materials:

- Electronic presentation (i.e. PowerPoint, Prezi, etc.) to include: a) case description, b) patient risk factors, c) photos and x-rays; d) periodontal chart, e) evidence-based explanations and d) references
- Handouts with same information as above
- Calibration case worksheet (see handout)
- Voting System: either electronic voting system (Turning Point or other, if available) or paper ballots (4 note cards for each participant with A, B, C and D choices);
- LCD projector and screen

Preparation: *Instructor*: Review case study, supporting materials and worksheet; develop explanation of proper diagnosis, treatment plan and maintenance using evidence-based principles

During Session:

Instructor: Pass out handouts. Read case and show/explain supporting materials; discuss risk factors

Participants: Use calibration case worksheet to take notes, etc.

Participants: Use electronic voting or voting cards to get consensus (1st time)

- Vote on potential risk factor complications
- Vote on proper diagnosis
- Vote on proper treatment plan
- Vote on periodontal maintenance therapy

Group: Discuss voting outcomes; participants explain why they chose their answers

Instructor: Read/explain research evidence, but do not give "correct" answers

Participants: Use electronic voting or voting cards to get consensus (2nd time)

- Did risk factor complications change?
- Did diagnosis change?
- Did treatment plan change?
- Did periodontal maintenance therapy change?

Group: Agree on diagnosis and treatment plan; or if cannot agree, then:

Instructor: Explain proper diagnosis and treatment plan using evidence, if necessary

Group: Discuss

After Session: *Instructor:* Summarize outcomes and email with presentation handouts to participants with instructions for faculty to discuss with dental students

Participants: Spend 10 minutes with students to do the same lesson

Calibration – Case Study with Worksheet

Calibration Goal: Agree on diagnoses, treatments and the personnel who will complete the treatment for specific cases.

Participants: Comprehensive Care Directors, Periodontics Faculty, Allied Dental Faculty; include dental students in class only

Calibration Materials:

Case description, patient risk factors, photos, x-rays, etc. presented in electronic presentation; handouts with same information; periodontal chart (paper or electronic); calibration case worksheet; LCD projector/computer/screen

Preparation: Email the case study handouts, supporting materials and worksheet to participants at least one day before the calibration session. Ask participants to review the case study and complete the worksheet, indicating their diagnosis, treatment plan and list the personnel that should complete treatment for each phase.

During Session: *Instructor:* Review case and supporting materials; explain what group was supposed to have done prior to session.

Pairs: Paired participants share their decisions with each other (5 minutes).

Pair Output: One person in each pair comments to group on their own decision and whether the pair agreed and why or why not.

Group: Discuss and agree on common outcomes

After Session: *Instructor:* Summarize outcomes and email to participants with next steps.

Participants: Spend 10 minutes with their students to do the same lesson.

Generational Communication Styles

Older dentists (46–70 years old)	Younger dentists (21–45 years old)
"We're invincible as a team"	"I work best alone"
"I want, think, would like..."	"I need"
Softened style: "I'd love it if you..."	Blunt style: "Just do it..."
Long preambles	Abrupt speech patterns
Care deeply what others think	Care little about what others think
Like to process and talk about ideas and issues	"Just tell me what you want done and I'll do it"
Highly value participation and consensus	Do not participate, attend meetings, or need to hear others' opinions
Want people to want to do something, to want to be part of the team	Want people to get the results as quickly and quietly as possible; often astonished by employee feelings of discontent
Believe people can be motivated by a stirring, well-expressed idea	Believe motivation is pushing on the end of a string
Recognition means a great deal; want acceptance, popularity, group identity	Doesn't work and isn't needed. "I know what kind of job I'm doing. If a boss recognizes my work, that's nice but it's frosting on the cake."
Source: Career Strategies, Marilyn Moats Kennedy, 2004.	

Kennedy MM. Career Strategies. 2004. Available at: <http://moatskennedy.com>

Calibration Case Worksheet

Name/Date _____

Please review the case and supporting materials. Indicate your diagnosis and comments in the spaces provided. Then complete the table in the order you believe treatment should be administered. If there are differences in "how it's done at our school" please make comments. Bring the completed sheet to the calibration session.

Case Name: _____

Risk Factors: _____

Diagnosis: _____

Comments: _____

Phase I Treatment Non-Surgical Therapy; can include direct restorations, if needed.	Location/personnel performing treatment	Phase II Treatment Considered Surgical Treatment	Location/personnel performing treatment	Phase III Treatment Considered maintenance therapy and can include in- direct restorations, if needed.	Location/personnel performing treatment
1.		1.		1.	
2.		2.		2.	
3.		3.		3.	
4.		4.		4.	

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