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UTILIZATION OF PROGNOSIS ASSIGNMENT: A CROSS-SECTIONAL SURVEY
OF MILITARY PERIODONTISTS

by

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A thesis submitted to the Faculty of the
Periodontics Graduate Program
Naval Postgraduate Dental School
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In partial fulfillment of the requirements for the degree of
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ABSTRACT

Utilization of Prognosis Assignment: A Cross-Sectional Survey of Military Periodontists

Richard E. Sawaya, DDS, 2023

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Introduction: Prognosis is a forecast of the likely course of a disease and its future implications on treatment outcomes. The significance of periodontal prognosis in clinical practice is evident by its influence on treatment planning, communication, and in the retrospective evaluation of treatment results. While there are multiple well-known prognosis systems reported in the periodontal literature, there is an absence of data on the actual use of prognosis assignment among practicing clinicians.

Objective: The purpose of this study was to survey military periodontists regarding their utilization of periodontal prognosis and to evaluate its influence on treatment planning as well as its implications on operational dental readiness.

Methods: A nineteen question internet survey was disseminated to military periodontists in the U.S. Air Force, Army, and Navy via the respective Periodontal Consultants to the Surgeon General. The survey inquired on provider-specific demographic information, the

provider's favored periodontal prognosis system, when and how prognosis is applied, and on the relationship between prognosis and operational dental readiness.

Results: A 55% (n = 65) response rate was achieved. The majority of respondents reported utilizing the Kwok and Caton periodontal prognosis system (63%, n = 41), assigned prognosis at multiple timepoints in a patient's overall course of treatment (68%, n = 44), identified the severity of the periodontal presentation and the predictability of treatment outcomes as the most important factors involved in assigning a prognosis (82%, n = 55), and indicated that periodontal prognosis non-significantly influenced their dental readiness classification and vice versa.

Conclusions: Kwok & Caton and McGuire periodontal prognosis systems were utilized by the majority of respondents but differed in utilization by military service branch. Respondents were likely to utilize a prognosis system at multiple timepoints during treatment and considered periodontal presentation severity and treatment outcome predictability most important factors when assigning a prognosis. There was minimal influence between operational dental readiness and periodontal prognosis. Future research will evaluate prognosis system utilization in a broader population and will assess impact of system standardization in education and clinical practice.

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LIST OF ABBREVIATIONS

DoD	Department of Defense
ABP	American Board of Periodontology

CHAPTER 1: Introduction

Prognosis is the likely course and future outcome of a disease and is an essential element of dental patient care. Assigning a proper periodontal prognosis accomplishes three important facets of care. First, it allows the clinician to more confidently develop a treatment plan based on the anticipated survival of the teeth in question. Second, it provides a means of communication regarding the outlook of the dentition to both the patient as well as the referring dental provider. Third, it allows for a dentist to evaluate the success of treatment outcomes through documentation of an anticipated prognosis which can then be retrospectively analyzed.

Multiple prognosis systems have been proposed in the periodontal literature. Hirschfeld and Wasserman in 1978 conducted a retrospective study on 600 patients who were treated and maintained in a private practice setting for an average of 22 years (Hirschfeld & Wasserman, 1978). The teeth in these patients were initially assigned either a favorable or questionable prognosis based on specific tooth-related factors such as furcation involvement, deep pockets, extensive alveolar bone loss, and mobility. The number of teeth lost was assessed retrospectively and patients were categorized into groups labeled as Well Maintained, Down-hill, and Extreme Down-hill. A significant finding of this study was the percentage of loss for favorable and questionable teeth differed between the Well Maintained, Down-hill, and Extreme Down-hill groups, implying that other patient-specific factors besides the defined tooth-related factors can affect the prognosis of the dentition.

Becker et al. in 1984 evaluated 95 patients treated in a private periodontal practice over the course of 6.5 years (Becker, Berg, & Becker, 1984). Patients were classified into

three categories: Good, Questionable, and Hopeless. These categories were based on tooth-related factors such as bone loss, pocket depths, furcation involvement, mobility, crown-root ratio, root proximity, presence of deep vertical grooves of anterior incisors, and extensive decay rendering a tooth non-restorable. Building upon the work of Hirschfeld and Wasserman, Becker used three categories and proposed specific quantified values for the amount of bone loss and the depth of the pockets necessary to place a tooth into a particular category. Additionally, specific classes of furcation involvement were utilized for assignment into the various prognosis categories. The results of this study showed relatively accurate predictability in well-maintained patients, but less reliable predictability in poorly maintained patients.

McGuire in 1991 conducted a study on 100 patients treated and maintained over 5 years at his private practice and developed a prognosis system encompassing five classes: Good, Fair, Poor, Questionable, and Hopeless (McGuire, 1991). This prognosis system included an Individual Tooth Prognosis that encompassed tooth-related factors as well as added an Overall Prognosis factoring in patient-specific parameters such as age, medical status, individual tooth prognosis, rate of progression, patient cooperation, economic considerations, and etiologic factors, amongst other parameters. One conclusion of this study was that the prognosis system was not a reliable predictor of future outcomes for any of the classifications other than the Good classification. Additionally, this system was more accurate for single-rooted teeth than it was for multi-rooted teeth. These conclusions were reinforced in a follow-on study looking at 8-year data of the same population (McGuire & Nunn, 1996). It was determined that when the Good prognosis was excluded, the accuracy of the prognosis system dropped from 81% to 35%.

In 2007, Kwok and Caton proposed a classification system based on future periodontal stability rather than on tooth survival (Kwok & Caton, 2007). Prognostic assignment based on the evaluation of periodontal stability rather than on tooth survival was a novel concept that differentiated the Kwok and Caton system from previous prognosis systems. This dynamic classification system proposed re-evaluation periodically rather than assigning a “short-term” and “long-term” prognosis with a 5-year threshold. The Kwok and Caton classification system is stratified into four categories of Favorable, Questionable, Unfavorable, and Hopeless. Influencing factors included both general factors, which encompass patient compliance, smoking, diabetes, and other systemic conditions, as well as local factors, which encompass tooth-related factors such as furcation involvement, cervical enamel projections, tooth position, overhanging restorations, trauma from occlusion, and mobility. In contrast to the other classification systems, Kwok and Caton do not quantify the efficacy of the prognosis system. However, in a 5-year retrospective study evaluating the accuracy of the Kwok and Caton prognosis system, it was determined that teeth assigned a prognosis of Favorable remained in that classification at five years 95.6% of the time, while Questionable teeth remained at that classification 86.4% of the time, and Unfavorable teeth remained so 50% of the time (Nguyen et al., 2021).

Miller et al. in 2014 proposed a prognosis system specifically targeting molar teeth using a quantitative scoring index (Miller, McEntire, Marlow, & Gellin, 2014). Aiming to develop a system that was more objective, the authors evaluated 102 patients who were maintained for at least 15 years to develop a scoring system based on six

parameters: age, probing depth, furcation involvement, mobility, molar type, and smoking. Each parameter was assigned a specific score, and then those individual scores were added together using a cumulative score range of 0-16, with a higher score indicating a summation of more negative factors influencing the tooth's prognosis. Treated molars survived an average of 24.2 years with an initial prognosis scoring index of 4.32. Molars extracted during the maintenance period had an initial scoring index of 6.54. Molars extracted during initial treatment had an average scoring index of 8.34. Smoking was found to have the largest negative impact compared to the other parameters, while the age of the patient had the least impact.

As evidenced by the existence of multiple periodontal prognosis systems, the dental subspecialty of periodontics values the utilization of prognosis assignment. This weighted significance on prognosis assignment is further supported by the inclusion of prognosis as one of the six graded categories in the American Board of Periodontology (ABP) Certifying Examination (Periodontology, 2022).

Periodontists and dentists can easily become overwhelmed by the multitude of recognized periodontal prognosis systems and associated classification criteria. Despite the acknowledged importance of determining periodontal prognosis, its practical clinical application can be arduous and contentious. The literature is unclear about the use of the various prognosis systems amongst practicing periodontists, and to date, there is no study in the searchable literature that reports on periodontal prognosis system utilization. Accordingly, the purpose of this study was to survey U.S. military periodontists on their periodontal prognosis utilization practices and to gauge the influence of prognosis

assignment on periodontal treatment planning and military centric operational dental readiness classification.

CHAPTER 2: Materials and Methods

This study utilized a population-based cross-sectional survey to assess periodontal prognosis system utilization within the Department of Defense (DoD). Survey respondents were required to be periodontists on active-duty status within the Departments of the Air Force, Army or Navy. Retired or reserve military periodontists or periodontal residents in the DoD were excluded from survey distribution.

The survey consisted of 19 multiple choice or open response questions that collected demographic and prognosis system utilization data (Appendix – Survey Questions). Demographic information included branch of service, time currently spent in clinical patient care, the institution where periodontal residency training was completed, any academic involvement in a postdoctoral training program, years of practice as a periodontist, and ABP diplomate status. Questions related to prognosis system utilization included the following: (1) If the assignment of periodontal prognosis was formally utilized in the periodontist's clinical practice, (2) Which of the three contemporary periodontal prognosis systems (Becker, McGuire, or Kwok and Caton) was utilized, (3) At what stage in treatment prognosis system was utilized, (4) How often the prognosis classification was confirmed or modified, and (5) Whether periodontal prognosis assignment influenced the respondent's determination of Operational Dental Readiness classification for an active duty patient and vice versa.

The survey was made available via an online-based survey platform with Health Insurance Portability and Accounting Act and Business Associate Agreement security compliance, for a period of 30 days in 2022. The survey link was distributed to the

Periodontal Consultants to the Surgeon General of each of the three military service branches for dissemination to their respective active-duty periodontists.

Results were tabulated and summarized as descriptive statistics. Differences in responses by military service, year group since periodontal residency graduation, and prognosis system utilized were assessed via chi-square analysis and Students t-tests with significance set at 0.05. Data management and statistical analysis was conducted using R v.4.0.2.

The study was approved for human subject research by the Walter Reed National Military Medical Center Institutional Review Board.

CHAPTER 3: Results

Demographics

A total of 65 out of 120 potential respondents (55% response rate) completed the survey. The distribution of respondents was 27.7% (N = 18) Air Force, 27.7% (N = 18) Army, and 44.6% (N = 29) Navy with a majority (89.2%, N = 58) being Diplomates of the American Academy of Periodontology. (**Table 1**) Majority of respondents from the Air Force (83.3%, N = 15), Army (66.7%, N = 12), and Navy (58.6%, N = 17) reported teaching experience as a periodontist in a post-doctoral periodontics residency program or post-graduate year-1 (PGY1) program. Approximately half (53.8%, N = 35) of respondents graduated from their Periodontal Residency program between 2010-2019, 30.7% (N = 20) between 2020-2022, and 15.4% (N = 10) between 2000-2009.

Favored Prognosis System

Majority (94.8%, N = 61) of respondents reported documenting a periodontal prognosis classification in their evaluation/treatment plan note, of which Kwok and Caton was the most cited system utilized (63.1%, N = 41). (**Table 2**) McGuire (23.1%, N = 15) and Becker (10.7%, N = 7) systems were the second and third most cited systems utilized. Only two respondents (3.1%) reported using a combination of prognosis systems. Air Force and Army respondents preferred utilizing the Kwok and Caton system (94.4% and 72.2% of Air Force and Army respondents, respectively). A greater proportion of Navy respondents reported utilizing the McGuire system (48.3%, N = 14) compared to Kwok and Caton (37.9%, N = 11). Mean years since periodontal residency

completion of respondents stratified by prognosis system utilization were 12.1, 7.7, and 5.5 for Becker, Kwok and Caton, and McGuire, respectively.

Prognosis System Utilization Characteristics

Periodontal presentation severity (43.1%, N = 28) and treatment outcome predictability (41.5%, N = 27) represented the majority of “most important criteria” cited by respondents for assigning a periodontal prognosis. **(Figure 1)** The remaining respondents cited overall case complexity (10.8%, N = 7), etiology control (1.5%, N = 1), expected timeline to follow the patient (1.5%, N = 1), and patient oral hygiene instruction compliance (1.5%, N = 1) as most important criteria for assigning periodontal prognosis. Majority of respondents reported determining prognosis at multiple time points (67.6%, N = 44) compared to 23.1% (N = 15) at initial evaluation, 6.2% (N = 4) after completion of non-surgical therapy, and 3.1% (N = 2) never (“No formal prognosis scheme utilized”). **(Figure 2)**

Respondents were asked several scaled questions in which they rated from 1 to 10 how likely they were to perform the scenario being asked, with 1 being “never” and 10 being “always” **(Figure 3)**. When asked on a scale from 1 to 10 how often they referred back to their initial periodontal prognosis determination to confirm or modify it, 21.5% (N = 14) of respondents indicated “Always” (9-10); 21.5% (N = 14) as “Often” (7-8), 21.5% (N = 14) as “Regularly” (5-6), 9.2% (N = 6) as “Occasionally” (3-4), and 20.0% (N = 13) as “Never” (1-2).

Prognosis and Operational Dental Readiness

When asked to determine the influence of a patient's periodontal prognosis on the subsequent assignment of that patient's operational dental readiness, 15.3% (N = 10) indicated "Always" (9-10), 29.2% (N = 19) as "Often" (7-8), 23.0% (N = 15) as "Regularly" (5-6), 9.2% (N = 6) as "Occasionally" (3-4), and 23.0% (N = 15) as "Never" (1-2). **(Figure 3)** When asked how a patient's operational status, such as an imminent deployment or an upcoming permanent change of station, influences the subsequent assignment of that patient's periodontal prognosis, 10.8% (N = 7) of respondents indicated "Always" (9-10), 27.7% (N = 18) as "Often" (7-8), 12.3% (N = 8) as "Regularly" (5-6), 10.8% (N = 7) as "Occasionally" (3-4), and 38.4% (N = 25) as "Never" (1-2).

Prognosis and Staging & Grading of Periodontitis

Survey respondents were questioned on whether the addition of "Staging and Grading" in the 2017 World Workshop's classification of periodontitis has affected their periodontal prognosis assignment practices. Forty of the 65 military Periodontists (61.5%) responded that the adoption of this new classification does not affect their prognosis assignment practices.

CHAPTER 4: Discussion

The purpose of this study was to assess the utilization of periodontal prognosis systems among military periodontists in order to address a knowledge gap regarding an important component of academic periodontal training environments and a graded category on the ABP board-certification examination. Results indicated that the majority of study respondents utilized the Kwok and Caton or McGuire periodontal prognosis systems and that military service branch and location of residency training were associated with prognosis system preference. Treatment predictability or periodontal disease severity were the most significant factors affecting periodontal prognosis determination. Despite most respondents utilizing prognosis systems to evaluate periodontal prognosis at multiple time points, few respondents indicated revisiting the initial diagnosis as a tool to evaluate the accuracy of their initial prognosis or to evaluate disease progression. Lastly, the unique operational nature of the military did not routinely influence prognosis assignment.

Although the Kwok and Caton and the McGuire systems were the two most utilized periodontal prognosis systems, utilization diverged by military service affiliation and training location. Navy respondents indicated utilizing the McGuire system whereas Army and Air Force respondents were more likely to utilize Kwok and Caton. As many military periodontists train within their respective service's periodontics program (e.g., Navy periodontists predominantly train in the Navy's periodontics residency program), it was not surprising that military service distinctions occurred and were most likely traced back to institutional precedents that resulted in system utilization patterns. These patterns superseded time since residency completion, with no significant differences in time

between respondents utilizing McGuire and Kwok and Caton systems despite the sixteen-year gap between system establishment. The juxtaposition of military service specific utilization trends and lack of a general consensus demonstrate the ability of educational standardization to influence clinical practices.

Yet standardization of prognosis system utilization may be hard to achieve due to fundamental differences between prognosis systems. When questioned about factors affecting periodontal prognosis determination, respondents were split equally between prioritizing periodontal presentation severity and treatment outcome predictability. The criteria for “severity of periodontal presentation” are essentially represented by all three of the major prognosis systems (Becker, McGuire, and Kwok and Caton), since all prognosis systems account for local tooth-related factors which contribute to periodontal disease (Becker et al., 1984; Kwok & Caton, 2007; McGuire, 1991). However, the “predictability of treatment outcomes” is most correlated with the Kwok and Caton system, since it is a prognosis system based on periodontal stability rather than on tooth survival (Kwok & Caton, 2007). Questions remain as to whether one prognosis system alone is sufficient to address a dentist’s and/or periodontist’s major considerations when assigning periodontal prognosis or which system should be emphasized in an educational setting. Instruction in multiple prognosis systems would be comprehensive but burdensome to implement clinically, whereas focusing on a particular system may be clinically achievable but myopic.

When analyzing the data, we noticed a peculiar trend in periodontal prognosis determination timing. The majority of respondents indicated that prognosis was determined at multiple timepoints versus at initial evaluation only or after the completion

of non-surgical therapy, suggesting that a patient's periodontal prognosis was repeatedly evaluated throughout their treatment plan. Reported repeat evaluations were consistent with the choice of Kwok and Caton as the favored system as this prognosis system outlines assessing periodontal stability at multiple points throughout treatment (Kwok & Caton, 2007). However, while the majority of respondents reported assessing periodontal prognosis at multiple time points, it was peculiar that the majority of respondents did not report referring to their initial periodontal prognosis determination to confirm or modify prognosis.

A unique complicating factor in applying periodontal prognosis in military patients is the influence of "operational" and/or military specific challenges affecting access to or provision of dental care. An important part of a military periodontist's job is the determination of "Operational Dental Readiness." Since operational readiness and periodontal prognosis focus on forecasting dental disease status and progression, we aimed to investigate whether periodontal prognosis affected the respondent's determination of operational dental readiness for a service member. In rating the influence of periodontal prognosis on operational dental readiness, respondents were more likely than not to state that their readiness classification was frequently influenced by periodontal prognosis. Inversely, respondents were less likely to report operational requirements influencing periodontal prognosis assignment. However, in both cases respondent distributions were evenly distributed, weakly correlated, and nonsignificant. We interpret these results to suggest that there was a relatively weak correlation between periodontal prognosis and operational status.

With regards to future research, respondents were questioned about the addition of “Staging and Grading” to the current classification of periodontitis as determined by the 2017 World Workshop (Tonetti, Greenwell, & Kornman, 2018). Grading aims to indicate the rate of progression of periodontitis as well as its potential responsiveness to therapy. Thus, grading in of itself can be considered a measure of the prognosis of the overall dentition. When the respondents were asked whether staging and grading of periodontitis affected their periodontal prognosis assignment practices, 61.5% (N = 40) stated that staging and grading did not affect prognosis. While grading is determined for the overall dentition and thus differs from our periodontal prognosis systems, which outline specific prognosis determinations for individual teeth, the overlap between prognosis and grading of periodontitis as well as how the two influence one another are elements that require further investigation.

Of a potential 120 respondents, our study sample received responses from 65. Although a moderate to good survey response, 65 periodontists represent only a fraction of all periodontists in the United States. Additionally, the survey's targeted demographic, military active-duty periodontists, may not have been representative of periodontists in civilian private practice or those fully devoted to academia at civilian institutions. Moreover, our survey questions were relatively broad and aimed at gathering primary exploratory data for utilization in future studies. Future investigations will target a broader demographic with study designs that focus on the relationship between the use of staging and grading in periodontal diagnosis and its effect on prognosis. Alternatively, future research could focus on pre- and post-doctoral periodontal programs to more clearly gauge how prognosis is taught and utilized. Amongst the specific demographic of

military periodontists, future research could aim to dive deeper on the relationship between prognosis and operational dental readiness.

CHAPTER 5: Conclusions

This study led to four primary findings regarding prognosis practices among active-duty military periodontists. The Kwok and Caton periodontal prognosis system was the most favored, respondents reported assigning prognosis at multiple time points in a patient's overall course of treatment, the severity of the periodontal presentation and the predictability of treatment outcomes were the most important factors involved in assigning a prognosis, and there was minimal influence between operational dental readiness and periodontal prognosis. Knowledge from this study illustrates the clinical applications of periodontal prognosis systems and provides a framework for future research regarding standardization in education and clinical practice.

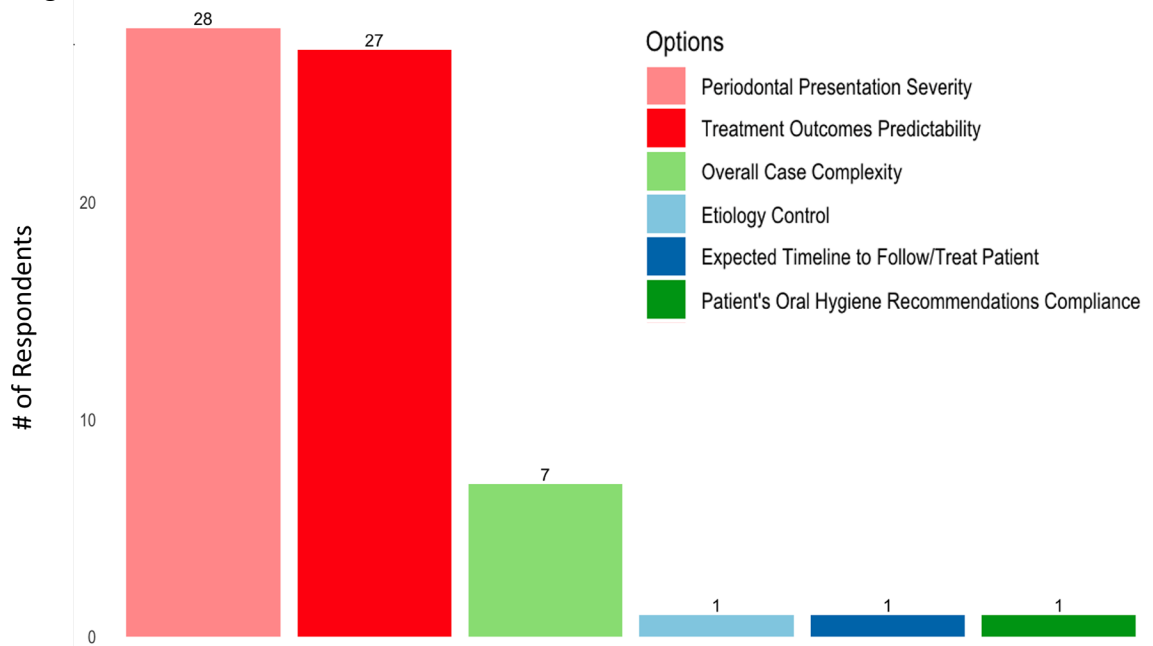
Table 1: Profile of Survey Participants

	Air Force (N=18)	Army (N=18)	Navy (N=29)	Overall (N=65)
Training Location				
Air Force Residency	16 (88.9%)	0 (0%)	0 (0%)	16 (24.6%)
Civilian Residency	2 (11.1%)	0 (0%)	3 (10.3%)	5 (7.7%)
Army Residency	0 (0%)	18 (100%)	0 (0%)	18 (27.7%)
Navy Residency	0 (0%)	0 (0%)	26 (89.7%)	26 (40.0%)
Diplomate of AAP Status				
No	1 (5.6%)	2 (11.1%)	4 (13.8%)	7 (10.8%)
Yes	17 (94.4%)	16 (88.9%)	25 (86.2%)	58 (89.2%)
Experience in Academic Setting				
No	3 (16.7%)	6 (33.3%)	12 (41.4%)	21 (32.3%)
Yes	15 (83.3%)	12 (66.7%)	17 (58.6%)	44 (67.7%)
Percent of Patients Active-Duty				
Mean (SD)	91.2 (15.4)	97.1 (5.7)	91.7 (14.3)	93.0 (13.0)
Median [Min, Max]	99.0 [50.0, 100]	100 [80.0, 100]	100 [50.0, 100]	100 [50.0, 100]
Percent Patients Change/Gone in 6 Months				
Mean (SD)	21.7 (10.4)	32.1 (15.4)	35.7 (18.1)	30.6 (16.3)
Median [Min, Max]	20.0 [10.0, 50.0]	30.0 [15.0, 70.0]	31.5 [10.0, 75.0]	25.0 [10.0, 75.0]

Table 2: Prognostic System Utilized by Service Branch and Years Since Training

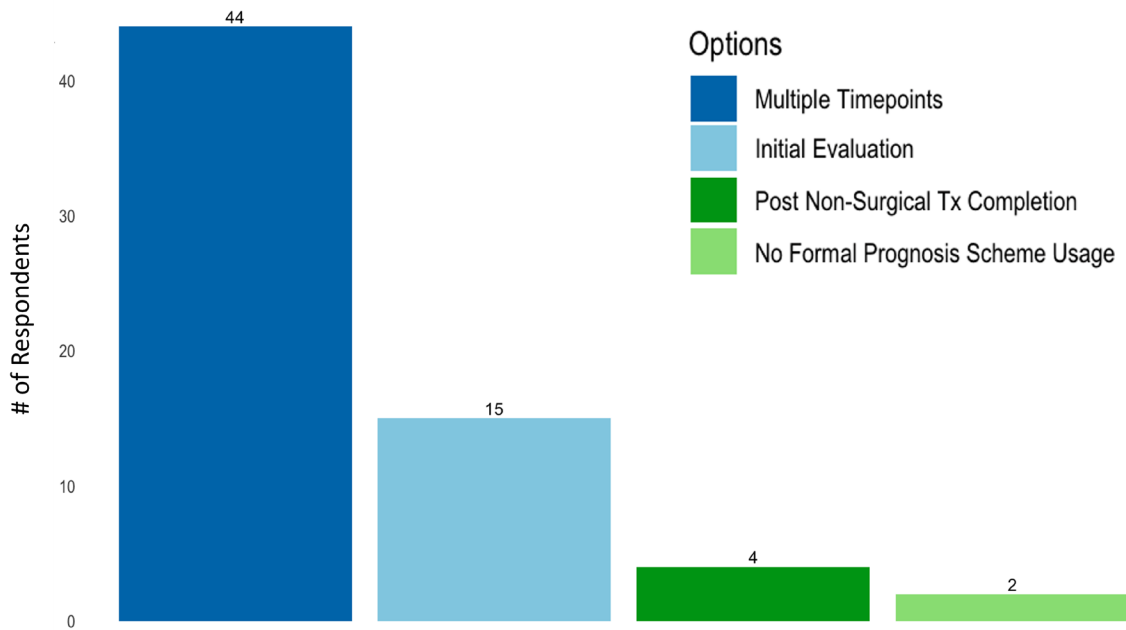
	Becker (1984) (N=7)	McGuire (1991) (N=15)	Kwok and Caton (2007) (N=41)	Combine d Schemes (N=2)	Overall (N=65)
Service Branch					
Air Force	1 (14.3%)	0 (0%)	17 (41.5%)	0 (0%)	18 (27.7%)
Army	3 (42.9%)	1 (6.7%)	13 (31.7%)	1 (50.0%)	18 (27.7%)
Navy	3 (42.9%)	14 (93.3%)	11 (26.8%)	1 (50.0%)	29 (44.6%)
Years Since Training					
Mean (SD)	12.1 (3.9)	5.5 (3.9)	7.7 (6.0)	7.5 (2.1)	7.7 (5.6)
Median [Min, Max]	12.0 [6.0, 19.0]	5.0 [1.0, 14.0]	7.0 [1.0, 23.0]	7.5 [6.0, 9.0]	7.0 [1.0, 23.0]

Figure 1: Distribution of respondents' consideration of most important criteria when assigning prognosis.



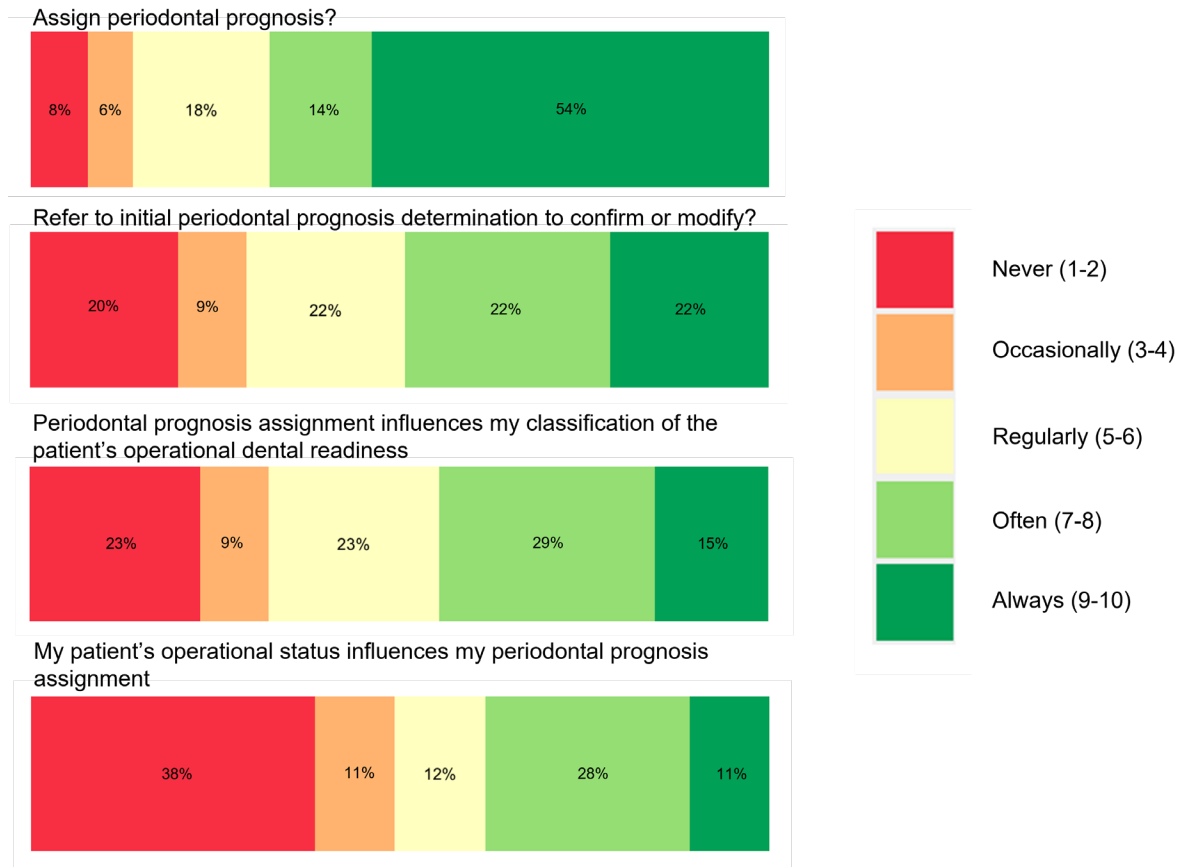
Survey respondents were asked “What do you consider the most important when assigning a periodontal prognosis?” Severity of periodontal presentation (43.1%, N = 28) and predictability of treatment outcomes (41.5%, N = 27) were the two most cited criteria considered.

Figure 2: Patient periodontal prognosis determination timing.



Respondents were asked, “At which time point do you determine a patient’s periodontal prognosis?” Majority of respondents reported determining periodontal prognosis at multiple time points (67.6%, N = 44) or at initial evaluation only (23.1%, N = 15).

Figure 3: Respondent practices in relation to prognosis assignment methods and operational dental readiness of military patients.



Respondents were asked questions with scaled responses from 1 to 10. For purposes of analysis, the scaled responses were stratified into the following groupings: (1-2: Rarely; 3-4: Occasionally; 5-6: Regularly; 7-8: Often; 9-10: Always). Most respondents (67.7%, N = 44) reported assigning periodontal prognosis often or always. Approximately half (49.2%, N = 32) referred to their initial periodontal prognosis assignment to confirm or modify prognosis assignment often or always. Less than half of respondents (44.6%, N = 29) reported that periodontal prognosis influenced their determination of operational dental readiness classification often or always, whereas a smaller proportion (38.5%, N = 25) reported that operational status often or always influenced periodontal prognosis assignment.

APPENDIX A

Survey Questions

Demographic Questions:

1) In which Branch of the Armed Forces do you currently serve?

- a. Air Force
- b. Army
- c. Navy

2) On a scale of 0-100%, what percentage of your time is currently spent in clinical practice versus administrative or other collateral duty roles?

Open Box to allow entering a percentage

3) Where did you complete your Periodontics Residency training?

- a. Air Force Residency
- b. Army Residency
- c. Navy Residency
- d. Civilian Residency

4) What year did you graduate from your Periodontics Residency?

Open Box to allow entering a year

5) Are you a Diplomate of the American Academy of Periodontology?

- a. Yes
- b. No

6) Do you have academic experience as a Periodontist serving as a faculty member or mentor for a Periodontal or any postdoctoral dental training program?

- a. Yes
- b. No

7) To the best of your knowledge, approximately what percentage of your patients are Active Duty servicemembers?

Open Box to allow entering a percentage

8) To the best of your knowledge, approximately what percentage of your patients will change duty stations, deploy, or otherwise no longer be under your care in 6 months?

Open Box to allow entering a percentage

Prognosis Questions:

9) Do you currently document periodontal prognosis classification in your evaluation/treatment plan note (even if only part of the time)?

- a. Yes
- b. No

10) On a scale of 1 to 10, where 1 is never and 10 is always, how often do you assign periodontal prognosis?

Options from 1 to 10

11) Which of the following statements best describes how you utilize prognosis when determining a treatment plan?

- a. I record in the patient's chart an "Overall" prognosis for the entire dentition and an "Individual" prognosis for each tooth
- b. I record in the patient's chart an "Overall" prognosis for the entire dentition only
- c. I record in the patient's chart an "Individual" prognosis for each tooth only
- d. I do not formally record prognosis in the patient's chart
- e. Other (open box to allow for specifying)

12) What do you consider most important when assigning a periodontal prognosis?

- a. Severity of the periodontal presentation
- b. Overall complexity of the case
- c. Predictability of treatment outcomes
- d. The timeline I can expect to treat and be able to follow the patient
- e. I don't utilize periodontal prognosis as a practice
- f. Other (open box to allow for specifying)

13) At which time point do you determine a patient's periodontal prognosis?

- a. At initial evaluation
- b. After completion of all non-surgical therapy
- c. After completion of all non-surgical and surgical therapy
- d. I determine prognosis at multiple points over time
- e. I do not formally utilize periodontal prognosis in clinical practice
- f. Other (open box to allow for specifying)

14) On a scale of 1 to 10, where 1 is never and 10 is always, how often do you refer back to your initial periodontal prognosis determination to either confirm or modify it?

Options from 1 to 10

15) On a scale of 1 to 10, where 1 is never and 10 is always, how does your periodontal prognosis assignment influence your determination of an active duty patient's operational dental readiness classification?

Options from 1 to 10

16) On a scale of 1 to 10, where 1 is never and 10 is always, how does a patient's operational status such as an imminent deployment or an upcoming permanent change of status influence your assignment of periodontal prognosis?

Options from 1 to 10

17) Which of the following Periodontal Prognosis systems do you currently utilize most often when treatment planning for periodontal disease in your clinical practice?

- a. Becker (1984)
- b. McGuire (1991)
- c. Kwok and Caton (2007)
- d. No utilization of any formal periodontal prognosis system
- e. Other (open box to allow for specifying)

18) Does the addition of Staging and Grading in the 2017 World Workshop affect your prognosis assignment practices?

- a. Yes
- b. No

19) Please share any additional comments you have regarding periodontal prognosis

Open Box to allow for comments

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