A Model for Increasing Senior Dental Student Production Using Private Practice Principles


Abstract: Previous dental graduates have reported a lack of confidence in their ability to implement business practices upon graduation. The purpose of the new model was to enable senior students to gain experience using sound business principles in their senior year. This model involves setting and meeting production goals, teamwork, personnel evaluation, and performance incentives. This article reports the findings after implementing this model in the academic year 2003-04. Each student averaged 226 more charged visits than in 2002-03. Total dollars produced increased $7,526 per student, which represented a 63 percent increase in production over the previous year. Total dollars produced by the senior class increased from $713,740 to $1,066,139 over the previous year. A survey of the students’ attitudes toward the model showed an increase in acceptance from the beginning of the senior year to the end of the year. The model was successful in achieving most of the desired outcomes but failed to increase seniors’ chairtime utilization.

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For many years, a recurring comment by the senior dental students at Louisiana State University School of Dentistry (LSUSD) during exit interviews is their lack of confidence regarding the business aspects of running a dental practice. For many years, senior students at LSUSD received didactic information related to the private practice dental operation in a practice management course spanning the entire senior year. However, this course did not provide our students with the hands-on experience needed to implement the theories and concepts presented. In an attempt to further address these issues, a private practice simulation clinic was created, and all of our seniors complete a rotation in this program. This rotation provided a good clinical experience during which senior students learned to deliver quality dental care efficiently by working directly with a highly trained chairside dental assistant. This experience did not, however, address the previously stated concerns relative to the business aspect of managing a dental practice.

While the students expressed lack of confidence in their practice management skills, the faculty voiced concerns about the senior students’ lack of attendance in clinic. The previous clinical model was a point driven system that set a minimum number of points for graduation and in which the points accumulated determined the final student grade. The point system did not accurately reflect the care delivered by the individual student. Students quickly identified procedures that would provide maximum points for minimum time and effort. Under this system, for example, students could receive points for not actually performing the procedures themselves, but rather by assisting postgraduate residents. In the old point system model, many senior dental students completed their requirements for graduation weeks before the academic year ended, resulting in underutilized chair time and personnel. In academic year 2002-03, clinical support staff were hired for the purpose of scheduling senior student clinic time in an effort to increase student productivity. This effort did not achieve the desired results; senior students continued to be absent from clinic.

A New Senior Year Clinical Model

Several models for improving group productivity in dental academic institutions have been re-
ported. Some were based upon an experimental concept utilizing a control group.\textsuperscript{1,2} Other schools introduced a new clinical model to the entire class at one time.\textsuperscript{3} The latter approach was taken by our school.

In response to the various concerns, a new operational model was implemented in senior clinic during academic year 2003-04. This model was based on sound business practices and included several different components that would help senior students provide quality and timely dental care to the patients of LSUSD. The model was developed to correct existing problems and was not implemented as an experimental model.

One very important part of the new senior year clinical model is goal setting. A characteristic common to all successful businesses is the establishment of productivity goals to help the organization operate profitably. Studies have shown that if employees are to achieve acceptable performance, the financial goals of the organization must be translated into achievable individual employee goals.\textsuperscript{4} Knowing this, it was important to establish goals for the students that would be consistent with the school’s operational goals. Establishing the monetary goals serves two purposes: 1) it aligns students’ goals with the operational goals of the school, and 2) it provides students with an opportunity to practice critical business skills prior to attempting to manage a dental practice after graduation.

Like any successful business, high-functioning private dental offices operate based on setting and meeting production goals to cover costs (overhead), plus desirable targets (profit). The new senior clinic model provides each student with reports and vital feedback to enable them to track their progress and modify goals accordingly, an essential element in maintaining motivation when using goal setting to increase performance.\textsuperscript{5}

Another important aspect of this model was to enhance teamwork. Every year, dentists throughout the country pay thousands of dollars to attend continuing education courses that address the issues of business management and the creation of cohesive and effective dental teams. Studies have proven that for goal setting to work properly, employees must receive support from supervisors and other team members.\textsuperscript{5} This business model gave our students the opportunity to work as part of a professional team. The students played a dual role: one of a learner who is supervised and guided by a licensed faculty member and the other of an employer, directing the members of his or her team. Each student works in conjunction with an appointment clerk, a dental assistant, a patient care coordinator, and a faculty team leader. The teams were formed using existing personnel, with the exception of one appointment clerk.

This appointment clerk was hired to absorb the anticipated increase in workload. All members of the team work to assist the student in achieving the desired clinical outcomes. The model allows the student to gain experience working with the various staff members of the dental team, while remaining under the guidance and supervision of a faculty member.

In any goal-driven endeavor, evaluation and accountability must be part of the process. Research has shown that measurement and feedback are vital to improve employee performance.\textsuperscript{6} For a dentist in a private office, personnel evaluation is an integral part of business operations. This segment was incorporated into the school’s model through an evaluation system. The students evaluated faculty and staff team members. Five separate evaluation forms were developed identifying specific desirable behaviors for each group. The information gathered on these forms was used to coach and reward various team members. The department head addressed problems revealed by the evaluations relative to the faculty. The staff supervisors acted as coaches to address the staff performance deficiencies. Both the administration and the staff supervisors provided rewards for the team members based on the information in the evaluations.

\section*{Design and Implementation of the Model}

\subsection*{Setting the Goals}

An examination of the monetary production of the graduating classes of 2001 and 2002 revealed a decrease in production per student, despite a 10 percent fee increase (Table 1). Even with an additional 8 percent fee increase, the class of 2003 produced well below expectations. It was obvious from the data gathered and the visual observation of the senior clinic that students were not maximizing the use of clinic time.

In order to establish a reasonable monetary production goal per student, previous years of data were studied, based on average dollars produced per visit, number of patients seen, and procedures per-
formed. This data was then compared to chair time availability for each student, thereby arriving at production potential per half day. A total year production dollar target was established, and then a cancellation factor of 15 percent was built into this figure to determine a final production goal for each student, by half-day, by week, by month, and by year. Based on these calculations, a production minimum of $16,000 per student per year was set. Students had to achieve this dollar value in order to graduate. This production goal of $16,000 represented a 46 percent increase over the average production per student in 2002-03. Other academic standards and clinical experiences remained in place. A second monetary target of $20,000 was set, which when met allowed students to control their clinic schedules. Special clinical experiences were arranged for students who met this higher target.

Johns and Saks state, “Specific, challenging goals must be accepted by the individual if the goals are to have effective motivational properties. In a sense, goals really are not goals unless they are consciously accepted.” Although the students did not have direct input in setting the minimum goal for graduation, they could choose which incentive goals they wanted to achieve. In developing this model, it was felt that giving the students choices about potential goals would increase acceptance of the new model and provide additional experience in choosing and achieving goals.

Progress Reports

To enable the students to track their production activities and ensure the accuracy of the clinic management system records, a customized spreadsheet was developed and provided to each student. This spreadsheet showed half-day, weekly, monthly, and year-to-date production goals. This allowed students to monitor their progress toward their goals.

Students were given monthly reports showing their production for the month, minus any lab bills charged to their account. The deduction of the lab fees served a twofold purpose: 1) it made the students aware that there is an additional overhead associated with high-dollar procedures that include lab fees, and 2) it restricted the number of procedures requiring laboratory support that were performed by the senior students, thus making more of these procedures available for the junior dental students.

The Team

At the LSUSD, senior students have their own chairs for the entire senior year. Chairs are grouped in bays of ten. A primary faculty member from the department of general dentistry is assigned to each bay, along with one or more part-time faculty members.

Senior clinic operations were restructured to create a team concept that would directly aid the students in meeting their production goals. The teams were organized to mimic a private office team. This arrangement correlates with information provided to students in the practice management course and helps them gain experience employing a team concept in the delivery of patient care. The senior students worked directly with an assigned scheduling clerk, a patient care coordinator, a shared dental assistant, and a primary faculty member. Each team member played a vital part in helping the students to reach the set targets.

Bay teams, which were subsets of the larger production teams, were created to provide each individual student with an identifiable clinic support system. A bay team consisted of nine or ten senior dental students, a dental assistant, and a primary faculty member. The bay teams worked together in meeting individual goals, and a reward system was set up to recognize the most productive bay team monthly.
The Incentives

Daniels states, “Goals are antecedents for either reinforcement or punishment. . . . If goals are set, but there are no consequences for either success or failure, the goals will produce no improvement and will ultimately be a waste of time.”7 Bruce and Pepitone say that while motivation is an intrinsic factor, we do not operate in a vacuum: “We live in the world and what we experience affects us. In other words, our motivation is affected by external factors. Those factors can include rewards, recognition, bonuses, promotions, and praise.”8 In creating this model, the incentive portion was designed to achieve two purposes: 1) to teach the students that in business you must create reward systems to recognize and motivate high performance, both personal and staff, and 2) to reward and motivate the senior students throughout the year.

Individual and group incentives were established to appeal to the personalities of different students. Honeywell et al. in their research reported that the high performers, when given a choice, chose individual incentive systems and lower or average performers find the group incentive systems more appealing.9 In keeping with the business model, it was important for the students to feel rewarded for their efforts. It was equally important for the clinical support staff to share in their students’ successes. A monthly reward luncheon was established to recognize the faculty, staff, and student members of the top performing bay team.

Several reward mechanisms were created. As described previously, when seniors achieved the $20,000 production level, they could take days off from clinic, take advantage of special learning experiences created for them in the specialty departments, or schedule fewer patients.

“The climb to the top is arduous and long,” say Kouzes and Posner. “People become exhausted, frustrated, and disenchanted. They’re often tempted to give up. . . . Initiate incremental steps and small wins.”5 At LSUSD, interim targets were set for Thanksgiving and Mardi Gras weeks to provide students with the opportunity to achieve and celebrate smaller successes. If the students met these targets, they had control of their schedule for that week. The top five producers monthly received use of reserved parking spaces. These spaces were directly adjacent to the administration building and convenient for the students. These individuals were announced and recognized before their classmates monthly. The top producing bay team monthly was treated to a catered lunch in the dean’s conference room. The dean, the clinic dean, and the department head participated in these lunches to celebrate their achievement.

Team Evaluation

One of the skills that any employer needs to master is how to evaluate work performance. This was also a key factor in helping our senior students to meet their production targets. A set of evaluation forms was developed, and each senior student was required to evaluate all team members monthly using a set of defined standards. Each team member was evaluated on specific duties using a three-point rating scale consisting of “Excellent,” “Acceptable,” or “Unacceptable.” A space for specific comments on performance is provided at the bottom of each evaluation.

The evaluations were used to coach and improve the performance of the various team members. If a team member received a rating trend of “Unacceptable” in one or more areas, the staff member was counseled to improve his or her performance by the staff supervisor and the faculty by the department head. The evaluations were also used to reward staff members who performed above expectations. When a team member received an “Excellent” rating or comments that were extraordinary, that performance was recognized and rewarded through a schoolwide recognition program.

Implementation

Before the plan was accepted, a series of informational meetings was held for faculty. The purpose of these meetings was to explain the details of the plan and address questions raised by the concept. A series of discussions, leading up to a general faculty meeting, were held to address concerns regarding the ethics of setting a monetary goal in a teaching facility. This issue was addressed by explaining that there is no difference between a dollar or a point as a unit of measurement. However, the points did not translate into the reality of managing a dental office. It was emphasized to faculty that the key objective of the new clinical model was to enhance students’ experience with a business model, not the production of dollars. The part-time faculty, who are also engaged in private practice, enthusiastically endorsed the concept. The full-time faculty had reservations at the beginning of the academic year. The senior
students realized the value of the concept early in the senior year, as described in the results section below (Table 2).

There was also concern expressed by the department heads and full-time faculty about the initial proposed targets and what would happen to the students who did not meet them. It was collectively decided through these meetings that any student who did not meet his or her targets would not graduate on time. There were, however, resources available to students who fell behind in meeting their monthly targets, to help them in completing the year on time.

During the registration orientation phase for the senior year, a special presentation was given to the students detailing the business model, the production goals, and the relationship to real-life private practice. It was explained that while this model did not encompass every aspect of running a dental office, it did emphasize many principles that are necessary to operate a successful organization, such as goal setting, time management, employee evaluation, feedback, and reward and recognition. The students were given examples of how to schedule patients to best utilize and manage their time. They were also given information comparing the school fees to private practice fees so that they could begin to realize the true value of their work. They were introduced to the concept of the customized spreadsheet and how it could be used to track their progress. The necessity of evaluating the team members was explained in detail and samples of the evaluation documents were introduced. The concept of recognizing and rewarding high performance was also stressed.

### Results

Analysis of results for the first year showed an increase of 10,861 in the total number of charged visits for the senior class. The average number of charged visits per student increased by 226 visits. Total dollars produced per student increased from $12,977 to $20,503 or an average increase per student of $7,526 (Table 1). This represented a 63 percent increase in production per student over the previous year. Total dollars produced by the senior class increased from $713,740 to $1,066,139 or a total of $352,399.

A survey was taken of student attitudes toward the model at the end of the senior year (Table 2). There was a shift in attitude from 40 percent negative to 13 percent negative by the end of the senior year. Sixty-seven percent of the students ended the senior year with positive feelings toward the model.

When surveyed on the impact the incentives had on their motivation, 60 percent of the students reported a positive impact toward one or more of the incentives (Table 3). Forty percent of the students reported the incentives had no impact on their motivation to achieve the production goals. The interim goal of controlling their schedule for the week of Thanksgiving was identified as the most influential motivator, according to the survey. However, the incentive to graduate on time was not included on this survey. The assumption was made that the incentive to graduate would be the major motivator for all students.

### Discussion

Overall, the model has been a positive experience for the LSU School of Dentistry. Clinic revenue increased as a result of providing more care to more patients. This increased the students’ educational opportunities in clinic and enhanced their opportunity to apply business principles to their senior clinic experience.
One unmeasured outcome was that the clinic staff were perceived to be busier and more helpful to the students. Senior exit interviews revealed that the students had a more positive attitude toward the clinic staff than previous graduating classes. These results were achieved without the addition of any personnel.

In reviewing the senior exit interviews, most felt that the model taught them the importance of setting and meeting production goals to produce a profit in a private office. The majority of seniors reported that this model enhanced their ability to work with the clinic staff as a team and to evaluate staff performance to assist them in meeting production goals.

One of the primary objectives of this model was to increase utilization of the senior clinic. This objective was not fully met. Although the students provided more treatment to more patients throughout the academic year, faculty feedback regarding clinic usage was that unused chair time in March and April continued to be too high. This was a direct result of setting the minimum production target too low and has been adjusted for the coming year. For the academic year 2004-05, a minimum production goal of $20,000 has been set for the students to graduate, and a goal of $25,000 is the new target for the students to control their schedules and participate in specially arranged clinical experiences.

It should be noted that we are aware that data collected from only one year is not adequate to draw definitive conclusions regarding the effectiveness and long-term success of any new program. As with all new programs, lessons learned during the first year will be applied to improve the model for future years. Data will continue to be gathered in order to measure the effectiveness of this model in the long term.

REFERENCES