Casey Hein, RDH, MBA

# Dental Hygiene Specialization: The "Focused Factory" Concept in Nonsurgical Periodontal Therapeutics

There are a small but growing number of hygienists who are specializing in nonsurgical periodontal therapeutics. They call themselves periodontal therapists and instead of treating patients with varying needs, they concentrate on treating patients with chronic periodontitis. An often-asked question is, "What kind of special credentials do these hygienists have that allows them to specialize in nonsurgical periodontics and call themselves periodontal therapists?"

The answer is that there are no special credentials, only a dogged determination to fulfill their scope of practice by focusing on perfecting the outcomes of nonsurgical periodontal care. Market forces of supply control the demand for periodontal therapists—as more general dentists start to understand the benefits of providing high-end, evidence-based periodontal therapeutics, these hygienists will be in great demand.

This 3-part series explores the subject of dental hygiene specialization in nonsurgical periodontal therapeutics. Part 1 introduces a business model called the "Focused Factory" concept, which has achieved great success in focused specialization within other areas of the healthcare industry and discusses the concept's potential in achieving specialization in nonsurgical periodontics within general practice settings.[1] This article also discusses what is stimulating the need for the periodontal therapist model of care.

Part 2 of this series offers a real-life example of a Focused Factory environment in medicine and discusses how elements of the Focused Factory concept can be applied to specialization in periodontal therapeutics. Part 2 also looks at how the ideal schedule of a periodontal therapist will differ from a conventional dental hygiene model of care.

For those hygienist who aspire to specialize in nonsurgical periodontics, Part 3 of this series will present the hurdles to specialization and specific recommendations on how to transition to specialization in nonsurgical periodontics.

## Lessons From Manufacturing

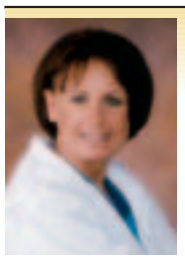
For over a decade, professors at Harvard Business School have been teaching the merits of focused business to their graduate students through the Focused Factory concept. This concept defines a business that concentrates on refining a process to the point of perfection.[1] Originally conceived by Wickham Skinner in 1974, the Focused Factory concept is so well respected that over 75 of the world's leading business schools have adopted it within their graduate school curriculum.[1] When Skinner surmised that "simplicity and repetition breed competence," he was primarily referring to the American manufacturing industry. Skinner argued that a factory that focused on a narrow product mix for a particular market niche would outperform the conventional manufacturing plant that attempts a broader mission.[1]

More recently, the Focused Factory concept also has been successfully applied to the medical side of the health care sector.[1] Although this practice concept has not reached its way into dentistry, it may provide the very solution we need to bridge the gap in the limited supply of expert periodontal clinicians and the increasing demand for quality periodontal care in primary care settings.

Using the Focused Factory concept in general dental practices that seek to provide evidence-based periodontal therapy (certain treatment modalities and etiological approaches that are supported by scientific evidence of their safety and efficacy in periodontal treatment) may significantly increase the quality of care we render while simultaneously yielding greater rates of clinical efficiency. Skinner's argument regarding the high performance rate that manufacturers experience as a result of narrowing their focus can easily be applied to hygienists who specialize in periodontics—periodontal therapists.

Some might be offended by the use of the term *Focused Factory* because it conjures up images of assembly line production with robot-like technicians (clinicians) automatically manufacturing (performing) a "widget" (periodontal procedure) with little concern for patient uniqueness relative to treatment plans and execution of care. Overemphasizing the *factory* part causes us to miss the *focus* part of the concept. Focus, focus, focus. Even the best of us can rarely become experts in the wide range of care expected of the conventional dental hygiene model. Yet, when we shift from providing the wide range of preventive and periodontal services customary to the conventional hygienist model to specialize in nonsurgical periodontics, by sheer volume and repetition, our proficiency level and efficiency rates increase.

The concept of a Focused Factory will not guarantee success. The details of its execution will be what make it work—specifically, developing and implementing the details that will ensure suppression or elimination of pathogenic microorganisms, elimination or modification of predisposing risk factors, and modulation of the immune response. In health care, as in everything else in life, practice makes perfect.



**Casey Hein, RDH, MBA**

*Casey is a periodontal therapist subcontractor in the Washington DC/Baltimore area and founder of PointPerio, LLC, a consulting firm committed to coaching general dentists and hygienists in progressive periodontal therapeutics within a collaborative framework. She is a member of the American Dental Hygienists' Association. Casey lectures nationally on the role of the periodontal therapist in general practice and regularly contributes practice management articles to* Dentist's Money Digest. *She welcomes comments and visitors to her Website www.@pointperio.com.*

## What's Driving the Need for Specialization?

Practice models evolve in response to many things, including technology, research findings, demographics, and consumer-patient demand. The need for specialization in nonsurgical periodontics within the dental hygiene profession is being driven by 3 factors:

1. epidemiological trends of patients projected to have early-to-moderate chronic periodontitis and issues related to most general practices' capacity to diagnose and treat this volume of patients;[2]
2. a trend that may be occurring related to the quality of nonsurgical periodontal therapy being rendered in general practice settings including delayed diagnosis, a lack of recognition of severity of disease, delayed referral or lack of timely referral for treatment, and inappropriate or a lack of treatment;[3-7] and
3. patients' financial constraints, which may compromise acceptance of periodontal treatment plans and/or referral to a periodontist.[7,8]

### *Capacity Issues in General Dental Practices*

If correctly diagnosed and treated, the volume of patients projected to have early-to-moderate stage chronic periodontitis may overwhelm many general practices that rely solely on the conventional dental hygienist practice model. In the table on page TK, projections (in a patient population of 1,000) of early-to-moderate cases of chronic periodontitis (case types II and III) provide a framework for estimating the clinical hours necessary to treat and maintain this level of periodontal clientele.

If each of the 228 cases of early-to-moderate chronic periodontitis required a minimum of 50 minutes of treatment time (scaling and root planing, adjunctive therapies, etc.) per quadrant, this translates into 760 hours of chair time for every

**Table 1—Projections of Periodontal Clientele Within a General Practice Population of 1,000 Patients***

| | Age group | | | |
|---|---|---|---|---|
| | 18-44 | 45-64 | 65+ | Total |
| % of total patient population:[1] | 43% | 23% | 12% | 78% |
| Actual number of patients in population of 1,000: | 430 | 230 | 120 | 780 |
| Patients projected to have early-to-moderate cases:[2] | 12% | 45% | 60% | |
| Actual number of patients in population of 1,000: | 52 | 104 | 72 | 228 |
| Patients projected to have severe cases:[2] | 9% | 25% | 40% | |
| Actual number of patients in population of 1,000: | 39 | 58 | 48 | 145 |

*Assumptions driving the projections

1. Percentages of patients within each age group was determined by demographics drawn from US Census Bureau Statistics: National Population Estimates-Characteristics Source-Population Division US Census Bureau; Release date June 18, 2003.
2. Percentages used to project the number of cases of chronic periodontitis were estimated from data collected from US Department of Health and Human Services, National Center for Health Statistics. Third National Health and Nutrition Examination Survey, 1988-94. Public Use Data File No.7-0627. Hyattsville MD: CDC, 1997.

1,000 patients. In addition, most of these periodontal patients will be maintained on a 3-month maintenance schedule based on their needs. If you assume that periodontal maintenance visits are 1 hour in length, this equates to another 684 hours (3 maintenance visits after definitive treatment within 1 year). It quickly becomes apparent that squeezing this volume of periodontal treatment into an already overbooked dental hygiene schedule is untenable in a small practice with only 1,000 patients, let alone a larger practice.

The resulting 1,444 hours (roughly the equivalent of 75% of a full-time clinician position) necessary to treat and maintain this volume of patients would overwhelm the capacity of many general practices. In fact, issues related to capacity (both human resources and operatory space) are among the top hurdles general practices experience when trying to reach the next level in progressive periodontal therapeutics.

### *Quality Issues*

Statements by various thought leaders from research and academia are chronicled in the sidebar on this page, which give us a glimpse of the concerns many professional authorities have, relative to the level of periodontal care being rendered in general practice settings.[3-6]

Clinically knowledgeable consultants who have performed random chart audits when considering purchasing dental practices admit to observing gross neglect in terms of diagnosis and treatment of chronic periodontitis in many practices.[8] In analyzing procedural mixes of general dental practices, it is fairly easy to ascertain the level of periodontal care a practice is providing by looking at the number of quadrants of scaling and root planing performed and comparing it against the number of adult patients in the practice.

When these numbers appear disproportionate (according to epidemiological estimates of periodontal disease prevalence), concerns relative to diagnostic ability seem valid. A 1999 survey conducted by the American Dental Association found that less than 1% of all dental services completed by private dental practices (including generalists and periodontists) within that year were for scaling and root planing (ADA procedural code 04341).[9]

If chronic periodontitis was diagnosed and treated at the level estimated in epidemiological studies, shouldn't we see significantly more quadrants of scaling and root planing being reported?[2] In the same survey, the number of periodic exams reported was more than 5 times greater than the number of comprehensive exams.[9] Although many insurance companies impose limitations on how often comprehensive exams can be performed, it may be that the opportunity to intercept early-to-moderate stage chronic periodontitis has been compromised because comprehensive examinations are not being performed.

### *Meeting the Needs of Managed Care Patients*

Although it is expected that the level of dental insurance as a whole will not significantly change between 2001 and 2006, it is anticipated that there will be a trend toward increased patient enrollment and provider participation in preferred provider organizations (PPOs).[10] (In this article the term *managed care* describes insurance company contracts that discount dentists' usual and customary fees, not just capitation contracts.)

This is how this trend may affect the ability to meet the periodontal needs of managed care patients: Because PPOs pay dentist providers at lower reimbursement levels and because participation obligates a dentist to accept it, there is a significant disincentive for many general practices to provide periodontal care. An example would be when offices are reimbursed $80 (and sometimes even less) for a quadrant of scaling and root planing. This discounted fee falls significantly below even the 40th percentile nationally ($165 per quadrant).[11] When reimbursement is this low, dentists have a difficult time covering costs, let alone making a profit, so chair time is allocated for procedures with higher profit margins.

A general practice that uses a Focused Factory model can expect greater efficiency, which translates into lower costs of chair time. No longer should it take 50 minutes to perform scaling and root planing in 1 quadrant. Because volume and repetition of procedures has allowed us to gain speed and competency, now we can perform 1 quadrant of quality scaling and root planing in less time. In effect, we have increased quality and improved efficiency to the point that it is now affordable to treat managed care periodontal patients.

## Conclusion

Specialization is not attractive to all hygienists or dentists. However, we need to recognize that there are hygienists who are already specializing in nonsurgical periodontal therapeutics. Although some may question whether specialization in periodontal therapeutics may have a detrimental effect on the profession as a whole, my personal conviction is that it has the opposite effect by raising the bar for our whole profession.

For those hygienists who are already specializing, none of this information comes as a revelation. Take heart and realize you are not alone. For those hygienists who want to specialize in nonsurgical periodontal care, look forward to exploring the potential of the Focused Factory model and stay tuned for some practical suggestions on how to transition to specialization in the February and March issues of *Contemporary Oral Hygiene*. COH

**What Do Your Colleagues Think?**

"Many of today's referring doctors can be strongly influenced to delay their referrals and maintain their revenue stream with soft-tissue management programs that have not created strict guidelines for outcome assessment and have not delivered definitive periodontal therapy."[3]—McGuire and colleagues

"The problem is that periodontal procedures from examination and diagnosis to scaling and root planing to supportive care may not be well done in many general practices. Periodontal charting may be ignored, the treatment plan may not be related to the examination findings, and periodontal patients may not be monitored regularly."[4]—Oliver and colleagues

"Failures to diagnose periodontitis, residual calculus, as well as a failure to relate oral conditions to systemic problems...instances where a reevaluation after scaling and root planing wasn't performed and so there may be an area that didn't resolve, mostly because the hygienist didn't see it...in some cases, practices charge for scaling and root planing that wasn't performed."[5]—Nunn and colleagues

"Clearly, we must individually and collectively respond to this call and stretch ourselves to a higher level of professional responsibility at this pivotal time, regardless of practice settings. Perhaps our greatest challenge is to fine-tune our approach to clinical education."[6]—Gaston and colleagues

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