



2008 Colorado Rural Dentist Workforce Survey

*Codebook and Variable Frequencies
Report – Public Use File*

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ACKNOWLEDGMENTS

The 2008 Colorado Rural Dentist Survey was a cooperative effort between CHI and the Colorado Department of Public Health and Environment's Oral Health Program and is part of a larger Colorado Rural Oral Health Workforce Project.

Funding was also provided by The Colorado Trust through its Health Professions Initiative.

INTRODUCTION

The Colorado Health Institute (CHI) serves as an independent, nonpartisan source of health information and policy analysis. With funding from The Colorado Trust, CHI is building a comprehensive health professions database for the purpose of informing health workforce policy in Colorado.

A series of profession-specific workforce databases is being constructed to complement existing health professions workforce data. From these data, CHI is developing a set of indicators that will document changes in health care workforce supply and demand as well as practice patterns that exist in Colorado communities over time. A database download function has been developed to enable visitors to the CHI Web site to download health professions data and customize reports by profession and geographic location. The purpose of this survey is to better understand the factors that have the potential to expand access to oral health care for rural Coloradans.

2008 COLORADO RURAL DENTIST WORKFORCE SURVEY

Methods

The survey was administered in four waves by mail and Internet beginning on July 10, 2008. The first mailing was a postcard alerting the 365 rural dentists identified in the state's licensing database that a survey was coming. On July 17, 2008, a second mailing, which included a cover letter with *Frequently Asked Questions*, a questionnaire, a self-addressed stamped envelope and a \$2 token, went out to all actively licensed dentists living in a rural Colorado area according to the Rural/Urban Commuting Area (RUCA) codes¹. The survey forms were mailed to the contact address in each licensee's file at the Colorado Department of Regulatory Agencies (DORA). This address may have been the dentist's home or practice location.

On July 24, 2008, a postcard was mailed either reminding the dentists to fill out the survey or thanking them if they already sent it back. The fourth mailing, sent on August 7, 2008, consisted of a cover letter, a second questionnaire and a self-addressed stamped envelope. See Appendix C (p. 87) for copies of cover letters and postcards.

Response rate

CHI received survey responses from 190 rural dentists as a result of the first mailing of questionnaires which ended on August 10, 2008. The second questionnaire mailing yielded an additional 61 completed surveys. In total, CHI received survey responses from 251 rural dentists or 70 percent of those who were mailed a survey form. The following table shows the final disposition of surveys by response category.

Final Disposition	Number
Surveys mailed to Colorado rural dentist population	365
Unable to forward	0
Non-response	5
Out of state	1
Non-rural	2
Eligible sample	357
Returned completed questionnaires (2 nd wave)	190
Returned completed questionnaires (4 th wave)	61
Total returned completed questionnaires	251
Response rate	70.3%

¹ Rural-urban commuting area (RUCA) codes are a sub-county measure of urban/rural status based on 2000 Census data and 2004 ZIP Codes; they are more specific than county-based definitions of rural and therefore more accurately classify intra-county rural and urban areas. For more information on RUCA codes, refer to <http://depts.washington.edu/uwruca/index.html>.

Data from the paper survey questionnaires returned to CHI were entered into an electronic database (N=243). In addition, eight survey forms were submitted to CHI via an online option on the Internet. With the paper forms, CHI randomly selected 15 for data entry validation. Data entry was 99+ percent accurate across all survey variables entered. Data verification and cleaning were conducted with a series of quality checks to ensure data completeness and adherence to formatting protocols [See Appendix A for Data Cleaning Business Rules].

Weighting for survey non-respondents

This survey was conducted to yield information about dentists holding an active license and practicing in rural Colorado as of August 2008. A survey form was mailed to all licensed Colorado dentists with a contact address in rural Colorado (N=365)². The data file includes variable counts for valid respondents only (N=251).

Gender,³ the date when a Colorado license was first obtained (before and after 1990) and educational background (DDS vs. DMD) were used to estimate the probability of responding to the survey. This probability of response and the non-response rate were combined to derive the final survey weight variable. The weight variable must be applied to all descriptive and inferential statistics calculated from the survey data in order to correctly apportion the sample population to overall rural dentist population in Colorado. [See Appendix B for strata information].

PUBLIC USE DATA FILE

This codebook specifies the variables contained in the 2008 CHI Colorado Rural Dentist Workforce Survey public use file (PUF). The file contains 251 records, one for each respondent, and includes a weight variable. The PUF contains 75 variables. [See the list of variables on p. 11-12 for the variables contained in the PUF].

The PUF is available for anyone to analyze. To minimize any risk of indirect identification and ensure confidentiality of survey respondents, sub-state geographic identifiers such as county, city and ZIP Code, and other sensitive variables such as graduation year, are removed or rolled up into categorical variables. Users of the PUF must fill out a registration form.

All users of the data must include the following citation in any public release of the data or its subsequent analysis: "Source: The 2008 Rural Dentist Workforce Survey, Colorado Health Institute."

In addition, CHI requests that interested individuals and organizations using the database share their analysis and findings with CHI by contacting Christine Demont-Heinrich at 720.382.7093, or by e-mail at demont-heinrichc@coloradohealthinstitute.org.

Technical information

The PUF is released as SAS, comma-delimited, Excel and SPSS files. In addition, a sampling and response summary by strata is provided in Appendix B.

Codebook structure

The codebook lists variable labels in the order in which they appear on the questionnaire. Each variable includes a name, description and any appropriate technical notes. The last 6 variables in the codebook were created from survey questions and re-coded to protect the confidentiality of survey respondents.

For each variable, an unweighted and weighted frequency is provided. The unweighted sum for each variable totals 251, that is, the number of survey respondents. The weighted sum is 362, the number of actively licensed dentists living or practicing in Colorado [Because of rounding, totals in the weighted frequency tables do not always equal 362].

² Based on the ZIP Codes of responding dentists' practice location, one dentist was out of state and two dentists were non-rural. This reduced the total number of actively licensed rural dentists by three leaving a total of 362 rural Colorado dentists.

³ For gender, two cases were missing from DORA, but fortunately these two people responded to the CHI survey and CHI was able to use those responses as values in the derivation of weights from the population.

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2008 RURAL DENTIST SURVEY

Survey # _____

To complete form online... Open your Internet browser and type: <http://www.coloradohealthinstitute.org/dentist2008.html> → Complete the questionnaire online → Click "submit" button when you are finished so your name will be taken off the mailing list.

The Colorado Health Institute is conducting this survey on behalf of the Colorado Department of Public Health and Environment's Oral Health Program. This survey is voluntary. Your answers are confidential. Please complete the form online or return this questionnaire in the envelope provided. Thank you for your assistance in this important survey about rural dentistry. If you have any questions please contact Michael Boyson, MHA at 303.831.4200 x207 or by e-mail at boysonm@coloradohealthinstitute.org.

ABOUT YOU

1. In what year were you born? 19 ____
2. What is your gender?
Male ☐
Female ☐
3. What is your race/ethnicity? [PLEASE MARK ONE BOX THAT MOST CLOSELY REPRESENTS YOUR ETHNIC/RACIAL BACKGROUND]
African American ☐
White Hispanic ☐
Non-White Hispanic ☐
White ☐
Native American ☐
Asian/Pacific Islander ☐
Alaskan Native ☐
Mixed Heritage ☐
4. Which of the following best describes the area in which you grew up? [MARK ONE BOX]
Rural ☐
Suburban ☐
Urban ☐
5. How long have you lived in Colorado? ____ Year(s) [ROUND UP TO THE NUMBER OF YEARS]
6. What degree(s) have you completed? [MARK YES OR NO FOR EACH DEGREE]
DDS ☐ Yes ☐ No
DMD ☐ Yes ☐ No
MD ☐ Yes ☐ No
PhD ☐ Yes ☐ No
Other: _____ ☐ Yes ☐ No

PRACTICE CHARACTERISTICS

7. Which of the following best describes your current professional status? [MARK ONE BOX ONLY]
☐ Fulltime dentist actively seeing patients (30 hours or more per week working in clinical dentistry)
☐ Part-time dentist actively seeing patients (fewer than 30 hours per week working in clinical dentistry)
☐ Active in dental health activities (e.g. teaching, public health, etc.) but not seeing patients [STOP HERE AND RETURN YOUR QUESTIONNAIRE]
☐ Retired not seeing patients [STOP HERE AND RETURN YOUR QUESTIONNAIRE]
☐ I am working outside of dentistry [STOP HERE AND RETURN YOUR QUESTIONNAIRE]
☐ Other (please specify) _____

Please turn form over →

8. Are you practicing as a specialist in an ADA-recognized specialty?

Dental Public Health	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Endodontics	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Oral and Maxillofacial Pathology	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Oral and Maxillofacial Radiology	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Oral and Maxillofacial Surgery	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Orthodontics and Dentofacial Orthopedics	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Pediatric Dentistry	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Periodontics	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Prosthodontics	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A

9. What is the ZIP Code of your primary practice location? _____ ZIP Code

10. How many years have you practiced in your current primary location?

_____ Year(s) [ROUND UP TO THE NUMBER OF YEARS]

11. Approximately how many dental visits did you have in **2007** at your primary practice location? _____ Visits

12. What factors led to your decision to practice in your present community?

Quality of life	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Good place to raise children	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Slower pace of life	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Personal or family reasons	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Recreational/Leisure activities	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Good schools	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Smaller practice	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Took over established practice	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Opportunity to be involved in the community	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Spouse's work opportunity	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Grew up in a rural area	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
National Health Services Corp scholarship/loan commitment	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Other reason: _____	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A

[WRITE BELOW IF YOU NEED MORE SPACE]

13. In what year did you first become licensed to practice as a dentist in **Colorado**? [YYYY] _____

14. How many years have you practiced dentistry in Colorado? _____ [ROUND UP TO THE NUMBER OF YEARS]

15. Please estimate the time you spent in clinical dental practice in the first six months of **2008** (Include direct patient care, teaching, other professional activities, CDE, meetings, etc.):

(a) Average number of total professional hours per week _____ Hour(s) per week

(b) Average number of hours spent in direct patient care _____ Hour(s) per week

16. How many other dentists practice in your office? [PLEASE ENTER 0 IF YOU HAVE A SOLO PRACTICE]

(a) _____ Full time dentists (30+ hours per week)

(b) _____ Part-time dentists (Fewer than 30 hours per week)

17. How many dental hygienists does your practice currently employ? [PLEASE ENTER 0 IF YOU DO NOT EMPLOY ANY]

(a) _____ Full time dental hygienists (30+ hours per week)

(b) _____ Part-time dental hygienists (Fewer than 30 hours/week)

18. Are you currently recruiting for a dental hygienist?

☐ Yes → If YES, how many full time positions? _____ Dental hygienist(s) (30+ hours per week)

→ If YES, how many part time positions? _____ Dental hygienist(s) (Fewer than 30 hours/week)

☐ No

19. How many chair-side dental assistants do you currently employ? [PLEASE ENTER 0 IF YOU DO NOT EMPLOY ANY]

_____ Full time chair-side dental assistant(s) (30+ hours per week)

_____ Part-time chair-side dental assistant(s) (Fewer than 30 hours/week)

20. Please describe your current primary practice in terms of patient characteristics:

I am accepting new patients	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
I offer a sliding fee payment schedule based on income	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
I accept Medicaid payment	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
I am accepting new Medicaid patients	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
I accept CHP+ payment	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
I am accepting new CHP+ patients	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A

21. If you do NOT accept Medicaid patients, listed below are factors that often contribute to a decision not to accept Medicaid patients into a dental practice. [ON A SCALE OF 1-5 WITH 1 REPRESENTING **VERY IMPORTANT** AND 5 REPRESENTING **NOT IMPORTANT** CIRCLE THE RELATIVE IMPORTANCE OF EACH FACTOR.]

	Very Important				Not Important		
	1	2	3	4	5		
The reimbursement is too low						N/A	
Paperwork is too difficult/time consuming						N/A	
Too many "no-shows"						N/A	
Other (please specify) _____						N/A	

[WRITE BELOW IF YOU NEED MORE SPACE]

22. Please estimate the percentage of the time you spend in direct patient care with the following patients.

[PERCENT SHOULD ADD UP TO 100%]

Infants (ages 0- 3 yrs) _____%

Children (ages 4-12 yrs) _____%

Teenagers (ages 13-19 yrs) _____%

Adults (ages 20-64 yrs) _____%

Older adults (65 yrs+) _____%

DIRECT PATIENT CARE 100%

23. Do you speak a language other than English to communicate with some or all of your patients?

☐ Yes → If YES, please specify language: _____

☐ No

THIS SET OF QUESTIONS IS ABOUT YOUR DENTAL SCHOOL EXPERIENCE

24. In what state did you attend dental school? [ENTER TWO LETTER STATE CODE, XX FOR FOREIGN COUNTRY]

____ State abbreviation

25. In what year did you graduate from dental school? [YYYY] ____ ____ ____ ____

26. To prepare you for a rural practice, please rate the adequacy of CLASSROOM instruction you received during dental school in the following areas using a scale of 1-5 with 1 representing **1 - Most Adequate** and 5 representing **Inadequate**.

	Most Adequate			Inadequate		
Dental care for pregnant women	1	2	3	4	5	N/A
Dental care for infants (ages 0 - 3 yrs)	1	2	3	4	5	N/A
Dental care for children/adolescents (ages 4 - 19 yrs)	1	2	3	4	5	N/A
Dental care for persons with disabilities	1	2	3	4	5	N/A
Dental care for persons with behavioral health problems	1	2	3	4	5	N/A
Treatment of caries	1	2	3	4	5	N/A
Preventive dental care such as fluoride varnishes and application of sealants	1	2	3	4	5	N/A
Setting up a dental practice	1	2	3	4	5	N/A
Management of a dental practice, marketing, customer service	1	2	3	4	5	N/A
Working with other health professionals such as physicians and dental specialties	1	2	3	4	5	N/A
Training in endodontics	1	2	3	4	5	N/A
Training in oral surgery	1	2	3	4	5	N/A
Training in orthodontics	1	2	3	4	5	N/A
Training in periodontics	1	2	3	4	5	N/A

27. To prepare you for a rural practice, please rate the adequacy of your CLINICAL experiences during dental school in the following areas using a scale of 1-5 with 1 representing **Most Adequate** and 5 representing **Inadequate**.

	Most Adequate			Inadequate		
Dental care for pregnant women	1	2	3	4	5	N/A
Dental care for infants (ages 0 - 3 yrs)	1	2	3	4	5	N/A
Dental care for children/adolescents (ages 4 - 19 yrs)	1	2	3	4	5	N/A
Dental care for persons with disabilities	1	2	3	4	5	N/A
Dental care for persons with behavioral health problems	1	2	3	4	5	N/A
Treatment of caries	1	2	3	4	5	N/A
Preventive dental care such as fluoride varnishes and application of sealants	1	2	3	4	5	N/A
Setting up a dental practice	1	2	3	4	5	N/A
Management of a dental practice, marketing, customer service	1	2	3	4	5	N/A
Working with other health professionals such as physicians and dental specialties	1	2	3	4	5	N/A
Training in endodontics	1	2	3	4	5	N/A
Training in oral surgery	1	2	3	4	5	N/A
Training in orthodontics	1	2	3	4	5	N/A
Training in periodontics	1	2	3	4	5	N/A

28. How prepared were you to practice clinical dentistry after graduating from dental school? [ON A SCALE OF 1-5, WITH 1 REPRESENTING **FULLY PREPARED** AND 5 REPRESENTING **NOT PREPARED**, CIRCLE APPROPRIATE NUMBER.]

Fully Prepared					Not Prepared
1	2	3	4	5	

29. How prepared were you to manage a clinical practice after graduating from dental school? [ON A SCALE OF 1-5, WITH 1 REPRESENTING **FULLY PREPARED** AND 5 REPRESENTING **NOT PREPARED**, CIRCLE APPROPRIATE NUMBER.]

Fully Prepared					Not Prepared
1	2	3	4	5	

ABOUT THE FUTURE OF DENTAL CARE IN YOUR COMMUNITY

30. Are you planning to leave your current dental practice in the next twelve months?

☐ Yes
☐ No → **Go to Question 32**

31. If YES, there are many factors that influence a decision to leave a practice. Listed below are some of these factors. [ON A SCALE OF 1-5 WITH 1 REPRESENTING **VERY IMPORTANT** AND 5 REPRESENTING **NOT IMPORTANT**, CIRCLE THE RELATIVE IMPORTANCE OF EACH FACTOR.]

	Very Important			Not Important		
I am planning to retire	1	2	3	4	5	N/A
I am planning to relocate to a different practice location	1	2	3	4	5	N/A
I do not have continuing education opportunities in my current location	1	2	3	4	5	N/A
I do not have a sufficient patient load to continue to run my office	1	2	3	4	5	N/A
There are not enough paying patients to make my practice sustainable	1	2	3	4	5	N/A
The administration and management of the practice has become too burdensome	1	2	3	4	5	N/A
I do not feel the work is professionally challenging	1	2	3	4	5	N/A
I have too many Medicaid patients to make my practice sustainable	1	2	3	4	5	N/A
I have family responsibilities that interfere with my ability to continue my practice	1	2	3	4	5	N/A
My health does not permit me to continue my practice	1	2	3	4	5	N/A
Other (Please specify) _____	1	2	3	4	5	N/A
[WRITE BELOW IF YOU NEED MORE SPACE]						

32. Could your community benefit from additional dental care services?

- ☐ Yes → If YES, please describe: _____
- ☐ No [WRITE BELOW IF YOU NEED MORE SPACE]
- ☐ I don't have an opinion

33. Do you collaborate with physicians and nurses in your community to provide preventive oral health care services?

- ☐ Yes → If YES, in what way do you collaborate? Please specify: _____
- ☐ No [WRITE BELOW IF YOU NEED MORE SPACE]

34. Do you support expanding the role of dental hygienists as independent practitioners?

- ☐ Yes
- ☐ No → If NO, please explain: _____
- _____

Please return questionnaire in the enclosed self addressed stamped envelope. The time you have taken to complete this survey is important and appreciated. Your responses will help to inform Colorado policymakers about the practice of rural dentistry in our state.

THANK YOU!

LIST OF VARIABLES

QUESTION NUMBER	VARIABLE NAME	DESCRIPTION
1	BIRTH_YR_GRP	Birth year group
2	GENDER	Gender
3	RACE_GRP	White vs. non-white
4	GREWUP_LOCATION	Area in which one grew up
5	CO_LIVEYRS_GRP	# years lived in Colorado, grouping
6	DEGR_DMD	Degree completed: DMD
6	DEGR_OTH	Degree completed: Other
7	EMPLOY_STATUS_GRP	Professional status grouping
8	ADA_SPEC	Practicing any ADA specialty
10	LGTH_SVC_YR_PRIMARY_GRP	Years practiced in current primary practice location, grouping
11	VISITS_2007_GRP	Number of visits in 2007 at primary practice location, grouping
12	COMM_SLOWPACE	Factors to practice in community: Slower pace of life
12	COMM_PER_FAM_REASONS	Factors to practice in community: Personal or family reasons
12	COMM_RECREATION	Factors to practice in community: Recreational/Leisure activities
12	COMM_GOODSCHOOL	Factors to practice in community: Good schools
12	COMM_SMALLPRC	Factors to practice in community: Smaller practice
12	COMM_TOOKOVER	Factors to practice in community: Took over established practice
12	COMM_OPP	Factors to practice in community: Opportunity to be involved in the community
12	COMM_GREWUP_RURAL	Factors to practice in community: Grew up in a rural area
13	LICyr_CO_GRP	License year to practice as Dentist in Colorado, grouping
14	PRACYR_CO_GRP	Number of years practicing dentistry in Colorado
15	HRS08_TOTPROF_GRP	Average number of total professional hours per week, grouping
15	HRS08_DIRCARE_GRP	Average number of direct patient care hours per week, grouping
16	FT_DENT_OFFICE_GRP	Number of other full time dentists in office, grouping
16	PT_DENT_OFFICE_GRP	Number of other part time dentists in office, grouping
17	FT_DENHYG_GRP	Number of full time dental hygienists in office, grouping
17	PT_DENHYG_GRP	Number of part-time dental hygienists in office, grouping
18	RECRUIT_DH	Currently recruiting for a dental hygienist
19	FT_DENCHR_ASST_GRP	Full time chair-side dental assistant(s), grouping
19	PT_DENCHR_ASST_GRP	Part-time chair-side dental assistant(s), grouping
20	SERVE_SFS_INC	Primary practice characteristics: Offer sliding fee payment schedule
20	ACCEPT_MDCAID	Primary practice characteristics: Accept Medicaid payment
20	ACCEPT_NEW_MDCAID	Primary practice characteristics: Accept new Medicaid patients
20	ACCEPT_CHPP_PAY	Primary practice characteristics: Accept CHP+ payment
20	ACCEPT_NEW_CHPP_PAY	Primary practice characteristics: Accepting new CHP+ patients
21	REJECTMDCD_REIMBLOW_GRP	Reason for not accepting Medicaid: Reimbursement is too low grouping
21	REJECTMDCD_TIMECONS_GRP	Reason for not accepting Medicaid: Paperwork difficulty/time grouping

QUESTION NUMBER	VARIABLE NAME	DESCRIPTION
22	PCTCARE_INFANT_GRP	Percent of time on direct patient care for infants (0-3) grouping
22	PCTCARE_CHILDREN_GRP	Percent of time on direct patient care for children (4-12) grouping
22	PCTCARE_TEEN_GRP	Percent of time on direct patient care for teens (13-19) grouping
22	PCTCARE_ADULT_GRP	Percent of time on direct patient care for adults (20-64) grouping
22	PCTCARE_OLDADULT_GRP	Percent of time on direct patient care for older adults (65+) grouping
23	LANG_OTHENG	Speak another language to communicate with patients?
24	GRAD_STATE_GRP	State in which dental school attended, grouping
25	GRAD_YEAR_GRP	Year graduated from dental school, grouping
26	EDCARE_PREGNANT_GRP	Classroom preparation: Dental care for pregnant women grouping
26	EDCARE_INFANT_GRP	Classroom preparation: Dental care for infants (0-3 yrs) grouping
26	EDCARE_DISAB_GRP	Classroom preparation: Dental care for persons with disabilities grouping
26	EDCARE_BEHAVE_GRP	Classroom preparation: Dental care for persons with behavioral health problems grouping
26	EDCARE_SETUP_PR_GRP	Classroom preparation: Setting up a dental practice grouping
26	EDCARE_MGMT_GRP	Classroom preparation: Management, marketing, customer service grouping
26	EDCARE_WORKWITH_GRP	Classroom preparation: Working with other health professionals grouping
26	EDCARE_ORTHO_GRP	Classroom preparation: Training in orthodontics grouping
26	EDCARE_PERIO_GRP	Classroom preparation: Training in periodontics grouping
27	CLIN_PREGNANT_GRP	Clinical experience: Dental care for pregnant women grouping
27	CLIN_INFANT_GRP	Clinical experience: Dental care for infants (0-3 yrs) grouping
27	CLIN_DISAB_GRP	Clinical experience: Dental care for persons with disabilities grouping
27	CLIN_BEHAVE_GRP	Clinical experience: Dental care for persons with behavioral health problems grouping
27	CLIN_SETUP_PR_GRP	Clinical experience: Setting up a dental practice grouping
27	CLIN_MGMT_GRP	Clinical experience: Management, marketing, customer service grouping
27	CLIN_WORKWITH_GRP	Clinical experience: Working with other health professionals grouping
27	CLIN_ORTHO_GRP	Clinical experience: Training in orthodontics grouping
27	CLIN_PERIO_GRP	Clinical experience: Training in periodontics grouping
29	PREPARE_MGMT_DENT_GRP	Preparation to manage clinical practice upon graduation grouping
32	COMM_BENEFIT	Community could benefit from extra dental care services?
33	COLLAB_OTHERS	Collaboration with physicians and nurses in community?
34	SUPPORT_ROLEDH	Support expanding role of dental hygienists as independent practitioners?
CREATED VARIABLE	AGE_GRP	Age grouping from age variable
CREATED VARIABLE	GRAD_NUMYRS_GRP	Number of years from graduation grouping
CREATED VARIABLE	GRAD_AGE_GRP	Age upon graduation from dental school grouping
CREATED VARIABLE	PRIMARY_STATE_FROM_ZIP	State derived from primary practice ZIP Code
CREATED VARIABLE	PRIMARY_URBAN_FROM_ZIP	Urban/Rural indicator derived from primary practice ZIP Code
CREATED VARIABLE	RUCA_CLASS_FROM_ZIP	RUCA classification derived from primary practice zip code

CODEBOOK AND FREQUENCIES

**QUESTION
NUMBER**
1

VARIABLE NAME
BIRTH_YR_GRP

DESCRIPTION
Birth year group

TYPE
Numeric

LENGTH
8

FORMAT
Ordinal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	1	1
1	1943 or before	35	49
2	1944 to 1953	81	114
3	1954 to 1963	62	90
4	1964 to 1973	48	73
5	After 1973	24	35
TOTAL		251	362

**QUESTION
NUMBER**
2

VARIABLE NAME
GENDER

DESCRIPTION
Gender

TYPE
Numeric

LENGTH
8

FORMAT
Nominal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	1	1
1	Male	219	316
2	Female	31	45
TOTAL		251	362

QUESTION NUMBER 3	VARIABLE NAME RACE_GRP	DESCRIPTION White vs. non-white	
	TYPE Numeric	LENGTH 8	FORMAT Nominal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	2	3
0	Non-white	24	34
1	White	225	326
TOTAL		251	363

QUESTION NUMBER 4	VARIABLE NAME GREWUP_LOCATION	DESCRIPTION Area in which one grew up	
	TYPE Numeric	LENGTH 8	FORMAT Nominal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	1	1
-8	Not Applicable	3	4
1	Rural	133	190
2	Suburban	82	120
3	Urban	32	46
TOTAL		251	361

**QUESTION
NUMBER**
5

VARIABLE NAME
CO_LIVEYRS_GRP

DESCRIPTION
years lived in Colorado, grouping

TYPE
Numeric

LENGTH
8

FORMAT
Ordinal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	5	7
1	1-10 years	70	109
2	11-25 years	58	83
3	26-35 years	52	72
4	More than 35 years	66	90
TOTAL		251	361

**QUESTION
NUMBER**
6

VARIABLE NAME
DEGR_DMD

DESCRIPTION
Degree completed: DMD

TYPE
Numeric

LENGTH
8

FORMAT
Nominal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	1	1
-8	Not Applicable	111	158
0	No	106	151
1	Yes	33	52
TOTAL		251	362

**QUESTION
NUMBER**
6

VARIABLE NAME
DEGR_OTH

DESCRIPTION
Degree completed: Other

TYPE
Numeric

LENGTH
8

FORMAT
Nominal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	1	1
-8	Not Applicable	118	169
0	No	86	124
1	Yes	46	68
TOTAL		251	362

**QUESTION
NUMBER**
7

VARIABLE NAME
EMPLOY_STATUS_GRP

DESCRIPTION
Professional status grouping

TYPE
Numeric

LENGTH
8

FORMAT
Nominal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
1	Fulltime dentist actively seeing patients	190	273
2	Part-time dentist actively seeing patients	30	43
3	Not seeing patients or other	31	46
TOTAL		251	362

**QUESTION
NUMBER**
8

VARIABLE NAME
ADA_SPEC

DESCRIPTION
Practicing any ADA specialty

TYPE
Numeric

LENGTH
8

FORMAT
Nominal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	26	37
-8	Not Applicable	24	36
0	No	163	234
1	Yes	26	38
2	N/A - Response	12	17
TOTAL		251	362

**QUESTION
NUMBER**
10

VARIABLE NAME
LGTH_SVC_YR_PRIMARY_GRP

DESCRIPTION
Years practiced in current primary practice location, grouping

TYPE
Numeric

LENGTH
8

FORMAT
Ordinal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	5	7
-8	Not Applicable	22	33
1	1-5 years	76	112
2	6-15 years	60	88
3	16-25 years	39	54
4	More than 25 years	49	66
TOTAL		251	360

QUESTION NUMBER 11	VARIABLE NAME VISITS_2007_GRP	DESCRIPTION Number of visits in 2007 at primary practice location, grouping
TYPE Numeric	LENGTH 8	FORMAT Ordinal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	71	102
-8	Not Applicable	24	37
1	0-1000 visits	33	48
2	1001-2000 visits	37	53
3	2001-3000 visits	36	51
4	More than 3000 visits	50	71
TOTAL		251	362

QUESTION NUMBER 12	VARIABLE NAME COMM_SLOWPACE	DESCRIPTION Factors to practice in community: Slower pace of life
TYPE Numeric	LENGTH 8	FORMAT Nominal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	6	9
-8	Not Applicable	29	44
0	No	30	43
1	Yes	179	257
2	N/A - Response	7	10
TOTAL		251	363

**QUESTION
NUMBER**
12

VARIABLE NAME
COMM_PER_FAM_REASONS

DESCRIPTION
Factors to practice in community: Personal or family reasons

TYPE
Numeric

LENGTH
8

FORMAT
Nominal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	6	9
-8	Not Applicable	52	77
0	No	75	107
1	Yes	101	146
2	N/A - Response	17	24
TOTAL		251	363

**QUESTION
NUMBER**
12

VARIABLE NAME
COMM_RECREATION

DESCRIPTION
Factors to practice in community: Recreational/Leisure activities

TYPE
Numeric

LENGTH
8

FORMAT
Nominal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	6	9
-8	Not Applicable	36	54
0	No	26	36
1	Yes	178	256
2	N/A - Response	5	7
TOTAL		251	362

**QUESTION
NUMBER**
12

VARIABLE NAME
COMM_GOODSCHOOL

DESCRIPTION
Factors to practice in community: Good schools

TYPE
Numeric

LENGTH
8

FORMAT
Nominal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	6	9
-8	Not Applicable	52	77
0	No	79	114
1	Yes	85	121
2	N/A - Response	29	42
TOTAL		251	363

**QUESTION
NUMBER**
12

VARIABLE NAME
COMM_SMALLPRC

DESCRIPTION
Factors to practice in community: Smaller practice

TYPE
Numeric

LENGTH
8

FORMAT
Nominal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	6	9
-8	Not Applicable	52	77
0	No	90	130
1	Yes	87	124
2	N/A - Response	16	23
TOTAL		251	363

**QUESTION
NUMBER**
12

VARIABLE NAME
COMM_TOOKOVER

DESCRIPTION
Factors to practice in community: Took over established practice

TYPE
Numeric

LENGTH
8

FORMAT
Nominal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	6	9
-8	Not Applicable	50	74
0	No	104	148
1	Yes	76	110
2	N/A - Response	15	21
TOTAL		251	362

**QUESTION
NUMBER**
12

VARIABLE NAME
COMM_OPP

DESCRIPTION
Factors to practice in community: Opportunity to be involved in the community

TYPE
Numeric

LENGTH
8

FORMAT
Nominal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	6	9
-8	Not Applicable	54	79
0	No	77	110
1	Yes	102	147
2	N/A - Response	12	17
TOTAL		251	362

**QUESTION
NUMBER**
12

VARIABLE NAME
COMM_GREWUP_RURAL

DESCRIPTION
Factors to practice in community: Grew up in a rural area

TYPE
Numeric

LENGTH
8

FORMAT
Nominal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	6	9
-8	Not Applicable	53	78
0	No	105	150
1	Yes	75	108
2	N/A - Response	12	17
TOTAL		251	362

**QUESTION
NUMBER**
13

VARIABLE NAME
LICyr_CO_GRP

DESCRIPTION
License year to practice as Dentist in Colorado, grouping

TYPE
Numeric

LENGTH
8

FORMAT
Ordinal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	5	7
-8	Not Applicable	24	36
1	1984 or before	82	111
2	After 1984	140	207
TOTAL		251	361

**QUESTION
NUMBER**
14

VARIABLE NAME
PRACYR_CO_GRP

DESCRIPTION
Number of years practicing dentistry in Colorado

TYPE
Numeric

LENGTH
8

FORMAT
Ordinal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	5	7
-8	Not Applicable	22	33
1	1-10 years	79	119
2	11-25 years	77	110
3	More than 25 years	68	92
TOTAL		251	361

**QUESTION
NUMBER**
15

VARIABLE NAME
HRS08_TOTPROF_GRP

DESCRIPTION
Average number of total professional hours per week, grouping

TYPE
Numeric

LENGTH
8

FORMAT
Ordinal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	6	9
-8	Not Applicable	23	35
1	0-24 hours	30	43
2	25-32 hours	45	65
3	More than 32 hours	147	210
TOTAL		251	362

**QUESTION
NUMBER**
15

VARIABLE NAME
HRS08_DIRCARE_GRP

DESCRIPTION
Average number of direct patient care hours per week, grouping

TYPE
Numeric

LENGTH
8

FORMAT
Ordinal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	10	14
-8	Not Applicable	23	35
1	0-24 hours	30	43
2	25-32 hours	109	157
3	More than 32 hours	79	113
TOTAL		251	362

**QUESTION
NUMBER**
16

VARIABLE NAME
FT_DENT_OFFICE_GRP

DESCRIPTION
Number of other full time dentists in office, grouping

TYPE
Numeric

LENGTH
8

FORMAT
Ordinal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	15	22
-8	Not Applicable	22	33
1	0 dentists	155	221
2	1 or more dentists	59	86
TOTAL		251	362

**QUESTION
NUMBER**
16

VARIABLE NAME
PT_DENT_OFFICE_GRP

DESCRIPTION
Number of other part time dentists in office, grouping

TYPE
Numeric

LENGTH
8

FORMAT
Ordinal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	42	61
-8	Not Applicable	22	33
1	0 dentists	155	222
2	1 or more dentists	32	46
TOTAL		251	362

**QUESTION
NUMBER**
17

VARIABLE NAME
FT_DENHYG_GRP

DESCRIPTION
Number of full time dental hygienists in office, grouping

TYPE
Numeric

LENGTH
8

FORMAT
Ordinal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	27	39
-8	Not Applicable	22	33
1	0 hygienists	87	124
2	1 hygienist	76	108
3	More than 1 hygienist	39	57
TOTAL		251	361

QUESTION NUMBER 17	VARIABLE NAME PT_DENHYG_GRP	DESCRIPTION Number of part-time dental hygienists in office, grouping	
	TYPE Numeric	LENGTH 8	FORMAT Ordinal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	37	54
-8	Not Applicable	22	33
1	0 hygienists	100	143
2	1 hygienist	63	90
3	More than 1 hygienist	29	42
TOTAL		251	362

QUESTION NUMBER 18	VARIABLE NAME RECRUIT_DH	DESCRIPTION Currently recruiting for a dental hygienist	
	TYPE Numeric	LENGTH 8	FORMAT Nominal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	6	9
-8	Not Applicable	22	33
0	No	199	286
1	Yes	24	34
TOTAL		251	362

**QUESTION
NUMBER**
19

VARIABLE NAME
FT_DENCHR_ASST_GRP

DESCRIPTION
Full time chair-side dental assistant(s), grouping

TYPE
Numeric

LENGTH
8

FORMAT
Ordinal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	21	30
-8	Not Applicable	22	33
1	None or one assistant	102	146
2	2 or 3 assistants	80	115
3	More than 3 assistants	26	38
TOTAL		251	362

**QUESTION
NUMBER**
19

VARIABLE NAME
PT_DENCHR_ASST_GRP

DESCRIPTION
Part-time chair-side dental assistant(s), grouping

TYPE
Numeric

LENGTH
8

FORMAT
Ordinal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	72	103
-8	Not Applicable	22	33
1	No assistants	78	113
2	1 assistant	58	82
3	More than 1 assistant	21	30
TOTAL		251	361

**QUESTION
NUMBER**
20

VARIABLE NAME
SERVE_SFS_INC

DESCRIPTION
Primary practice characteristics: Offer sliding fee payment schedule

TYPE
Numeric

LENGTH
8

FORMAT
Nominal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	6	9
-8	Not Applicable	30	44
0	No	180	259
1	Yes	28	40
2	N/A - Response	7	10
TOTAL		251	362

**QUESTION
NUMBER**
20

VARIABLE NAME
ACCEPT_MDCAID

DESCRIPTION
Primary practice characteristics: Accept Medicaid payment

TYPE
Numeric

LENGTH
8

FORMAT
Nominal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	6	9
-8	Not Applicable	31	46
0	No	164	236
1	Yes	44	63
2	N/A - Response	6	8
TOTAL		251	362

**QUESTION
NUMBER**
20

VARIABLE NAME
ACCEPT_NEW_MDCAID

DESCRIPTION
Primary practice characteristics: Accept new Medicaid patients

TYPE
Numeric

LENGTH
8

FORMAT
Nominal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	6	9
-8	Not Applicable	30	44
0	No	174	250
1	Yes	33	47
2	N/A - Response	8	11
TOTAL		251	361

**QUESTION
NUMBER**
20

VARIABLE NAME
ACCEPT_CHPP_PAY

DESCRIPTION
Primary practice characteristics: Accept CHP+ payment

TYPE
Numeric

LENGTH
8

FORMAT
Nominal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	6	9
-8	Not Applicable	34	50
0	No	115	165
1	Yes	85	122
2	N/A - Response	11	16
TOTAL		251	362

**QUESTION
NUMBER**
20

VARIABLE NAME
ACCEPT_NEW_CHPP_PAY

DESCRIPTION
Primary practice characteristics: Accepting new CHP+ patients

TYPE
Numeric

LENGTH
8

FORMAT
Nominal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	6	9
-8	Not Applicable	36	53
0	No	118	169
1	Yes	80	116
2	N/A - Response	11	16
TOTAL		251	363

**QUESTION
NUMBER**
21

VARIABLE NAME
REJECTMDCD_REIMBLOW_GRP

DESCRIPTION
Reason for not accepting Medicaid: Reimbursement is too low grouping

TYPE
Numeric

LENGTH
8

FORMAT
Nominal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	11	16
-8	Not Applicable	67	98
0	Not important or indifferent (3,4,5)	23	32
1	Important (1,2)	143	206
2	N/A	7	10
TOTAL		251	362

**QUESTION
NUMBER**
21

VARIABLE NAME
REJECTMDCD_TIMECONS_GRP

DESCRIPTION
Reason for not accepting Medicaid: Paperwork difficulty/time grouping

TYPE
Numeric

LENGTH
8

FORMAT
Nominal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	11	16
-8	Not Applicable	71	103
0	Not important or indifferent (3,4,5)	22	32
1	Important (1,2)	136	194
2	N/A	11	16
TOTAL		251	361

**QUESTION
NUMBER**
22

VARIABLE NAME
PCTCARE_INFANT_GRP

DESCRIPTION
Percent of time on direct patient care for infants (0-3) grouping

TYPE
Numeric

LENGTH
8

FORMAT
Ordinal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	10	15
-8	Not Applicable	52	76
1	None or 0 percent	94	134
2	1 percent	42	61
3	More than 1 percent	53	77
TOTAL		251	363

**QUESTION
NUMBER**
22

VARIABLE NAME
PCTCARE_CHILDREN_GRP

DESCRIPTION
Percent of time on direct patient care for children (4-12) grouping

TYPE
Numeric

LENGTH
8

FORMAT
Ordinal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	10	15
-8	Not Applicable	52	76
1	0-5 percent	64	93
2	6-10 percent	76	110
3	More than 10 percent	49	70
TOTAL		251	364

**QUESTION
NUMBER**
22

VARIABLE NAME
PCTCARE_TEEN_GRP

DESCRIPTION
Percent of time on direct patient care for teens (13-19) grouping

TYPE
Numeric

LENGTH
8

FORMAT
Ordinal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	10	15
-8	Not Applicable	52	76
1	0-5 percent	39	56
2	6-10 percent	72	104
3	11-20 percent	53	75
4	More than 20 percent	25	36
TOTAL		251	362

**QUESTION
NUMBER**
22

VARIABLE NAME
PCTCARE_ADULT_GRP

DESCRIPTION
Percent of time on direct patient care for adults (20-64) grouping

TYPE
Numeric

LENGTH
8

FORMAT
Ordinal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	10	15
-8	Not Applicable	52	76
1	0-30 percent	28	40
2	31-40 percent	34	48
3	41-50 percent	34	48
4	51-60 percent	31	45
5	61-70 percent	26	37
6	More than 70 percent	36	52
TOTAL		251	361

**QUESTION
NUMBER**
22

VARIABLE NAME
PCTCARE_OLDADULT_GRP

DESCRIPTION
Percent of time on direct patient care for older adults (65+) grouping

TYPE
Numeric

LENGTH
8

FORMAT
Ordinal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	10	15
-8	Not Applicable	52	76
1	0-5 percent	33	47
2	6-10 percent	34	50
3	11-20 percent	58	83
4	21-30 percent	36	51
5	More than 30 percent	28	41
TOTAL		251	363

**QUESTION
NUMBER**
23

VARIABLE NAME
LANG_OTHENG

DESCRIPTION
Speak another language to communicate with patients?

TYPE
Numeric

LENGTH
8

FORMAT
Nominal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	8	12
-8	Not Applicable	24	36
0	No	158	227
1	Yes	61	87
TOTAL		251	362

**QUESTION
NUMBER**
24

VARIABLE NAME
GRAD_STATE_GRP

DESCRIPTION
State in which dental school attended, grouping

TYPE
Numeric

LENGTH
8

FORMAT
Nominal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	5	7
-8	Not Applicable	22	33
0	Non-Colorado	179	257
1	Colorado	45	65
TOTAL		251	362

**QUESTION
NUMBER**
25

VARIABLE NAME
GRAD_YEAR_GRP

DESCRIPTION
Year graduated from dental school, grouping

TYPE
Numeric

LENGTH
8

FORMAT
Ordinal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	6	9
-8	Not Applicable	24	36
1	1972 or before	31	43
2	1973-1982	67	93
3	1983-1992	55	79
4	1993-2002	46	69
5	2003-2008	22	33
TOTAL		251	362

**QUESTION
NUMBER**
26

VARIABLE NAME
EDCARE_PREGNANT_GRP

DESCRIPTION
Classroom preparation: Dental care for pregnant women grouping

TYPE
Numeric

LENGTH
8

FORMAT
Nominal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	11	16
-8	Not Applicable	23	35
0	Adequate or indifferent (1,2,3)	175	251
1	Inadequate (4,5)	39	56
2	N/A	3	4
TOTAL		251	362

**QUESTION
NUMBER**
26

VARIABLE NAME
EDCARE_INFANT_GRP

DESCRIPTION
Classroom preparation: Dental care for infants (0-3 yrs) grouping

TYPE
Numeric

LENGTH
8

FORMAT
Nominal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	11	16
-8	Not Applicable	29	44
0	Adequate or indifferent (1,2,3)	117	168
1	Inadequate (4,5)	91	130
2	N/A	3	4
TOTAL		251	362

**QUESTION
NUMBER**
26

VARIABLE NAME
EDCARE_DISAB_GRP

DESCRIPTION
Classroom preparation: Dental care for persons with disabilities grouping

TYPE
Numeric

LENGTH
8

FORMAT
Nominal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	11	16
-8	Not Applicable	25	38
0	Adequate or indifferent (1,2,3)	168	241
1	Inadequate (4,5)	47	67
TOTAL		251	362

**QUESTION
NUMBER**
26

VARIABLE NAME
EDCARE_BEHAVE_GRP

DESCRIPTION
Classroom preparation: Dental care for persons with behavioral health problems grouping

TYPE
Numeric

LENGTH
8

FORMAT
Nominal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	11	16
-8	Not Applicable	23	35
0	Adequate or indifferent (1,2,3)	131	188
1	Inadequate (4,5)	84	120
2	N/A	2	3
TOTAL		251	362

**QUESTION
NUMBER**
26

VARIABLE NAME
EDCARE_SETUP_PR_GRP

DESCRIPTION
Classroom preparation: Setting up a dental practice grouping

TYPE
Numeric

LENGTH
8

FORMAT
Nominal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	11	16
-8	Not Applicable	25	38
0	Adequate or indifferent (1,2,3)	103	147
1	Inadequate (4,5)	111	160
2	N/A	1	1
TOTAL		251	362

**QUESTION
NUMBER**
26

VARIABLE NAME
EDCARE_MGMT_GRP

DESCRIPTION
Classroom preparation: Management, marketing, customer service grouping

TYPE
Numeric

LENGTH
8

FORMAT
Nominal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	11	16
-8	Not Applicable	24	36
0	Adequate or indifferent (1,2,3)	83	119
1	Inadequate (4,5)	132	189
2	N/A	1	1
TOTAL		251	361

**QUESTION
NUMBER**
26

VARIABLE NAME
EDCARE_WORKWITH_GRP

DESCRIPTION
Classroom preparation: Working with other health professionals grouping

TYPE
Numeric

LENGTH
8

FORMAT
Nominal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	11	16
-8	Not Applicable	25	37
0	Adequate or indifferent (1,2,3)	163	234
1	Inadequate (4,5)	51	74
2	N/A	1	1
TOTAL		251	362

**QUESTION
NUMBER**
26

VARIABLE NAME
EDCARE_ORTHO_GRP

DESCRIPTION
Classroom preparation: Training in orthodontics grouping

TYPE
Numeric

LENGTH
8

FORMAT
Nominal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	11	16
-8	Not Applicable	23	35
0	Adequate or indifferent (1,2,3)	113	161
1	Inadequate (4,5)	100	145
2	N/A	4	6
TOTAL		251	363

**QUESTION
NUMBER**
26

VARIABLE NAME
EDCARE_PERIO_GRP

DESCRIPTION
Classroom preparation: Training in periodontics grouping

TYPE
Numeric

LENGTH
8

FORMAT
Nominal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	11	16
-8	Not Applicable	23	35
0	Adequate or indifferent (1,2,3)	194	279
1	Inadequate (4,5)	22	31
2	N/A	1	1
TOTAL		251	362

**QUESTION
NUMBER**
27

VARIABLE NAME
CLIN_PREGNANT_GRP

DESCRIPTION
Clinical experience: Dental care for pregnant women grouping

TYPE
Numeric

LENGTH
8

FORMAT
Nominal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	7	11
-8	Not Applicable	24	36
0	Adequate or indifferent (1,2,3)	161	231
1	Inadequate (4,5)	54	77
2	N/A	5	7
TOTAL		251	362

**QUESTION
NUMBER**
27

VARIABLE NAME
CLIN_INFANT_GRP

DESCRIPTION
Clinical experience: Dental care for infants (0-3 yrs) grouping

TYPE
Numeric

LENGTH
8

FORMAT
Nominal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	7	11
-8	Not Applicable	24	36
0	Adequate or indifferent (1,2,3)	101	145
1	Inadequate (4,5)	114	163
2	N/A	5	7
TOTAL		251	362

**QUESTION
NUMBER**
27

VARIABLE NAME
CLIN_DISAB_GRP

DESCRIPTION
Clinical experience: Dental care for persons with disabilities grouping

TYPE
Numeric

LENGTH
8

FORMAT
Nominal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	7	11
-8	Not Applicable	26	39
0	Adequate or indifferent (1,2,3)	153	219
1	Inadequate (4,5)	63	90
2	N/A	2	3
TOTAL		251	362

**QUESTION
NUMBER**
27

VARIABLE NAME
CLIN_BEHAVE_GRP

DESCRIPTION
Clinical experience: Dental care for persons with behavioral health problems grouping

TYPE
Numeric

LENGTH
8

FORMAT
Nominal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	7	11
-8	Not Applicable	25	38
0	Adequate or indifferent (1,2,3)	129	185
1	Inadequate (4,5)	88	126
2	N/A	2	3
TOTAL		251	363

**QUESTION
NUMBER**
27

VARIABLE NAME
CLIN_SETUP_PR_GRP

DESCRIPTION
Clinical experience: Setting up a dental practice grouping

TYPE
Numeric

LENGTH
8

FORMAT
Nominal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	7	11
-8	Not Applicable	26	39
0	Adequate or indifferent (1,2,3)	95	136
1	Inadequate (4,5)	117	168
2	N/A	6	9
TOTAL		251	363

**QUESTION
NUMBER**
27

VARIABLE NAME
CLIN_MGMT_GRP

DESCRIPTION
Clinical experience: Management, marketing, customer service grouping

TYPE
Numeric

LENGTH
8

FORMAT
Nominal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	7	11
-8	Not Applicable	26	39
0	Adequate or indifferent (1,2,3)	83	119
1	Inadequate (4,5)	129	185
2	N/A	6	9
TOTAL		251	363

**QUESTION
NUMBER**
27

VARIABLE NAME
CLIN_WORKWITH_GRP

DESCRIPTION
Clinical experience: Working with other health professionals grouping

TYPE
Numeric

LENGTH
8

FORMAT
Nominal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	7	11
-8	Not Applicable	28	42
0	Adequate or indifferent (1,2,3)	151	216
1	Inadequate (4,5)	64	92
2	N/A	1	2
TOTAL		251	363

**QUESTION
NUMBER**
27

VARIABLE NAME
CLIN_ORTHO_GRP

DESCRIPTION
Clinical experience: Training in orthodontics grouping

TYPE
Numeric

LENGTH
8

FORMAT
Nominal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	7	11
-8	Not Applicable	26	39
0	Adequate or indifferent (1,2,3)	109	156
1	Inadequate (4,5)	104	150
2	N/A	5	7
TOTAL		251	363

**QUESTION
NUMBER**
27

VARIABLE NAME
CLIN_PERIO_GRP

DESCRIPTION
Clinical experience: Training in periodontics grouping

TYPE
Numeric

LENGTH
8

FORMAT
Nominal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	7	11
-8	Not Applicable	24	36
0	Adequate or indifferent (1,2,3)	196	281
1	Inadequate (4,5)	24	34
TOTAL		251	362

**QUESTION
NUMBER**
29

VARIABLE NAME
PREPARE_MGMT_DENT_GRP

DESCRIPTION
Preparation to manage clinical practice upon graduation grouping

TYPE
Numeric

LENGTH
8

FORMAT
Nominal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	3	4
-8	Not Applicable	22	33
0	Prepared or indifferent (1,2,3)	119	171
1	Not prepared (4,5)	107	154
TOTAL		251	362

**QUESTION
NUMBER**
32

VARIABLE NAME
COMM_BENEFIT

DESCRIPTION
Community could benefit from extra dental care services?

TYPE
Numeric

LENGTH
8

FORMAT
Nominal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	5	7
-8	Not Applicable	22	33
0	No	104	150
1	Yes	77	111
2	No opinion	43	61
TOTAL		251	362

**QUESTION
NUMBER**
33

VARIABLE NAME
COLLAB_OTHERS

DESCRIPTION
Collaboration with physicians and nurses in community?

TYPE
Numeric

LENGTH
8

FORMAT
Nominal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	5	7
-8	Not Applicable	22	33
0	No	111	159
1	Yes	113	163
TOTAL		251	362

QUESTION NUMBER 34	VARIABLE NAME SUPPORT_ROLEDH	DESCRIPTION Support expanding role of dental hygienists as independent practitioners?	
	TYPE Numeric	LENGTH 8	FORMAT Nominal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	10	14
-8	Not Applicable	24	36
0	No	162	233
1	Yes	55	78
TOTAL		251	361

Created variables

QUESTION NUMBER	VARIABLE NAME	DESCRIPTION
CREATED VARIABLE	AGE_GRP	Age grouping from age variable

TYPE
Numeric

LENGTH
8

FORMAT
Ordinal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	1	1
1	34 years or younger	24	35
2	35 - 44 years	48	73
3	45 - 54 years	62	90
4	55 - 64 years	81	114
5	65 years or older	35	49
TOTAL		251	362

QUESTION NUMBER	VARIABLE NAME	DESCRIPTION
CREATED VARIABLE	GRAD_NUMYRS_GRP	Number of years from graduation grouping

TYPE
Numeric

LENGTH
8

FORMAT
Ordinal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	30	45
1	0 - 5 years	22	33
2	6 - 15 years	46	69
3	16 - 25 years	55	79
4	26 - 35 years	67	93
5	More than 35	31	43
TOTAL		251	362

**QUESTION
NUMBER**

CREATED VARIABLE

VARIABLE NAME

GRAD_AGE_GRP

DESCRIPTION

Age upon graduation from dental school grouping

TYPE

Numeric

LENGTH

8

FORMATOrdinal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	31	47
1	25 years or younger	34	48
2	26 - 30 years	148	212
3	More than 30 years	38	56
TOTAL		251	363

**QUESTION
NUMBER**

CREATED VARIABLE

VARIABLE NAME

PRIMARY_STATE_FROM_ZIP

DESCRIPTION

State derived from primary practice ZIP Code

TYPE

Character

LENGTH

2

FORMATText

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	30	45
CO	Colorado	221	317
TOTAL		251	362

**QUESTION
NUMBER**

CREATED VARIABLE

VARIABLE NAME

PRIMARY_URBAN_FROM_ZIP

DESCRIPTION

Urban/Rural indicator derived from primary practice ZIP Code

TYPE

Numeric

LENGTH

8

FORMATNominal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	30	45
0	Rural	221	317
TOTAL		251	362

**QUESTION
NUMBER**

CREATED VARIABLE

VARIABLE NAME

RUCA_CLASS_FROM_ZIP

DESCRIPTION

RUCA classification derived from primary practice zip code

TYPE

Numeric

LENGTH

8

FORMATNominal

<u>VALUE</u>	<u>VALUE LABEL</u>	<u>UNWEIGHTED FREQUENCY</u>	<u>WEIGHTED FREQUENCY</u>
-9	Missing	30	45
1	Isolated	38	54
2	Rural Small	99	143
3	Rural Large	84	120
TOTAL		251	362

APPENDIX A BUSINESS RULES FOR DATA CLEANING

The Colorado Health Institute (CHI) used the following business rules to edit data obtained from the 2008 Rural Dentist Survey. Numbers in parentheses are the question numbers as they appeared in the survey.

For more information, contact Glenn Goodrich at 720.382.7095 or goodrichg@ColoradoHealthInstitute.org.

General Rules:

1. Questions that were skipped or left blank, without an instruction to do so, were coded as -9 (formatted as *Missing*). Questions that were part of a skip pattern or that contained invalid or out-of-range values were coded as -8 (formatted as *Not Applicable/Skip Pattern*).
2. If a survey question had N/A as an answer option, these responses were formatted as *N/A-Response* in the frequency report.
3. If more than one form was received for a given respondent, the earliest form, based on the time stamp of a Web-entered survey or the date a paper form was received at CHI, was retained.
4. If a respondent marked more than one item for a question that requested only a single response, then the value was reset to -8 (questions 2, 4, 6, 8, 12, 18, 20, 23, 30, 32 and 33).
5. For questions with a 1-5 scale along with a N/A option, if more than one of the 1-5 options was marked, the average was taken. If one or more of the 1-5 options was marked along with N/A, the value for that variable was re-coded to -8. This applied to questions 21, 26, 27 and 31.
6. For items with a 1-5 scale with 1 indicating *Fully prepared* and 5 *Not prepared*, if more than one option was chosen, the average of those options was used for the value. This applied to items 28 and 29.
7. If a respondent did not select the *Other* box in a question that offered a free-text field for *Other* but entered a description in the text field anyway, then *Other* was re-coded as selected. This applied to items 6, 12 and 33. If *Other* was selected but no text was entered in the text field, the answer was coded as *missing*, -9.

Question-specific rules

1. (Q3) Race/ethnicity- If more than one of the race/ethnicity options was marked but *Mixed Heritage* was not, then the value was coded as *Mixed Heritage*. Further, if more than one of the race/ethnicity options as well as *Mixed Heritage* was marked, then *Mixed Heritage* was the single value used.
2. (Q6) Degree- If *Not Applicable/Skip Pattern* was coded in the description and *No* was marked for the leading question, the description was reset to -9 or *missing*.
3. (Q7) Professional status- If the leading question was missing, but a description appeared in the text field, the leading question was re-coded to *Other*, 6.
4. (Q7) Professional status- If more than one item was marked, then the first option as it appeared on the survey was chosen for the value. If options 3, 4 or 5 were marked, then any subsequent questions answered were coded to -8 (N/A). Subsequent questions not answered were coded to -8 (N/A) as well. For professional status, if *Other* was not checked but a description was given, the answer was reset to *Unknown*, -9 (after the first business rule regarding question 7 was applied).
5. (Q7) Professional status- If the *Other* text “read not practicing dentistry” or “full-time dental hygienist,” then the rest of the survey was considered invalid and all numeric and character fields were recoded to -8 (N/A).
6. (Q11) Number of dental visits in 2007- If the number of visits was 0, then the value was set to -8 (N/A). If the response was 130,000 or more visits, this was considered an invalid response and was coded -8 (N/A).
7. (Q13 and Q25) License and graduation year- If the license year occurred before the graduation year, then both answers and the created variable were coded -8 (N/A). The created variables are number of years since graduation (and grouping) along with graduation age (and grouping).
8. (Q15) Total and direct care hours- If either of the hour estimates was 120 hours or more, these were considered invalid values and was coded -8 (N/A).

9. (Q18) Recruitment of dental hygienists- If a respondent indicated one or more for either part- or full-time positions that they are recruiting but did not mark the leading question as Yes, the variable was re-coded Yes. If the respondent marked No but filled out the count portion with 0 for part time and full time, the counts were re-coded -8 (N/A). If the respondent marked No and did not indicate a number the question was re-coded -8 (N/A). If the leading question was answered Yes and one of the secondary questions (part/full time) had a value of 1 or more and the other was missing, then the missing value was reset to 0.
10. (Q20 and Q21) Accepting Medicaid payment and Reasons for not accepting Medicaid- If the respondent marked Yes to either of the two Medicaid items on question 20 (Accept Medicaid payment or accepting new Medicaid patients), then all variables on question 21 were set to -8 (N/A).
11. (Q21) Reasons for not accepting Medicaid- If the Likert scale for the *Other* category was a missing value of -8 due to a skip pattern, then the description text was also set to -8. If the response to the Likert scale item on the *Other* category was N/A (right margin of the survey), then the text portion for the actual description was coded as *Unknown*.-9.
12. (Q22) Allocation of time spent in direct patient care- If the sum of percentages did not add to 100, then all percentage values were set at -8 (N/A). If the percentages added to 100 but some of the individual items were missing, the missing values were recoded to 0.
13. (Q23) Language other than English spoken with patients- If the respondent specified a language but did not indicate Yes, then the leading question was re-coded as Yes.
14. (Q30 and 31) Leaving current dental practice within 12 months- If question 30 was marked No, then question 31 responses were coded -8 (N/A).
15. (Q32) Community benefit from additional services- If No was marked on the leading question, any text in the comment field was coded -8 (N/A).
16. (Q34) Expanding the role of dental hygienists as independent practitioners- If question 34 had both Yes and No marked, the value was re-coded -8 (N/A). If Yes was marked, then text was re-coded to -8 (N/A).
17. (Q34) Expanding the role of dental hygienists as independent practitioners- If the leading question was missing (coded as Unknown or -9), then any text comments were also coded as -9.

APPENDIX B
SAMPLING AND RESPONSE SUMMARY BY STRATA

<u>STRATA</u>	<u>NUMBER RESPONDING</u>	<u>ELIGIBLE⁴</u>	<u>POPULATION</u>	<u>RESPONSE RATE</u>
License issue before 1990, Male, DMD	9	13	13	69.2%
License issue before 1990, Male, DDS	110	145	148	75.9%
License issue before 1990, Female, DMD	1	1	1	100.0%
License issue before 1990, Female, DDS	10	15	15	66.7%
License issue after 1990, Male, DMD	17	26	27	65.4%
License issue after 1990, Male, DDS	82	125	126	65.6%
License issue after 1990, Female, DMD	1	4	4	25.0%
License issue after 1990, Female, DDS	21	28	28	75.0%
TOTAL	251	357	362	70.3%

⁴ Eligible includes the number of active licensed dentists with a contact address in rural Colorado minus non-rural, out of state and non-response.

APPENDIX C POSTCARDS AND COVER LETTERS



Colorado Health Institute
1576 Sherman Street, Ste. 300
Denver, CO 80203-1728

Within a week you will receive in the mail a request to fill out a rural dentist questionnaire for an important study being conducted by the Colorado Health Institute on behalf of the Colorado Department of Public Health and Environment's (CDPHE) Oral Health Program.

The purpose of the questionnaire is to inform firsthand the Oral Health Program, the Colorado Rural Health Center and the Colorado Area Health Education Centers about rural dentistry issues from those dentists who practice in Colorado's rural areas.

I am writing you in advance because we have found many people like to know ahead of time that they will be contacted. Thank you in advance for your time and consideration in helping make our survey effort successful.

Sincerely,

A handwritten signature in blue ink, reading 'Pamela P. Hanes'.

Pamela P. Hanes, PhD
President and CEO
Colorado Health Institute

July 17, 2008

xxxx
xxxxxxx
xxxxxxxxx

Dear Dr. xxxx:

We need your help to learn more about the practice of dentistry in rural areas of Colorado. Many Coloradans living in rural areas of the state have difficulty getting access to oral health care because of an overall shortage of practicing dentists. Colorado policymakers at both the state and local levels would benefit from a better understanding of the training and practice issues related to recruiting dentists to a rural practice.

To provide policymakers with this information, the Colorado Health Institute (CHI) was asked by the Colorado Department of Public Health and Environment's Oral Health Program to survey Colorado's rural dentists in order to obtain a current and accurate picture of that part of the state's dental workforce. Your participation in this survey effort is very important.

The responses you provide are **confidential** and your name will be removed from our database once the survey effort has been completed.

CHI was created five years ago by three Colorado health foundations to serve as an independent and impartial source of reliable and relevant health-related information for sound decisionmaking. CHI has been working closely with the Colorado Department of Public Health and Environment as well as professional oral health organizations to develop the enclosed survey questionnaire.

We value your participation in this effort. The survey should take approximately 15 minutes to complete. A high response rate will ensure the reliability of the findings and provide the most accurate and generalizable picture of dentistry in the rural areas of our state.

Commonly Asked Questions about the survey are included on the back of this letter. If you have any additional questions about the survey or about the Colorado Health Institute, please contact Michael Boyson at 303.831.4200 x 207.

Enclosed is a small \$2 token of our appreciation for filling out the survey. Thank you for your participation.

Warm regards,



Pamela P. Hanes, PhD
President and CEO

You can also complete the survey form online at: <http://www.ColoradoHealthInstitute.org/Dentist2008.html>. Type the number shown at the top of your survey form (xxxx) → Complete the questionnaire and click the "submit" button when you finish.

COMMONLY ASKED QUESTIONS

Who are the Colorado policymakers who will see the summary results?

CHI will share a report of the rural dentist survey findings with interested individuals and groups including:

- Legislators
- State agencies, such as the Colorado Department of Public Health and Environment's Oral Health Program and the Department of Health Care Policy and Financing (the state's Medicaid agency)
- Governor's Task Force on Collaborative Scopes of Care
- Colorado foundations, such as The Colorado Trust, Caring for Colorado and The Colorado Health Foundation
- University of Colorado (CU) Denver School of Dental Medicine
- Colorado Rural Health Center

Why is this survey important?

The Colorado Department of Public Health and Environment's (CDPHE) Oral Health Program will use the information to identify opportunities to improve access to oral health care in rural areas of the state. The CU Denver School of Dental Medicine will use the information to improve its Rural Health Track for dental students. The Colorado Rural Health Center will identify practice opportunities for rural communities to recruit dentists. The Colorado Area Health Education Centers will identify opportunities to increase high school students' interests in health careers. The Colorado Health Institute will inform legislators about training and practice issues related to rural dentistry to inform their workforce deliberations.

How was I selected to be in the sample?

Using the home or work address contained in the Colorado Department of Regulatory Agency's dentist licensure file, CHI matched ZIP Codes with the definition of rural developed by the U.S. Department of Agriculture (Rural Urban Commuting Areas/RUCAs). RUCA codes are a sub-county measure of rural status based on 2000 U.S. Census data and 2006 ZIP Codes. For more information on RUCA codes, refer to <http://depts.washington.edu/uwruca/index.html>.

If I am retired or not practicing dentistry, do I need to fill out the questionnaire?

Yes, but only the first seven questions. Please answer these seven questions either online or by returning the enclosed questionnaire in the self-addressed stamped envelope. Your name will then be taken off the CHI mailing list for any further contact.

Who sees my answers?

CHI staff members working on the survey have signed a confidentiality agreement to protect the confidentiality of the data collected. Before the public sees the summary results or a research data file, CHI staff will ensure that survey responses that could identify an individual are re-coded to protect the confidentiality of all survey respondents.

How much time does the questionnaire take?

There are 34 questions. Based on a pre-test of the survey instrument, we estimate the questionnaire will take approximately 15 minutes to complete.

What happens if I do not respond?

This is a voluntary survey. However, if you do not respond, the survey will be less representative of the population of dentists practicing in rural areas of the state.

Can I see a report from the survey?

If you would like a copy of the final report based on this survey, please contact Rebecca Crepin, CHI research assistant, at 303.831.4200 x 216 or crepinr@coloradohealthinstitute.org.



Colorado Health Institute
1576 Sherman Street, Ste. 300
Denver, CO 80203-1728

Last week you received a letter inviting you to participate in a Rural Dentist Workforce Survey. Your name was drawn from a list of currently licensed dentists living or working in rural Colorado based on the U.S. Department of Agriculture's definition of "rural."

If you have already completed the survey online or returned the form to us, please accept our sincere thanks. If not, we ask that you please do so as soon as possible. It is only through rural dentists like you completing the questionnaire that Colorado policymakers will fully understand the workforce issues that you and your colleagues face in providing dental care in rural areas of the state.

If you did not receive a questionnaire, or if it was misplaced, please call Rebecca Crepin at 303.831.4200 x 216 and we will get another one in the mail to you today.

Warm regards,

A handwritten signature in blue ink, reading 'Pamela Hanes'.

Pamela P. Hanes, PhD
President and CEO

August 7, 2008

xxxxxxx
xxxxxxx
xxxxxxxxx
xxxxxxxxxxx

Dear Dr. xxxxx:

About three weeks ago the Colorado Health Institute mailed you a Rural Dentist questionnaire that asked about your experience as a dentist practicing in rural Colorado. To date, we have not received your completed questionnaire.

Dentists who have already returned their questionnaire reveal both good and bad experiences. We believe the results of this survey will be highly useful to state policymakers and others working to recruit dentists to rural Colorado.

The preliminary results for the rural dentist survey show that about one-third of rural dentists accept Medicaid payments, whereas two-thirds do not. The main reason given for not accepting Medicaid payments was that the reimbursement rate is too low. Too many "no shows" and difficult/time-consuming paperwork followed closely behind.

We are writing to you because your participation is so important to this effort. As we stated in the first letter, your responses to the questions will be confidential and only reported in the aggregate.

A few people have called to say that they are retired or not seeing patients. If that is the case with you, we ask you to simply complete the first seven questions and then return the survey to CHI.

I have enclosed another copy of the questionnaire and hope that you will take 15 minutes or so to fill it out and return it today. If you have any questions, please contact Michael Boyson at 303.831.4200 x 207. Thank you very much for your participation in this important survey effort.

Sincerely,



Pamela P. Hanes, PhD
President and CEO

You can also complete the survey form on line at: <http://www.ColoradoHealthInstitute.org/Dentist2008.html>. Type the number shown at the top of your survey form (xxxx) → Complete the questionnaire and click the "submit" button when you finish.

FREQUENTLY ASKED QUESTIONS

How many people have responded?

So far, we have received 185 surveys: 178 paper forms and seven filled out online. The response rate for the survey so far is 51 percent, but we are aiming for a 100 percent response rate.

Who are the Colorado policymakers who will see the summary results?

CHI will share a report of the rural dentist survey findings with interested individuals and groups including:

- Legislators
- State agencies, such as the Colorado Department of Public Health and Environment's Oral Health Program and the Department of Health Care Policy and Financing (the state's Medicaid agency)
- Governor's Task Force on Collaborative Scopes of Care
- Colorado foundations, such as The Colorado Trust, Caring for Colorado and The Colorado Health Foundation
- University of Colorado (CU) Denver School of Dental Medicine
- Colorado Rural Health Center

Why is this survey important?

The Colorado Department of Public Health and Environment's (CDPHE) Oral Health Program will use the information to identify opportunities to improve access to oral health care in rural areas of the state. The CU Denver School of Dental Medicine will use the information to improve its Rural Health Track for dental students. The Colorado Rural Health Center will identify practice opportunities for rural communities to recruit dentists. The Colorado Area Health Education Centers will identify opportunities to increase high school students' interests in health careers. The Colorado Health Institute will inform legislators about training and practice issues related to rural dentistry to inform their workforce deliberations.

How was I selected to be in the sample?

Using the home or work address contained in the Colorado Department of Regulatory Agency's dentist licensure file, CHI matched ZIP Codes with the definition of rural developed by the U.S. Department of Agriculture (Rural Urban Commuting Areas/RUCAs). RUCA codes are a sub-county measure of rural status based on 2000 U.S. Census data and 2006 ZIP Codes. For more information on RUCA codes, refer to <http://depts.washington.edu/uwruca/index.html>.

If I am retired or not practicing dentistry, do I need to fill out the questionnaire?

Yes, but only the first seven questions. Please answer these seven questions either online or by returning the enclosed questionnaire in the self-addressed stamped envelope. Your name will then be taken off the CHI mailing list for any further contact.

Who sees my answers?

CHI staff members working on the survey have signed a confidentiality agreement to protect the confidentiality of the data collected. Before the public sees the summary results or a research data file, CHI staff will ensure that survey responses that could identify an individual are re-coded to protect the confidentiality of all survey respondents.

What happens if I do not respond?

This is a voluntary survey. However, if you do not respond, the survey will be less representative of the population of dentists practicing in rural areas of the state.

Can I see a report from the survey?

If you would like a copy of the final report based on this survey, please contact Rebecca Crepin, CHI research assistant, at 303.831.4200 x 216 or crepinr@coloradohealthinstitute.org.