



Practice Analysis
for
General Dentist
Released 05/15/2007

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WREB DENTAL PRACTICE ANALYSIS

Objective of This Practice Analysis

The objective of this analysis is to identify the important procedures and tasks that are commonly performed by entry-level dentists in general practice. This provides a basis to validate the content of examinations administered by dental testing agencies, for recommending changes to existing examinations, and for developing new examination sections. On the WREB clinical dental examination, the knowledge and skills required to perform dental procedures are not individually evaluated. For this examination, the test items are clinical procedures that are completed by licensure candidates. WREB examiners score the completed procedures. Since the WREB examination tests by having candidates perform procedures from the practice of dentistry, in the construct validation process, a direct linkage exists between the tested measure and dental practice (AERA, APA, & NCME, p.153, 1999)¹. The contents of the examination are linked to constructs that were identified as relevant to professional competence during the practice analysis. Consequently, the knowledge, skills, and linkages to associated procedures were not included in this analysis of the content of dentistry. This practice analysis sought to identify those dental procedures that are most frequent and important in general practice dentistry.

Methodology

Appoint a task force of subject matter experts.

Convene a meeting of the subject matter experts to develop a list of dental procedures that are necessary and appropriate to include in surveys of dentists.

Construct a survey instrument to inform the task force:

- Frequency of performance for each procedure.
- Importance of each procedure (amount of associated risk).

Determine the distribution of surveys within population sampled.

Distribute the survey.

Analyze survey data. Convene additional meetings as necessary.

Complete a Final Report.

Task Force

Subject Matter Experts

Dr. William Woods, D.D.S., Chair, 2007 WREB President, dental licensing test examiner, and practicing general dentist
Dr. James A. Sparks, D.D.S., dental licensing test examiner and practicing general dentist
Dr. James Ence, D.D.S., dental licensing test examiner and practicing general dentist
Dr. Tim Saunders, D.D.S., Professor, Oral Health Care Externship Program Director, University of Southern California
Dr. John Valenza, D.D.S., Associate Professor, Executive Associate Dean, University of Texas, Houston
Dr. Gerald Woodworth, D.M.D., WREB Director of Examination Administration and practicing general dentist
Dr. David Low, D.D.S., WREB Examination Review Committee Chair and dental licensing test coordinator

Additional Participants

Del Hammond, WREB testing specialist
Linda Paul, WREB Executive Director
Beth Cole, WREB Assistant Executive Director

Reviewers

Dr. Thomas Haladyna, PhD., Professor, Arizona State University
Dr. Norman Hertz, PhD., Director of Psychometric Services, Comira Testing

The Conduct of the Practice Analysis

Orientation and Training

The testing specialist presented an orientation and training session to the task force. The concepts of validity, reliability and fidelity in testing were explained. The importance of practice analyses and content selection in reference to those concepts were discussed. The presentation identified the available guidance and standards and discussed the considerations that should be addressed in the process of defining test content.

Survey Instrument and Sampling Plan

The task force reviewed data from:

- ADA 1999 Survey of Dental Services Rendered,²
- California Validation Report for the California General Dentist Licensing Examination (2005),³
- Florida 1998 Dental Task Analysis Report,⁴
- WREB 1989 Dental Practice Survey.⁵

As a result of the review, the task force specified procedures to be included in the survey of practicing general dentists. Procedures were grouped under general titles rather than the more specific procedure titles used for CDT codes on the 1999 ADA survey. This reduced the number of survey responses required in an effort to maximize the survey response rate. A total of 4457 surveys were sent to a random sample of 10% of the general dentists from each state/territory in this country. Follow-up postcards were sent 10 days later in an effort to maximize the response rate. WREB contracted with the ADA to select the random sample from their listing of member and non-member dentists and to mail surveys. Of the surveys sent, 84 were not received or were returned after the cutoff date for analysis. Additionally, surveys from twenty-seven respondents were unusable because of incomplete demographic data or because the dentist was not a practicing general dentist. The response rate for the 1284 completed surveys used for this analysis was 29.54% overall.

It should be noted that the actual size of a sample is the significant factor in the effect of sampling error. For example a sample of 200 describes a group of 2,000 practitioners or a group of 200,000 practitioners equally well. Increasing sample sizes above 200 to 300 responses does little to increase accuracy.

Survey error is introduced if the respondents have systematic different opinions or practice experience when compared to the non-respondents. We do not see any reason for these differences to exist and when observing the consistency of the responses across regions, we feel that the data supports this contention.

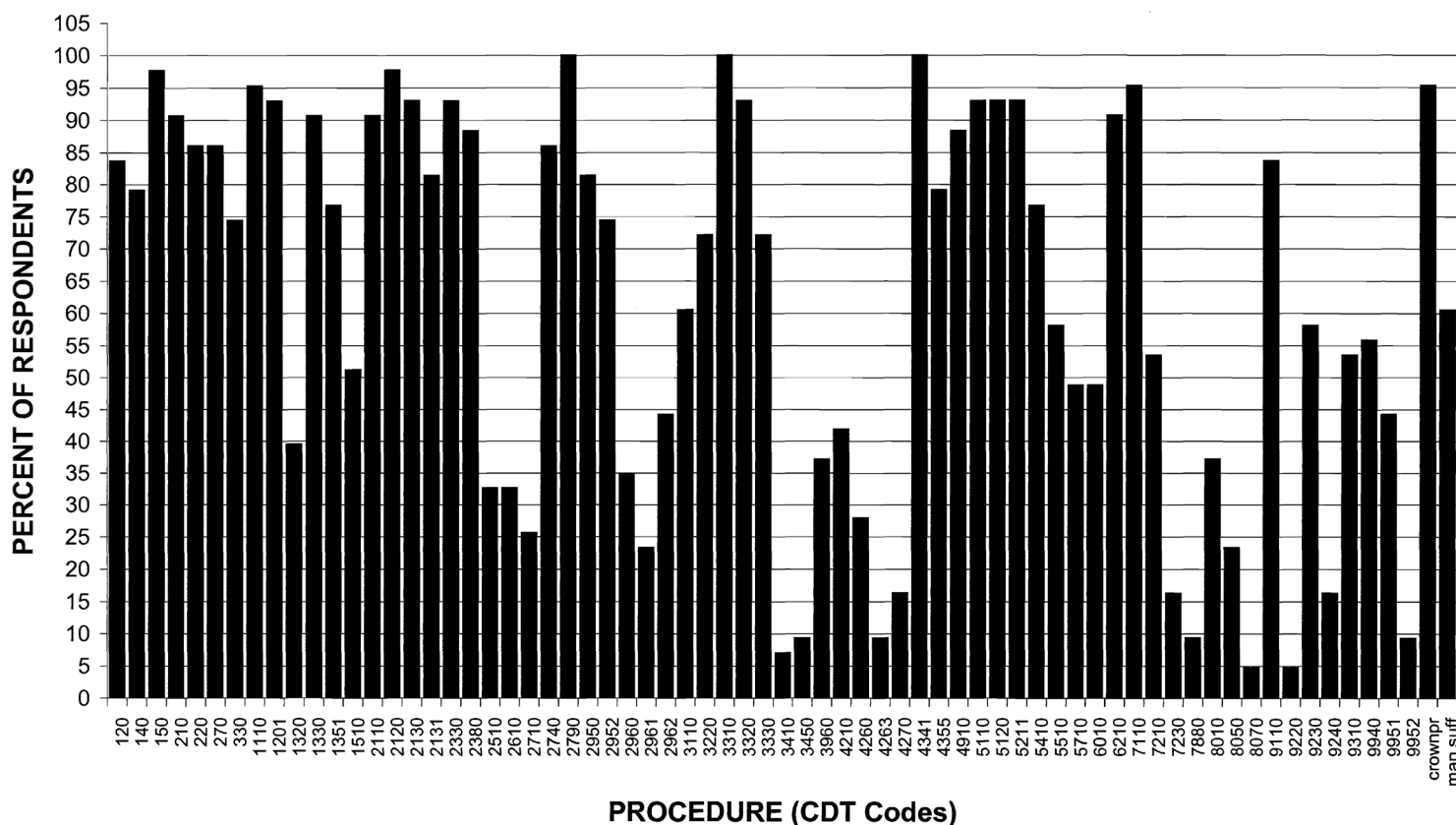
The task force also decided to survey all of the dental schools in the country to determine which of the specified procedures are taught to the level of competency. The deans at the 56 dental schools in this country were each sent a questionnaire asking which of the 67 procedures from the 1999 ADA survey,³ which were listed in CDT code order, are taught to competency in their curriculum. The committee agreed that this would identify the procedures that were considered reasonably frequent and important in dentistry. The deans were also asked questions about dental licensing exam content. These questions were informational for WREB examination development, but are not part of the practice analysis and consequently, are not included in the results of the survey. Responses were received from 44 of the schools for a response rate of 78.6%.

Data Analysis Results

The results of the surveys are presented as percentages of responses rather than the conventional method⁶ of assigning points to the categories of responses and developing numerical scores from the responses for each survey question. This presentation was chosen with the intent of making the results more meaningful to dental practitioners who will use the survey results. This is consistent with ADA's 1999 Survey,³ which reported results in frequencies. Correlations of percentages of responses were used to compare data from different groups of responders.

Graph 1 is a bar graph that summarizes the raw data for the dental school responses. Table 1 and Graph 2 detail the responses according to region. The East region includes schools that are in the Eastern United States and, if licensing examinations are offered at the school, the primary examination

PERCENT OF DENTAL SCHOOLS THAT TEACH PROCEDURES TO COMPETENCY



Graph 1

CDT Code	Description	CDT Code	Description
00120	Periodic Oral Evaluation	03410 - 03426	Apicoectomy/periradicular surgery
00140	Limited Oral Evaluation	03450	Root amputation
00150	Comprehensive Oral Evaluation	03960	Bleaching of discolored tooth
00210	Radiographs Complete series	04210 - 04240	Gingival surgery
00220 - 00230	Radiographs, periapical	04260	Osseous Surgery
00270 - 00274	Radiographs, bitewing	04263 - 04264	Bone Replacement Graft
00330	Panoramic film	04270 - 04271	Soft Tissue Graft
01110 - 01120	Prophylaxis	04341	Scaling and Root Planing, per quadrant
01201 - 01205	Fluoride treatment	04355	Debridement
01320	Tobacco Counseling	04910	Periodontal maintenance
01330	Oral Hygiene Instruction	05110	Complete denture, maxillary
01351	Sealant per root	05120	Complete denture, mandibular
01510 - 01550	Space Maintainer	05211 - 05281	Partial dentures
02110, 02140	Amalgam, One Surface	05410 - 05422	Denture adjustment , complete or partial
02120, 02150	Amalgam, two surfaces	05510 - 05660	Denture repair, complete or partial
02130, 02160	Amalgam, three surfaces	05710 - 05761	Denture rebase or reline
02131, 02161	Amalgam four +surfaces	06010 - 06199	Implant Services
02330 - 02336	Resin Restoration, anterior	06210 - 06792	Fixed Partial dentures
02380 - 02387	Resin Restoration posterior	07110	Single Tooth Extraction
02510 - 02530	Inlay, Metallic	07210, 07220	Surgical Extraction, soft tissue
02610 - 02630	Inlay, porcelain/ceramic	07230 - 07250	Surgical Extraction, bony
02710 - 02722	Crown, resin	07880	Occlusal Orthotic device
02740 - 02752	Crown, porcelain	08010 - 08040	Limited orthodontic treatment
02790 - 02810	Crown, metal	08050, 08060	Interceptive Orthodontic treatment
02950	Core Buildup	08070 - 08090	Comprehensive Orthodontic treatment
02952 - 02954	Posts and Core in addition to crown	09110	Emergency Treatment of dental pain
02960	Labial veneer, chair side	09220	General Anesthesia
02961	Labial resin laboratory	09230	Analgesia
02962	Labial veneer porcelain, laboratory	09240	Intravenous Sedation
03110, 03120	Pulp cap	09310	Consultation
03220	Pulpotomy	09940	Occlusal Guard
03310	Anterior Endodontic therapy	09951	Occlusal adjustment limited
03320	Bicuspid endodontic therapy	09952	Occlusal adjustment, complete
03330	Molar endodontic therapy		

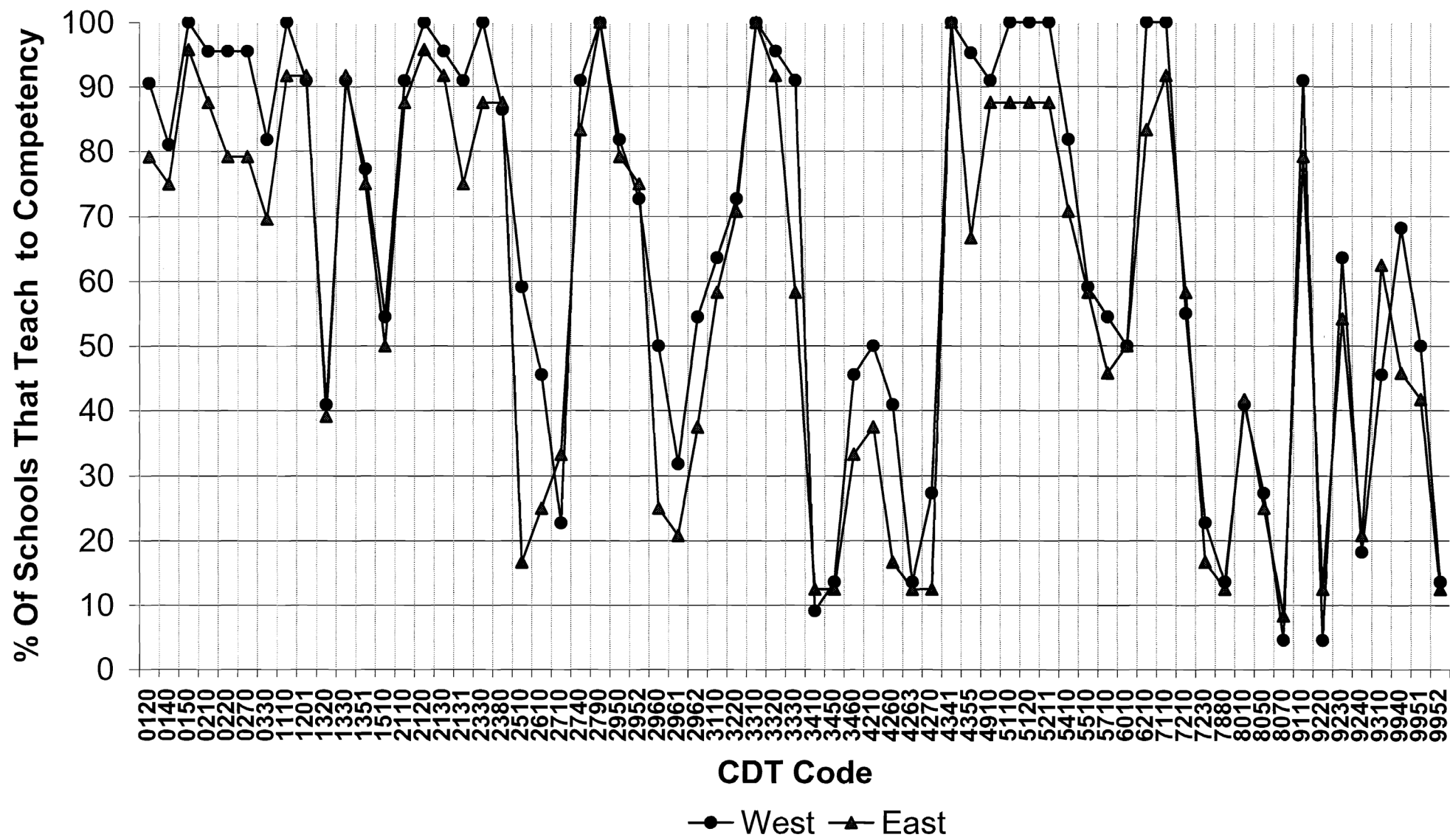
Graph 1 Key

Percentage of Schools That Teach Procedures to Competence - Listed by CDT Code

CODE	ALL	West	East		CODE	ALL	West	East
0120	84.4	90.5	79.2		3410	10.9	9.1	12.5
0140	77.8	81.0	75.0		3450	13.0	13.6	12.5
0150	97.8	100.0	95.8		3460	39.1	45.5	33.3
0210	91.3	95.5	87.5		4210	43.5	50.0	37.5
0220	87.0	95.5	79.2		4260	28.3	40.9	16.7
0270	87.0	95.5	79.2		4263	13.0	13.6	12.5
0330	75.6	81.8	69.6		4270	19.6	27.3	12.5
1110	95.7	100.0	91.7		4341	100.0	100.0	100.0
1201	91.3	90.9	91.7		4355	80.0	95.2	66.7
1320	40.0	40.9	39.1		4910	89.1	90.9	87.5
1330	91.3	90.9	91.7		5110	93.5	100.0	87.5
1351	76.1	77.3	75.0		5120	93.5	100.0	87.5
1510	52.2	54.5	50.0		5211	93.5	100.0	87.5
2110	89.1	90.9	87.5		5410	76.1	81.8	70.8
2120	97.8	100.0	95.8		5510	58.7	59.1	58.3
2130	93.5	95.5	91.7		5710	50.0	54.5	45.8
2131	82.6	90.9	75.0		6010	50.0	50.0	50.0
2330	93.5	100.0	87.5		6210	91.3	100.0	83.3
2380	87.0	86.4	87.5		7110	95.7	100.0	91.7
2510	37.0	59.1	16.7		7210	56.8	55.0	58.3
2610	34.8	45.5	25.0		7230	19.6	22.7	16.7
2710	28.3	22.7	33.3		7880	13.0	13.6	12.5
2740	87.0	90.9	83.3		8010	41.3	40.9	41.7
2790	100.0	100.0	100.0		8050	26.1	27.3	25.0
2950	80.4	81.8	79.2		8070	6.5	4.5	8.3
2952	73.9	72.7	75.0		9110	84.8	90.9	79.2
2960	37.0	50.0	25.0		9220	8.7	4.5	12.5
2961	26.1	31.8	20.8		9230	58.7	63.6	54.2
2962	45.7	54.5	37.5		9240	19.6	18.2	20.8
3110	60.9	63.6	58.3		9310	54.3	45.5	62.5
3220	71.7	72.7	70.8		9940	56.5	68.2	45.8
3310	100.0	100.0	100.0		9951	45.7	50.0	41.7
3320	93.5	95.5	91.7		9952	13.0	13.6	12.5
3330	73.9	90.9	58.3					

Table 1

Procedures Taught to Competency Shown by CDT Code



Graph 2

is administered by NERB, SRTA, or under the supervision of the dental board of an Eastern state. The West region includes the schools in states where results of a CRDTS or WREB administered licensing examination are accepted or schools where CRDTS, WREB, or a state board from the West administers the primary examination. With this categorization 23 survey responses were included in data from the "East" and 21 were included in data from the "West." Although there were some differences in the percentages of schools indicating that specific procedures were taught to competency, the correlation of the percentages between the East and West was $r=.95$. The very high correlation⁶ between the two regions indicates that if the data from one region identifies a procedure as important, then the data from the other region will also identify that procedure as important.

DENTIST SURVEY RESPONSES IN PERCENTAGES								
	Frequency					Importance		
	OFTEN	OCCASIONALLY	RARELY			HIGH	MEDIUM	LOW
Diagnosis / Treatment Planning	99.3	0.6	0.1		Diagnosis / Treatment Planning	99.1	0.9	0.1
Composite Restorations - Anterior	92.4	7.1	0.4		Composite Restorations - Anterior	92.7	7.0	0.2
Crown	86.7	11.3	2.0		Crown	92.4	7.0	0.6
Composite Restorations - Posterior	79.5	17.1	3.4		Composite Restorations - Posterior	78.6	17.9	3.4
Periodontal - Non Surgical	60.2	27.8	11.8		Periodontal - Non Surgical	81.4	15.7	2.9
Surgery - Exodontia	56.9	29.9	13.1		Surgery - Exodontia	80.6	16.1	3.3
Fixed Partial Denture	52.9	37.9	9.2		Fixed Partial Denture	78.0	19.2	2.8
Endodontics - Anterior	52.3	34.7	13.1		Endodontics - Anterior	83.5	14.4	2.1
Endodontics - Posterior	44.6	25.9	29.5		Endodontics - Posterior	78.8	15.9	5.3
Amalgam Restorations	39.5	20.1	40.4		Amalgam Restorations	49.5	23.5	27.1
Removable Partial Denture	34.7	52.1	13.2		Removable Partial Denture	66.6	29.5	4.0
Complete Denture	31.0	47.9	21.0		Complete Denture	66.4	27.7	6.0
Bleaching	30.6	50.2	19.3		Bleaching	31.7	41.1	27.2
Implant Restorations	24.1	47.3	28.5		Implant Restorations	66.3	25.9	7.8
Endodontics - Access and Refer	21.7	41.6	36.6		Endodontics - Access and Refer	66.7	21.1	11.2
Veneers	16.9	54.2	28.9		Veneers	33.5	43.7	22.9
Aesthetics - Indirect (Not Veneers)	16.9	43.1	39.9		Aesthetics - Indirect (Not Veneers)	28.1	43.3	28.5
Occlusal Adjustments	14.7	44.7	40.7		Occlusal Adjustments	46.6	36.9	16.5
Orthodontic Procedures	5.0	15.7	79.4		Orthodontic Procedures	35.4	34.9	29.7
Surgery - Implant Placement	4.2	10.3	85.6		Surgery - Implant Placement	43.5	30.2	26.2
Periodontal Surgery	4.1	15.1	80.9		Periodontal Surgery	49.8	30.3	19.9

Table 2

DENTAL PROCEDURES TO CONSIDER FOR INCLUSION IN TEST SPECIFICATION
ORDERED BY QUANTIFYING SURVEY RESPONSES FOR FREQUENCY AND IMPORTANCE

Associated CDT's	Percent of Surveyed Dental Schools That Teach to Competency	Procedures from Survey of Dentists Ordered According to Score	Score	Percent of Surveyed Dental Schools That Teach to Competency	Procedures from Survey of Dentists Ordered According to Score	Score
0120-0150	97.7	Diagnosis / Treatment Planning	99.9	97.7	Diagnosis / Treatment Planning	98.4
2330s	93.0	Composite Restorations - Anterior	99.2	93.0	Composite Restorations - Anterior	85.7
2700s	100.0	Crown	97.4	100.0	Crown	80.1
2380s	88.4	Composite Restorations - Posterior	93.2	88.4	Composite Restorations - Posterior	62.5
5211-5281	93.0	Fixed Partial Denture	88.3	100.0	Periodontal - Non Surgical	49.0
4910	100.0	Periodontal - Non Surgical	85.4	95.3	Surgery - Exodontia	45.9
3310	100.0	Endodontics - Anterior	85.2	100.0	Endodontics - Anterior	43.7
7110-7200	95.3	Surgery - Exodontia	83.9	93.0	Fixed Partial Denture	41.3
5211+	93.0	Removable Partial Denture	83.4	93.0	Endodontics - Posterior	35.1
5110-5120	93.0	Complete Denture	74.2	93.0	Removable Partial Denture	23.1
3320-3330	93.0	Endodontics - Posterior	66.8	93.0	Complete Denture	20.6
6010-6199	48.8	Implant Restorations	65.8	90.7	Amalgam Restorations	19.6
3960	37.2	Bleaching	58.8	48.8	Implant Restorations	16.0
NA	NA	Endodontics - Access and Refer	55.6	NA	Endodontics - Access and Refer	14.5
NA	NA	Veneers	54.9	37.2	Bleaching	9.7
9951-52	44.2	Occlusal Adjustments	49.6	44.2	Occlusal Adjustments	6.9
2100s	90.7	Amalgam Restorations	43.5	NA	Veneers	5.7
NA	NA	Aesthetics - Indirect (Not Veneers)	42.8	NA	Aesthetics - Indirect (Not Veneers)	4.7
4210-4271	9.3	Periodontal Surgery	15.4	9.3	Periodontal Surgery	2.0
8070	4.7	Orthodontic Procedures	14.6	NA	Surgery - Implant Placement	1.8
6010-6199-2	NA	Surgery - Implant Placement	10.7	4.7	Orthodontic Procedures	1.8
		Score is Based Upon the Product of "Often" + "Occasionally" Frequency and "High" + "Moderate" Importance			Score is Based Upon the Product of "Often" Frequency and "High" Importance	

Table 3

Table 2 presents a summary of survey responses ordered by the frequency of “Often” responses. Table 3 presents data with the procedures ordered by a score that is a combination of frequency and importance and also shows the percentage of schools that teach each of the procedures to competency. This table shows the result of using two methods of assigning scores to the procedures. Using the two methods resulted in little difference in the ordering of procedures by the scores. The procedures that are highest on the ordered lists were generally the procedures taught to competency by a larger percent of dental schools, showing agreement between the information derived from the schools and the practitioners surveyed. Three of the procedures on the dentist survey did not have exactly corresponding CDT codes and were marked NA in the column with the school percentages.

Correlations were computed for percentages of group responses for each type of response for each survey question. The groups considered in the correlations were: the region of the country, the years of dental experience, and the practice location. The three regions selected were East, Central, and West. States that have all or a majority of the state’s geographic area in the Eastern time zone were designated as East. States in the Central time zone were categorized as Central and those in the Mountain or Pacific time zone were categorized as West. The correlations were computed separately for frequency and importance as well as computing the correlations for all responses formatted as one file that includes both frequency and importance. Graphs 3 and 4 show the relationships between the East and West region responses for frequency and importance. The number of responses that came from the East, Central, and West regions were 451, 377, and 456 respectively.

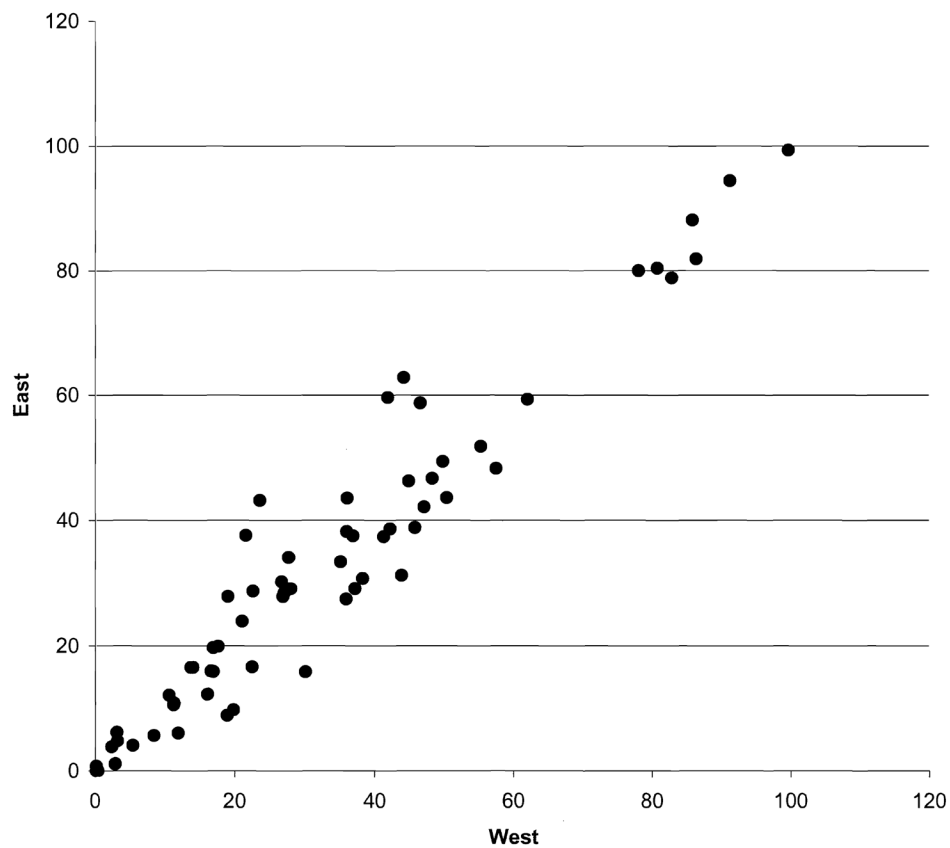
The correlation between groups based on experience were very high,⁷ ranging between $r=.953$ and $r=.993$. The lowest correlation was between responses from dentists with 16 or more years of experience and responses from dentists with less than 7 years of experience.

The correlations between the responses from dentists in rural settings and those in urban setting were also very high,⁷ ranging between $r=.976$ and $r=.989$.

The very high⁷ correlation between groups based on geographic region ranged from $r=.962$ to $r=.992$. The correlations between the West and the other two regions were slightly lower than the correlations between the East and Central regions.

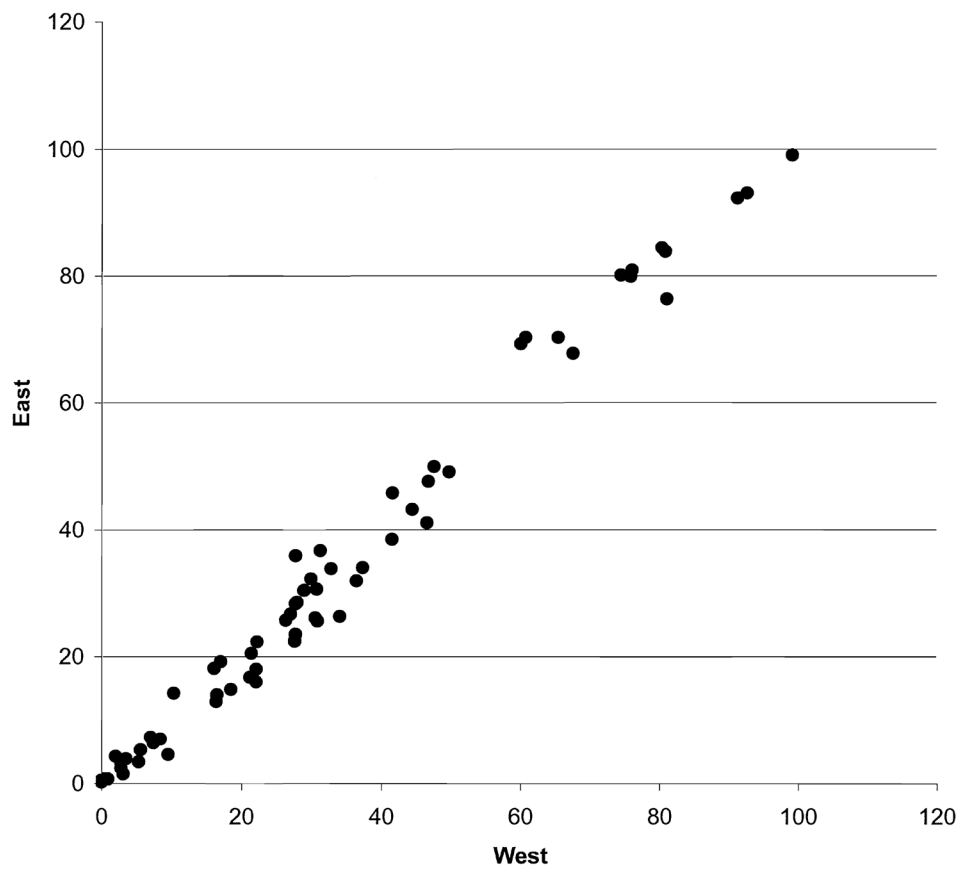
As with the school data, the results that are of interest are those that provide information that allows ranking procedures by relative frequency and importance. The differences in mean values of response percentages are of little interest and are not presented here. The high correlations show that, although there are some differences in the groups’ responses, the values are generally similar and provide for the same rank ordering.

Correlation of Frequency East / West ($r = .962$)



Graph 3

Correlation of Importance East / West ($r = .992$)



Graph 4

Summary

All correlations between data from different groups of respondents were above $r=.95$ as shown in tables 4, 5, and 6. These very high⁷ correlations from the survey reinforce the contention that the practice of dentistry is similar across this country without regard for geographic region. The dental school responses provide validation for the perceptions of the dentists surveyed regarding the important content in dental practice. It is noteworthy that amalgam is losing favor as a restorative material and that more than 70% of the responding dentists place implant teeth either often or occasionally. The subject matter experts on the practice analysis task force decided to consider all except for the last three procedures, listed by score, as possible inclusions on the WREB licensing examination. Some of the listed procedures will be removed from the list of procedures to be included due to logistic or cost restrictions. Some of the procedures may be excluded because they may be extremely difficult to develop into examination exercises or may be primarily in the domain of licensed and unlicensed dental assistive staff.

Correlations Using Responses
for Frequency and Importance

	Experience Less Than 7 Years	Experience Between 7 and 16 Years
Experience Between 7 and 16 Years	.993	
Experience More Than 16 Years	.960	.969

	East	Central
Central	.988	
West	.978	.977

Table 4

Correlations Using Responses
for Frequency

	Experience Less Than 7 Years	Experience Between 7 and 16 Years
Experience Between 7 and 16 Years	.995	
Experience More Than 16 Years	.953	.961

	East	Central
Central	.983	
West	.962	.963

Table 5

Correlations Using Responses
for Importance

	Experience Less Than 7 Years	Experience Between 7 and 16 Years
Experience Between 7 and 16 Years	.995	
Experience More Than 16 Years	.969	.978

	East	Central
Central	.992	
West	.992	.990

Table 6

References

1. American Educational Research Association, American Psychological Association, National Council on Measurement in Education, Standards for Educational and Psychological Testing, American Educational Research Association, Washington, D.C. 1999, pp.153-154.
2. American Dental Association, The 1999 Survey of Dental Services Rendered, American Dental Association, Chicago, 2002.
3. Office of Examination Resources; California Department of Consumer Affairs, Validation Report General Dentist, California Department of Consumer Affairs, Sacramento, 2005.
4. Testing Services Bureau of Operations Division of Medical Quality Assurance; Florida Department of Health, Task Analysis Report and Examination Content Validation Study for the Florida Dental Examination, Florida Department of Health, Tallahassee, 1998.
5. Western Regional Examining Board, 1989 Dental Practice Survey, Western Regional Examining Board, Phoenix, 1989.
6. Raymond MR, Neustel S, "Determining the Content of Credentialing Examinations", Handbook of Test Development, Lawrence Erlbaum Associates, Inc, Mahwah, NJ, 2006, p.195.
7. Hinkle DE, Wiersman W, Jurs SG, Applied Statistics for the Behavioral Sciences, Houghton Mifflin, Boston, 1994, p.119.

Appendix A

Cover Letter for Dental School Survey

Memorandum

From: Dr. William Woods, Chairman, WREB Practice Analysis Committee

To: All Dental School Deans

RE: Practice Analysis Survey

Date: February 3, 2006

I am writing to ask for your assistance in a Practice Analysis Survey currently being conducted by WREB. This survey is being conducted of all U.S. Dental Schools to assist the WREB in determining the frequency and importance of the procedures that entry-level practitioners are performing in dental practice. Having this data will assist us in the process of updating our practice analysis and then our exams so that our testing is consistent with the tasks that an entry-level dentist will perform in practice. We also plan to collect data from a sampling of U.S. practitioners, and insurance companies. A final report will be issued which will be published on our website.

To that end, I am sending you two copies of a brief survey. One is for your files and one is for you to send to the most appropriate clinical representative in your organization to complete and return to WREB. It would be most helpful if you could forward the survey to the person you designate for completion as soon as possible. Upon completion please return it to Beth Cole, Assistant Director at WREB, by February 24, 2006 in the enclosed SASE. Please feel free to contact Beth at 602-944-3315, if you have any questions about the survey.

I thank you for your attention to this matter and I look forward to sharing the results of this important project with you.

Appendix B

Survey Instrument for Dental School Survey

Survey of Dental Schools for WREB Practice Analysis

Name of Person Completing Survey:

Title:

Phone:

Email:

School Name:

What CDT codes are currently being taught to competency for graduating seniors in your present curriculum? Please check below.

CDT Code	Procedure	Check
00120	Periodic Oral Evaluation	
00140	Limited Oral Evaluation	
00150	Comprehensive Oral Evaluation	
00210	Radiographs Complete Series	
00220,00230	Radiographs, periapical	
00270-00274	Radiographs, bitewing	
00330	Panoramic Film	
01110-01120	Prophylaxis	
01201-01205	Fluoride Treatment	
01320	Tobacco Counseling	
01330	Oral Hygiene Instruction	
01351	Sealant Per Root	
01510-01550	Space Maintainer	
02110,02140	Amalgam, one surface	
02120,02150	Amalgam, two surfaces	
02130,02160	Amalgam, three surfaces	
02131,02161	Amalgam, four surfaces	
02330-02336	Resin Restoration, anterior	
02380-02387	Resin Restoration, posterior	
02510-02530	Inlay, metallic	
02610-02630	Inlay, porcelain/ceramic	
02710-02722	Crown, resin	
02740-02752	Crown, porcelain	
02790-02810	Crown, metal	
02950	Core Buildup	
02952-02954	Posts and Core, in addition to crown	
02960	Labial Veneer, chair side	
02961	Labial Resin, laboratory	
02962	Labial Veneer Porcelain, laboratory	
03110,03120	Pulp Cap	
03220	Pulpotomy	
03310	Anterior Endodontic Therapy	
03320	Bicuspid Endodontic Therapy	
03330	Molar Endodontic therapy	
03410-03426	Apicoectomy/Periradicular Surgery	
03450	Root Amputation	
03460	Bleaching of Discolored Tooth	
04210-04240	Gingival Surgery	
04260	Osseous Surgery	
04263-04264	Bone Replacement Graft	
04270-04271	Soft Tissue Graft	
04341	Scaling and Root Planing, per quadrant	
04355	Debridement	

04910	Periodontal Maintenance	
05110	Complete Denture, maxillary	
05120	Complete Denture, mandibular	
05211-05281	Partial Dentures	
05410-05422	Denture Adjustment, complete or partial	
05510-05660	Denture Repair, complete or partial	
05710-05761	Denture Rebase or Reline	
06010-06199	Implant Services	
06210-06792	Fixed Partial Dentures	
07110	Single Tooth Extraction	
07210,07220	Surgical Extraction, soft tissue	
07230-07250	Surgical Extraction, bony	
07880	Occlusal Orthotic Device	
08010-08040	Limited Orthodontic Treatment	
08050,08060	Interceptive Orthodontic Treatment	
08070-08090	Comprehensive Orthodontic Treatment	
09110	Emergency Treatment of Dental Pain	
09220	General Anesthesia	
09230	Analgesia	
09240	Intravenous Sedation	
09310	Consultation	
09940	Occlusal Guard	
09951	Occlusal Adjustment, limited	
09952	Occlusal Adjustment, complete	

What codes do you anticipate adding to your curriculum in the next year? Please list:

What codes do you anticipate deleting from the curriculum in the next year? Please list:

Are there procedures that you feel should be added to the WREB examination that will be important for a graduating dentist to be competent at, that are not currently being tested? Please list:

Do you have a competency assessment that requires a crown preparation and seating on a clinical patient?
Yes ____ No ____

Do you think that evaluating a student's ability to complete a crown preparation and seating on a manikin is sufficient to determine that the student can satisfactorily complete a crown procedure on a patient?
Yes ____ No ____

Appendix C

Cover Letter and Follow Up Postcard



WREB
A National Dental and Dental Hygiene Testing Agency

9201 N. 25th Avenue, Suite 185 Phoenix, Arizona 85021

Phone: 602-944-3315 Fax: 602-371-8131

www.wreb.org

generalinfo@wreb.org dentalinfo@wreb.org hygieneinfo@wreb.org

Date

Dear Dr.,

The WREB is conducting a Practice Analysis Study Survey. We presently administer licensing exams throughout the U.S. with results accepted for licensure in more than 30 states. The purpose of the survey is to determine the frequency and importance of the procedures that entry-level practitioners are performing in dental practice. Having this data will assist us in the process of updating our practice analysis and then our exams so that our testing is consistent with the tasks that an entry-level dentist will perform in practice.

This survey is being sent to a sampling of dentists across the country. We are including the entire United States in this study because we want to investigate regional similarities and differences in basic dental practice. We expect that the survey results should benefit all testing agencies. Along with your input, we are collecting data from insurance companies and dental schools. We plan to publish the results of the study on our website for the benefit of all.

I would appreciate it if you could complete the attached survey at your earliest convenience and return it in the self-addressed stamped envelope. Thank you for your time and effort in assisting us in this important project.

Should you have any questions, please contact Beth Cole, Assistant Director at 602-944-3315.

Sincerely,

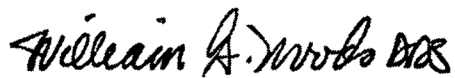
Dr. William Woods,
Chairman, Practice Analysis Committee

Dear Dr.,

We at WREB recently sent a survey to for you to complete with a letter of explanation. Your input is important to the dental community since it will assist us in the process of updating our licensing exams so that our testing is consistent with the tasks that an entry-level dentist will perform in practice. This is a reminder to ask you to complete and mail the survey at your earliest convenience.

Thank you for your assistance with this very important project.

Sincerely,

A handwritten signature in black ink that reads "William A. Woods D.D.S." The signature is written in a cursive, flowing style.

Dr. William Woods
Chairman, Practice Analysis Committee

Appendix D

Survey Instrument for Dentist Survey



WREB
A National Dental and Dental Hygiene Testing Agency

9201 N. 25th Avenue, Suite 185 Phoenix, Arizona 85021

Phone: 602-944-3315 Fax: 602-371-8131

www.wreb.org

generalinfo@wreb.org dentalinfo@wreb.org hygieneinfo@wreb.org

SECTION I: DEMOGRAPHICS

1. What type is your dental practice? <input type="checkbox"/> General Practice Only <input type="checkbox"/> General and Specialty Practice <input type="checkbox"/> Specialty Practice Only	3. In which state(s) do you practice?
2. How many years have you practiced dentistry? <input type="checkbox"/> 16 + years <input type="checkbox"/> 7 -15 years <input type="checkbox"/> 2 - 7 years <input type="checkbox"/> 0 - 2 years	4. In which type of area do you practice? <input type="checkbox"/> Rural <input type="checkbox"/> Urban

SECTION II: PROCEDURES / PRACTICE AREA

1. Please rate the procedures /practice areas listed by marking the appropriate box in each section with a check (√).
2. **Frequency:** How often do you perform the tasks that are within the listed procedures / practice areas?
Importance: How important are the tasks in protecting patient health and welfare?

No matter what you mark in the “Frequency” section, (even if “NA” is your response) please complete the “Importance” section to the best of your ability.

PROCEDURE / PRACTICE AREA	FREQUENCY			IMPORTANCE		
	Often	Occasionally	Rarely / NA	High	Moderate	Low
DIAGNOSIS & TREATMENT PLANNING						
oral diagnosis, prevention, and treatment planning						
OPERATIVE / RESTORATIVE						
composite, anterior						
composite posterior						
amalgam						
crown						
veneer labial, porcelain						
other indirect aesthetic procedure						

PROCEDURE / PRACTICE AREA	FREQUENCY			IMPORTANCE		
	Often	Occasionally	Rarely / NA	High	Moderate	Low
ENDODONTICS						
anterior						
posterior						
access and referral						
PERIODONTAL						
surgical						
non-surgical						
PROSTHODONTICS						
complete dentures						
removable partial dentures						
fixed partial dentures						
implant, restorative						
SURGERY						
exodontia						
implant placement						
ORTHODONTICS						
orthodontic procedures						
OTHER						
occlusal adjustment (equilibration)						
bleaching of discolored tooth						

Appendix E

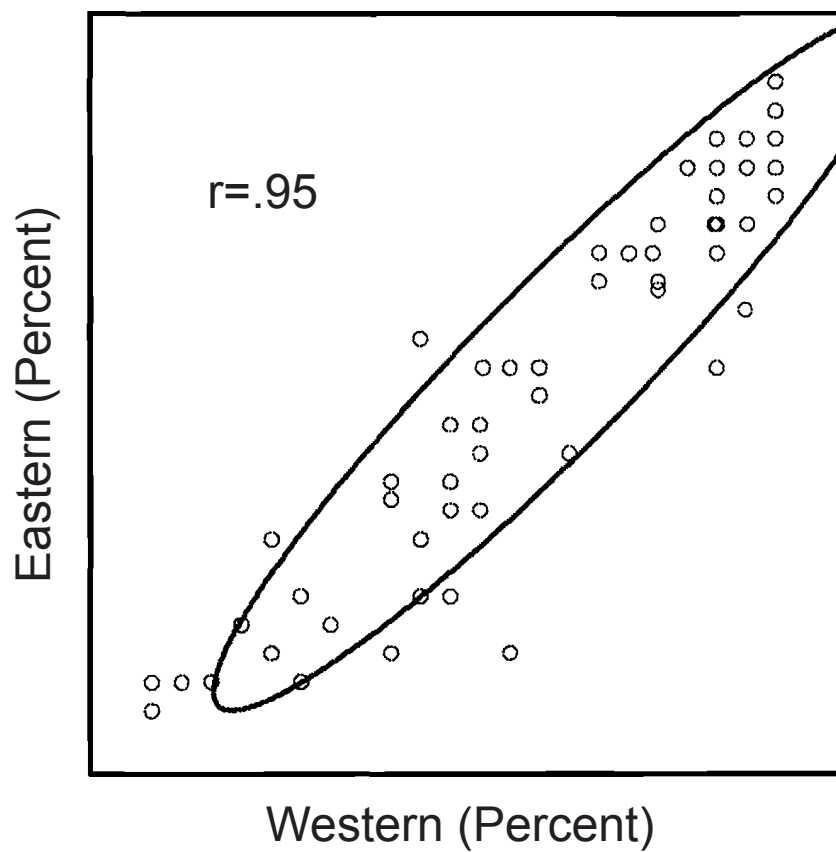
Demographic Table for Dentist Survey

Respondents by State			
State	Responses	State	Responses
AK	4	MT	9
AL	10	NC	23
AR	12	ND	3
AZ	64	NE	10
CA	203	NH	5
CO	28	NJ	38
CT	17	NM	12
DC	4	NV	15
DE	0	NY	62
FL	53	OH	33
GA	30	OK	21
HI	6	OR	22
IA	15	PA	38
ID	19	RI	1
IL	53	SC	11
IN	21	SD	4
KS	5	TN	14
KY	9	TX	112
LA	7	UT	26
MA	24	VA	23
MD	24	VI	2
ME	6	VT	1
MI	47	WA	46
MN	28	WI	25
MO	20	WV	9
MS	8	WY	2
Years Practice	Responses		
Less than 7	448		
Between 7 & 16	779		
More than 16	57		
Practice Location	Responses		
Rural	359		
Urban	893		
Did Not Answer	32		

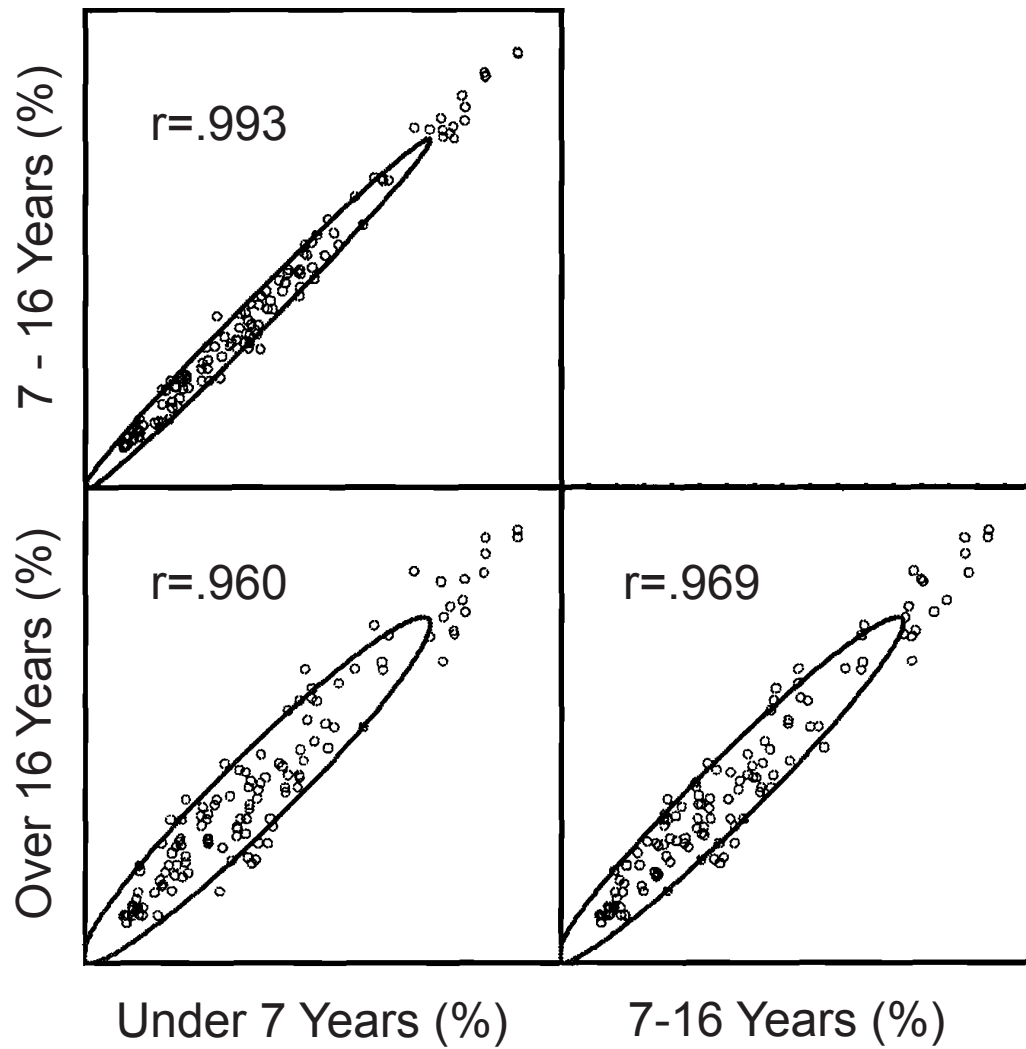
Appendix F

Correlations Shown as Scatterplots

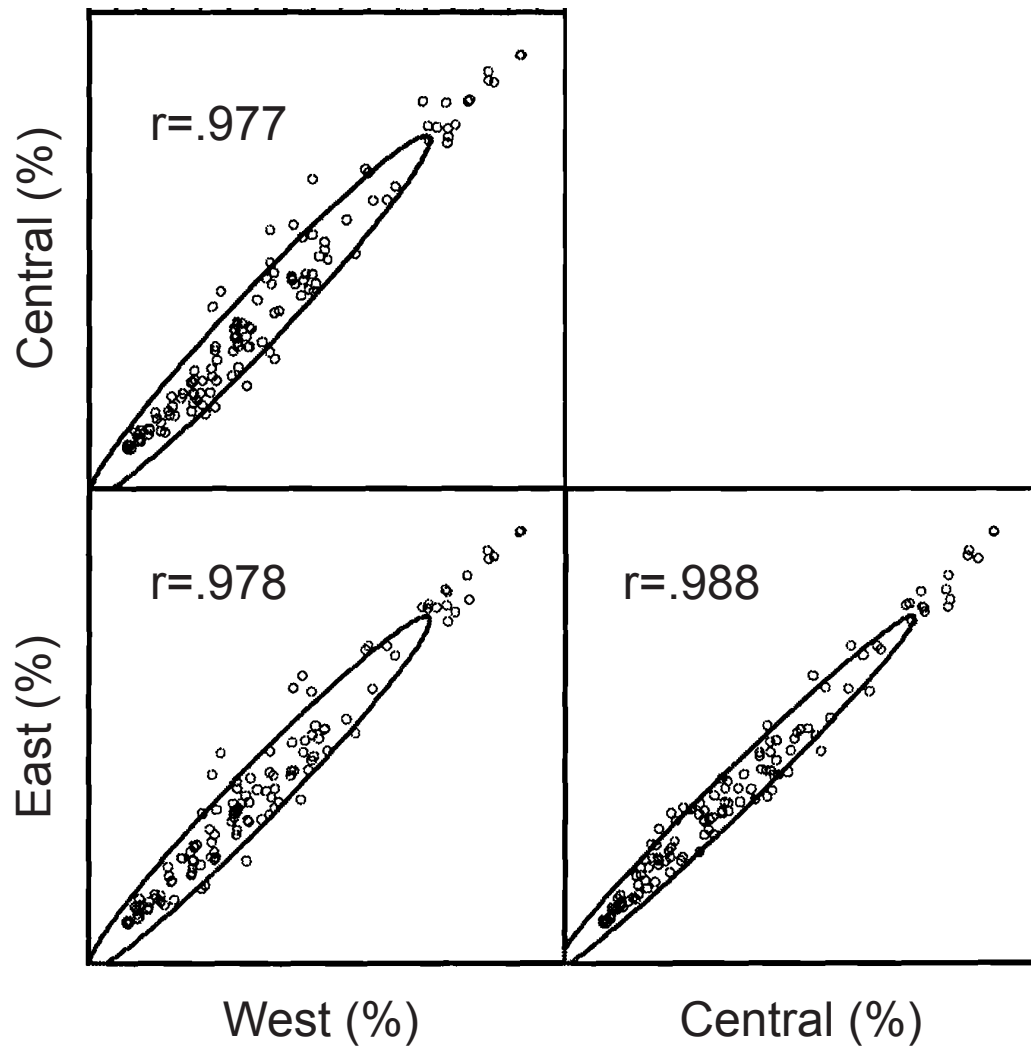
Correlation Between the Eastern and Western Schools on Dental Procedures Taught to Competence



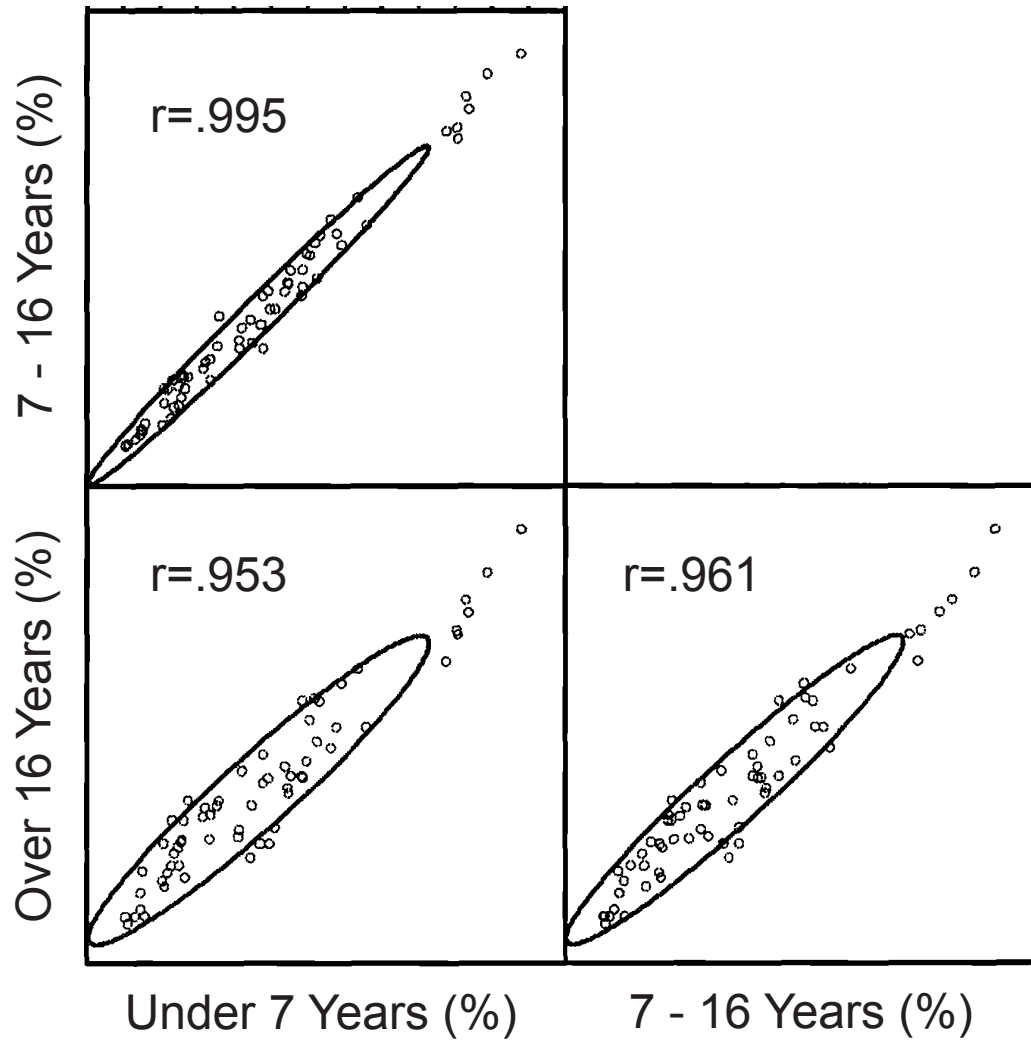
Correlation by Years of Experience Frequency and Importance



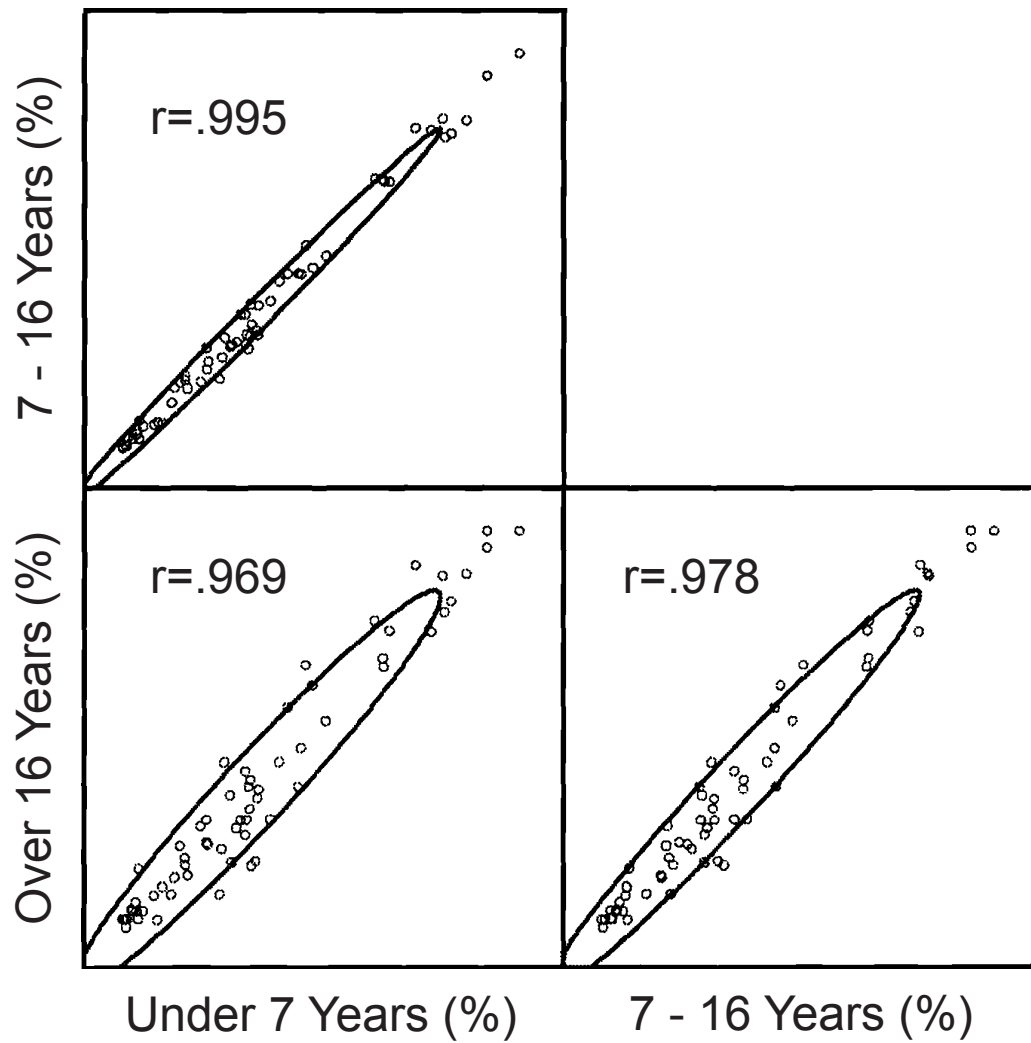
Correlation by Region Frequency and Importance



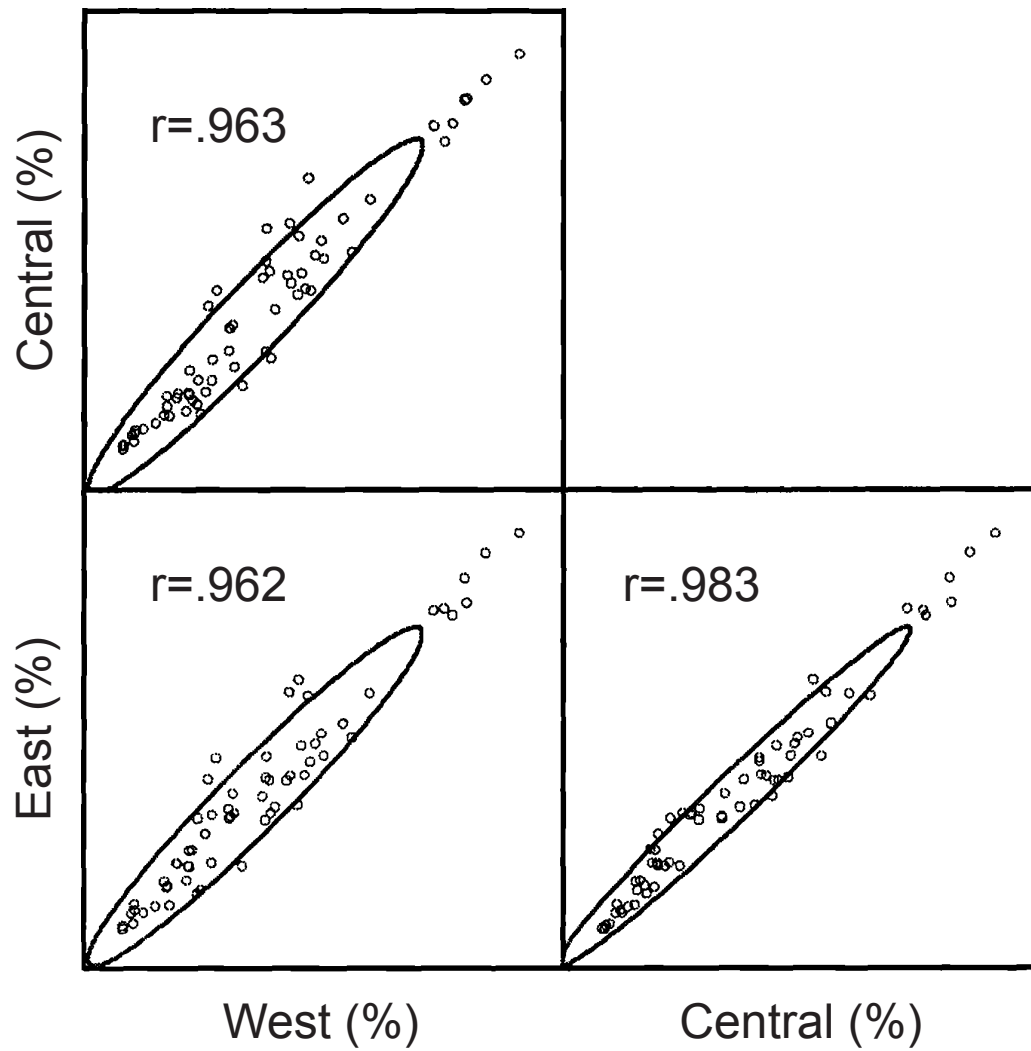
Correlation of Frequency by Years of Experience



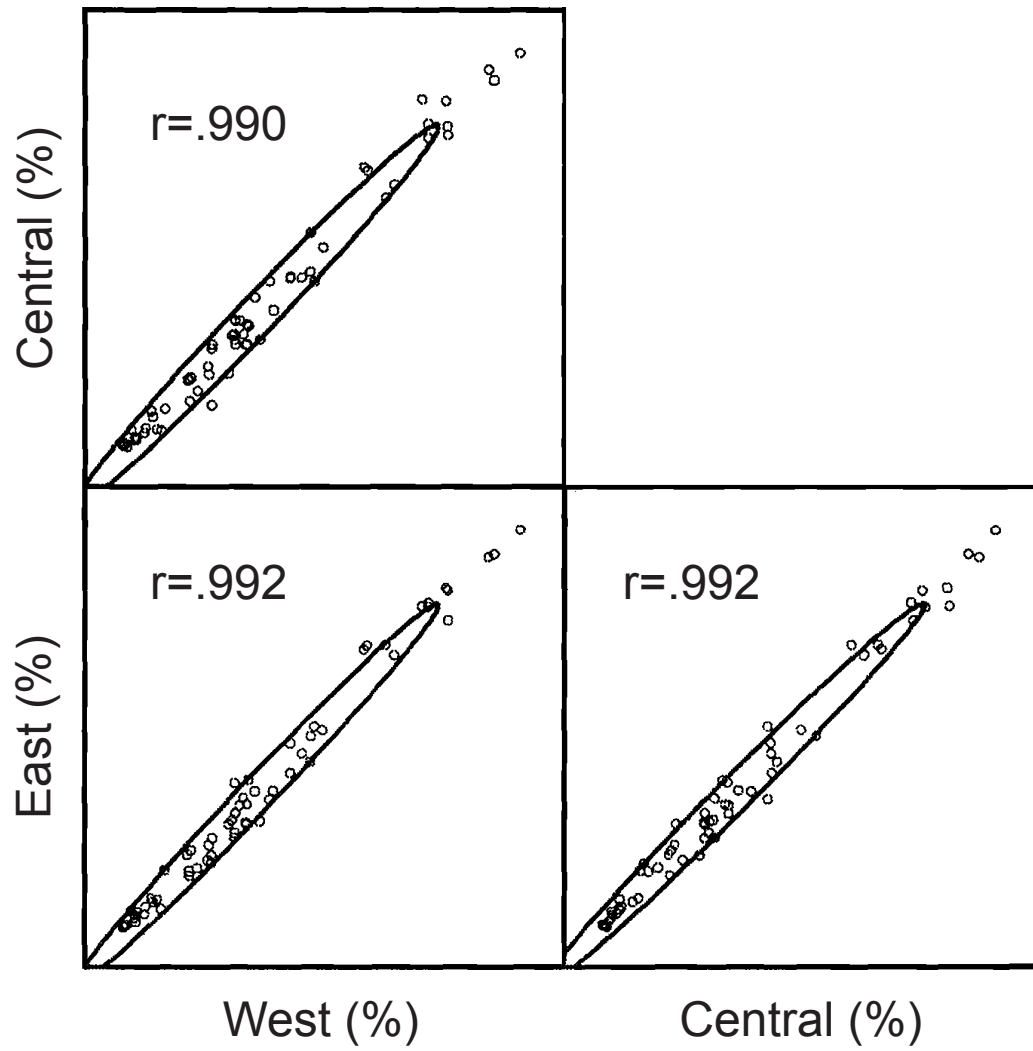
Correlation of Importance by Years of Experience



Correlation of Frequency by Region



Correlation of Importance by Region



Appendix G

Graphs that Show the Relationship Between
Regions for All Dentist Responses

