Retirement Intentions: Dentists

Healthcare Workforce Data Center

September 2020

Virginia Department of Health Professions
Healthcare Workforce Data Center
Perimeter Center
9960 Mayland Drive, Suite 300
Henrico, VA 23233
804-567-4213, 804-527-4466(fax)
E-mail: ***HWDC@dhp.virginia.gov***

Follow us on Tumblr: ***www.vahwdc.tumblr.com***

Get a copy of this report from: ***https://www.dhp.virginia.gov/PublicResources/HealthcareWorkforceDataCenter/***

Virginia Department of Health Professions

David E. Brown, DC
Director

Barbara Allison-Bryan, MD
Chief Deputy Director

Healthcare Workforce Data Center Staff:

Dr. Elizabeth Carter, PhD	Yetty Shobo, PhD	Laura Jackson, MSHSA	Rajana Siva, MBA	Christopher Coyle, BA
Director	*Deputy Director*	*Operations Manager*	Research Analyst	*Research Assistant*

Contents

INTRODUCTION 4

METHODS 4

Data 4

Analysis 5

Measures 6

RESULTS 6

Analysis One 7

Analysis Two 9

..... 9

Analysis Three 9

CONCLUSION 9

INTRODUCTION

The goal of this report is to examine whether dentists actually retire when they intended to retire. The impetus for the study is the high retirement intentions reported by dentists in surveys and the high median age of the workforce[1]. Further, dentistry workforce shortages are expected nationally due to a high number of retiring baby boomer dentists, that is, those born between 1946 and 1964. For instance, 35% of the Virginia's dentist workforce is over age 55[2]. Further, research suggests that these retiring baby boomers outnumber the dentists entering the workforce[3]. Research projects acute dental shortages starting from 2008. These shortages may be limited to general dentistry as supply for pediatric dentists, orthodontists, endodontists, oral surgeons, and other dentists (e.g., periodontists, dental public health providers, etc.) is projected to be adequate nationally[4]. In Virginia, 77% of dentists are in general dentistry. Thus, it is worth examining the retirement intentions of dentists in the state. Further, close to a third of Virginia's dentistry workforce intends to retire within the next decade, begging the question how closely do intentions and plans correlate with behavior? The three sets of analyses in this study address this question for dentists licensed in Virginia.

METHODS

Data

The data for this study come from the Virginia Dentistry Workforce Survey. Every year, the Virginia Department of Health Professions Healthcare Workforce Data Center administers the Virginia Dentistry Workforce Survey to dentists licensed in that year. In the 2013 survey, dentists were asked at what age they intend to retire. Their current age was subtracted from their intended retirement age to obtain the expected number of years to their retirement. The expected years to retirement was used to create the samples in this study.

The first sample includes dentists who intended to retire within two years of the 2013 survey, the base survey. A second question asked the dentist respondents what they planned to do in the next two years, with options including retire, leave the profession, continue in the profession, decrease patient care, increase patient care, pursue additional education, decrease teaching time, and increase teaching time. This study selected those who intended to retire within two years and who also indicated they planned to retire in two years. It excluded those who were already retired. This study also restricted the sample to dentists working only in dentistry-related positions. Using 2013 as the base survey year and 2014 to 2020 as follow up years, this study examined how many of these dentists retired by 2020.

As shown in the following table, there were 6,875 licensed dentists in Virginia in 2013. Of those, 6,186 were eligible to complete the 2013 survey; 78% (4,829) of the eligible dentists completed the survey. However, only 3,811 respondents answered the retirement age question; 1,018 did not respond to the question. Of the 3,811 who responded to the question, 245 indicated that they intended to retire within 2 years of the survey. Of the 245, 202 (82%) also selected retirement as one of their two-year plans. However, of these 202, two dentists did not provide a working status, one was involuntarily unemployed, two were voluntarily unemployed, two were working in a non-dentistry related capacity, and another two were working in an unknown capacity. Further, 16 of the 202 reported that they were retired. The remaining 177 dentists qualified for inclusion in sample one and were followed in the 2014 to 2020 surveys to see if they retired.

[1] http://www.dhp.virginia.gov/media/dhpweb/docs/hwdc/ltc/1701dentist2019.pdf
[2] http://www.dhp.virginia.gov/media/dhpweb/docs/hwdc/ltc/1701dentist2019.pdf
[3] https://www.dentaleconomics.com/money/article/16389876/ready-set-retire
[4] https://bhw.hrsa.gov/sites/default/files/bhw/health-workforce-analysis/research/projections/oral-health-2017-2030.pdf

The second sample in this study included dentists who intended to retire within five years of the 2013 survey, the base survey; the survey did not include a five-year plan question. The second analysis also restricted the sample to dentists working in dentistry-related positions. Using 2013 as the base survey year and 2014 to 2020 as follow up years, this study examines how many of these dentists retired by 2020.

The following table shows that a total of 443 dentists indicated that they intended to retire within five years. Of the 443, two dentists did not provide a working status, one was involuntarily unemployed, five were voluntarily unemployed, two were working in a non-dentistry related capacity, and another two were working in an unknown capacity. Further, 23 also reported that they were retired. The remaining 408 dentists were followed in the 2014 to 2020 surveys to see if they indeed retired.

	Dentists
Total licensees in 2013	6,875
Total respondents in 2013	4,829
Total who responded to retirement age question	3,811
Reported retiring within 2 years	245
Of those how many also reported 2-year retirement plan	202
% agreement between intentions and plan	82%
Number already retired	16
Number not reporting dentistry employment in 2013	9
Sample 1: Number employed and intending/planning to retire after removing retirees	**177**
Reported retiring within 5 years	443
Number already retired	23
Number not reporting dentistry employment in 2013	12
Sample 2:	**408**
Number not intending to retire within 5 years	3,368
Number already retired	9
Number not working in dentistry-related positions	50
Sample 3:	**3,309**

Source: VA. Healthcare Workforce Data Center

The third sample included the respondents who were not planning to retire within five years. Of the remaining 3,368 who responded to the retirement age question and did not intend or plan to retire within five years, four dentists did not provide a working status, seven were involuntarily unemployed, thirty-two were voluntarily unemployed, and seven were working in a non-dentistry related capacity. Further, nine also reported that they were retired. However, 3,309 were employed in a dentistry-related capacity. This third sample was followed to see whether any of them retired between 2014 or 2020.

Analysis

There were three sets of analyses in this study. The first analysis examined how many of the respondents who intended and planned to retire within two years of 2013 were retired at the end of the review period in 2020. The work and retirement status of each of the dentists in sample one is reported. Using logistics regression, this analysis also examined which workforce factors were associated with the likelihood of these dentists to retire. The second analysis examined how many respondents who intended to retire within five years of 2013 were retired by the 2020 survey; the number who retired any time before 2020 is reported. The last analysis examined how many respondents who did not intend to retire within 5 years of 2013 were retired by 2020.

Measures

Dependent Variable

Respondents were asked what their working status was in subsequent surveys after 2013. The options included: employed in a dentistry-related capacity; employed capacity unknown; employed not in a dentistry-related capacity; not working, reasons unknown; voluntarily unemployed (including for medical reasons); involuntarily unemployed; or retired. A binary variable indicating whether a respondent had selected retired or not (1=Yes, 0=No) was created from this question. The frequency of respondents indicating they had retired was obtained from this variable and was used for the three analyses. Further, this binary variable was used as the dependent variable in a logistic regression using sample one to investigate what factors increased or decreased the likelihood of a dentist retiring within seven years of their indicating an intention and plan to retire within two years.

Independent Variables

Initial logistics regression models included the following independent variables: a continuous measure of age; dummy variables for female, White, Black, Hispanic, and Asian (Others was the reference); dummy variables for work establishment such as group practice, solo practice, and others; a dummy variable for working more than two full time positions, dummy job length variables including one for working between three and ten year, and another for working at least ten years (working for less than two years was the reference); dummy variables for working 30 to 49 hours, 50 to 60 hours, and over 60 hours (works less than 30 hours is the reference), and dummy variables for job satisfaction, has education debt, licensed out of state, and access to employer-provided retirement and health insurance benefits. Dummy variables of different income categories were also included in initial models. The final logistic regression model included any of these variables that contributed significantly to the fit of the model of the likelihood of retirement.

RESULTS

Using the 2013 survey data, the following table compares the summary statistics of sample one, sample two, and sample three. Median income was the same for the three groups. Not surprisingly, the mean age of dentists who intended and planned to retire within two years of 2013 was higher than the mean for samples two and three; the intended retirees had a mean age of 67 years compared to 65 years for sample two and 47 years for sample three. Females were most represented in sample three and least represented in sample one. The intended retirees in sample one had a higher proportion of Whites compared to samples two and three. Conversely, sample one had fewer proportion of Blacks, Asians, and Hispanics and sample three had the most representation.

In all three samples, nearly all dentists reported a doctorate degree. However, sample one had the highest representation of dentists who did a specialty residency (orthodontics, periodontology, endodontics, prosthodontics, oral and maxillofacial radiology, oral and maxillofacial pathology, and oral and maxillofacial surgery) followed by sample two. Dentists in sample three were most likely to be working in group practice and those in sample one were least likely to be in group practice. Dentists in sample one were more likely to be working in one part time position compared to the other two samples.

About 68% of those who intended and planned to retire within two years had been at their position for more than a decade compared to 65% of dentists in sample two and 40% of dentists in sample three. Dentists in sample one were also most likely to be working less than 30 hours per week compared to samples two and three. Job satisfaction and median income did not differ significantly between the three samples. Receipt of at

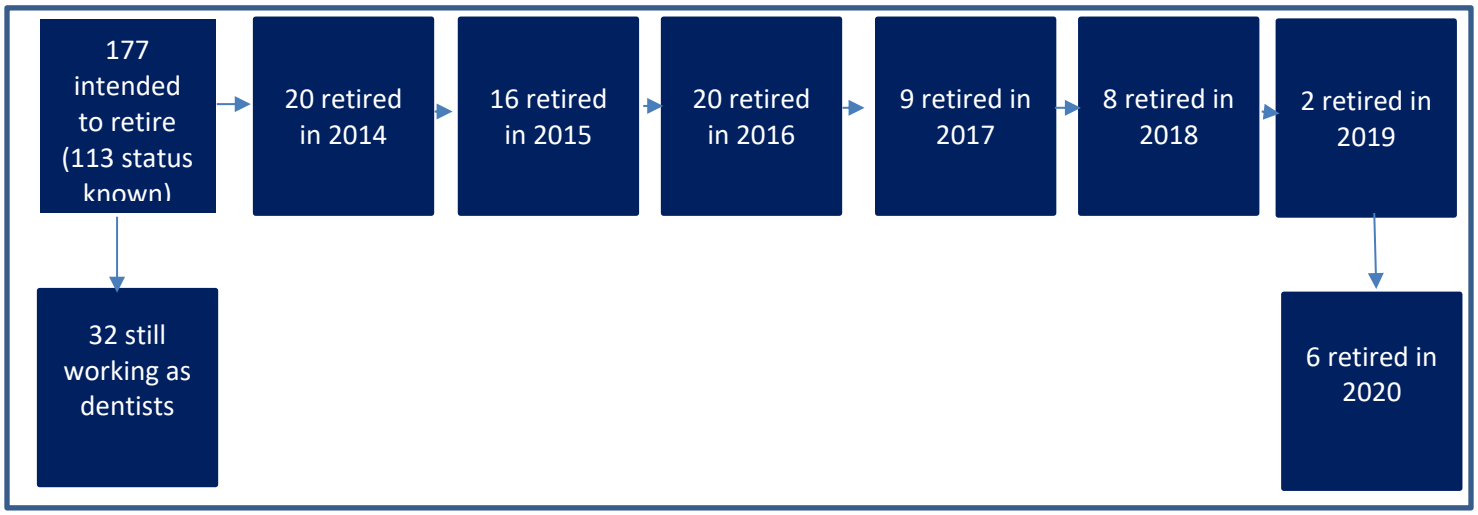
least one employer-provided benefit was low in general among the three samples; less than half reported receiving employer-provided health insurance and retirement benefits. Dentists in sample three were most likely to report receiving employer-provided health insurance whereas sample one had the highest report of employer-provided retirement benefits.

	Sample One	Sample Two	Sample Three
Mean age	67 yrs.	65 yrs.	47 yrs.
Female	8%	12%	33%
White	92%	90%	66%
Black	3%	4%	6%
Hispanic	1%	1%	5%
Asian	3%	4%	17%
Others	1%	1%	6%
Doctorate degree	98%	98%	97%
Specialist	31%	27%	21%
Solo practice	49%	50%	47%
Group practice	24%	28%	40%
Works one part time position	34%	28%	9%
Works full time/2 part time	64%	70%	80%
Works 2 or more full time	2%	2%	11%
Job length between 3 and 10 years	22%	19%	32%
Job length more than 10 years	68%	65%	40%
Works <30 hrs.	38%	30%	11%
Works 30-49 hrs.	57%	65%	78%
Works 50-59 hrs.	2%	4%	7%
Works 60+ hrs.	3%	1%	4%
Satisfied with job	95%	96%	95%
Median income	$125K-$150K	$125K-$150K	$125K-$150K
% Licensed outside state	32%	29%	37%
% in VA workforce	80%	82%	80%
% Employer-provided health insurance	33%	32%	39%
% Employer-provided retirement benefits	38%	35%	36%

Source: VA. Healthcare Workforce Data Center

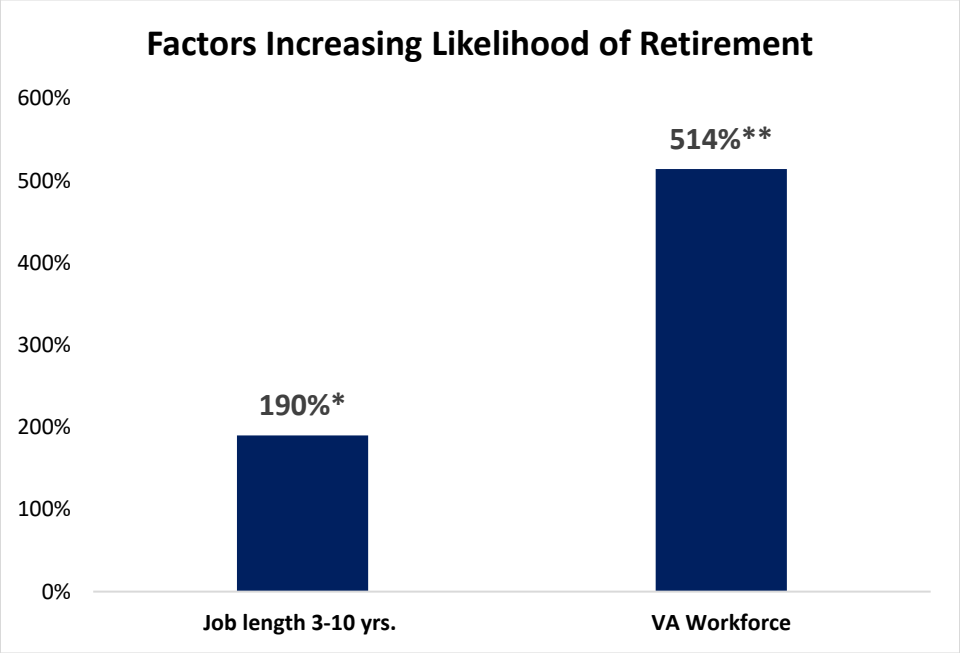
Analysis One

The first part of analysis one examined the retirement status of dentists who intended and planned to retire within two years of 2013. The retirement status of 113 of the 177 dentists in sample one was known in 2020; the status of 64 dentists was not known because their license in Virginia had expired in a majority of the cases. In very few cases, the licenses had been suspended or the dentists were deceased. Of the 113 dentists with known status, 72% (81) had retired; 32 were still working as a dentist. The following figure presents the retirement timing of the 81 dentists who had retired.



Source: VA. Healthcare Workforce Data Center

The second part of analysis one used logistic regression to examine the factors that increased or reduced the likelihood of retirement for dentists in sample one. The final logistic regression for physicians examined the factors that predicted the likelihood of retiring in a seven-year period after a dentist had stated an intention and plan to retire within two years. This final model included work establishment, job length, age, having a license from out of state, race, and gender as independent variables. The following figure presents the findings from the model.



Source: VA. Healthcare Workforce Data Center
Nagelkerke R Square=0.21
X^2(n, d.f) = 15.1(177, 5)
$^{+}p<.08$. $^{*}p<.05$. $^{**}p<.01$. $^{***}p<.001$

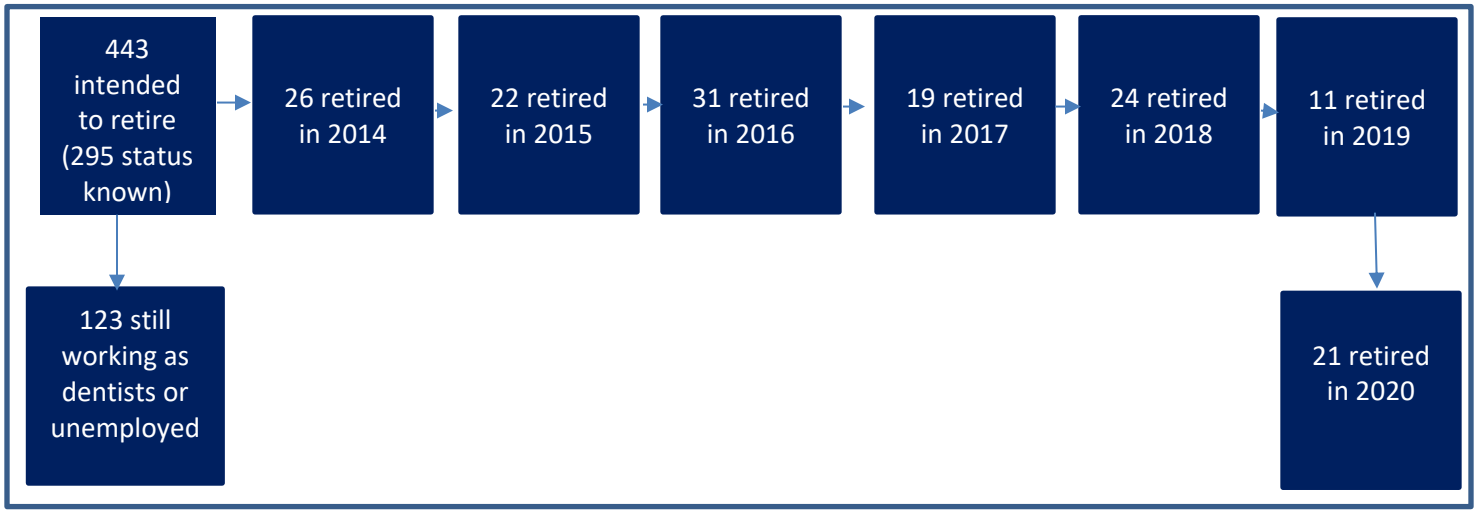
As seen in the figure, only job length and being in the Virginia workforce increased the likelihood that a dentist who had intentions and plans to retire would do so within seven years. Further, holding the same position for between three and ten years increased a physician's likelihood of retiring in the seven-year period by 190%. However, working at the same position for over a decade was not significantly associated with a higher or

lower likelihood of retiring. Age and working in solo practice were included in the final model but were not significantly associated with likelihood of retiring for dentists. None of the other variables were significant.

Analysis Two

This analysis examined the retirement status of dentists who intended to retire within five years of 2013. The retirement status of 274 of the 408 dentists in sample one was known in 2020; the status of 134 dentists was not known because their Virginia dentistry license had expired in a majority of the cases. In very few cases, the unknown status was because the licenses had been suspended or the dentists were deceased.

Of the 274 dentists with known status, a majority (56% or 153) had retired; 44% (121) were still working as a dentist or, in few cases, voluntarily or involuntarily unemployed. The following figure presents the retirement timing of the 153 dentists who had retired by 2020.



Source: VA. Healthcare Workforce Data Center

Analysis Three

Of the 3,309 licenses who did not intend to retire within 5 years of the 2013 survey, the retirement status of 2,717 was known by 2020; 592 had an unknown retirement status because their dentistry licenses in Virginia had expired in a majority of the cases. In very few cases, the licenses had been suspended or the dentists were deceased.

Of the 2,717 dentists with known retirement status, only 133 (5%) had retired by 2020; 2,584 had not retired. Of the 2,584 who were not retired, 2,064 or 80% were still employed in a dentistry-related capacity; 28 were voluntarily unemployed, five were involuntarily unemployed, and five were employed but not in a dentistry-related capacity in 2020. Another 482 did not respond to the working status question in 2020 but a majority of these had indicated that they were employed in a dentistry-related capacity in 2018 or 2019.

CONCLUSION

The findings from this study are encouraging; only 20% of dentists licensed in Virginia who intended and planned to retire within a two-year period did so in that period. However, 72% of those with known retirement status had retired within the immediate seven-year period. Further, when we examined the retirement status of dentists who intended to retire within a five-year period with known retirement status in 2020, a little less than half did so within the stated five-year period and 56% did so within the immediate seven-year period after 2013.

Additionally, another 133 dentists who did not indicate that they intended to retire within five years had retired by 2020. However, even after including their counts, fewer dentists exited by retirement in the seven-year period examined compared to the number expected to exit in the stated five-year period. A total of 308 dentists had exited the workforce through retirement by 2020 compared to the 408 who had indicated they intended to exit within five years of 2013. Further, there were 783 more dentist licensees in 2020 compared to 2013, somewhat making up for the loss due to retirement. The extent to which this overall increase in licensees meets the projected increase in dentistry demand, however, is not known.

A concerning finding in this study is the number of dentists who leave Virginia's workforce by letting their licenses expire; these constitute a majority of the dentists with unknown retirement status. In very few cases with unknown status, the licenses had been suspended or the dentists were deceased. It is unknown whether these dentists with expired licenses left for another state's dentistry workforce or let their license expire because they retired. These unknown constitute about a third of samples one and two, and need further studying. Another finding of concern is the higher likelihood of the retiring dentists to be licensees in the state workforce. This finding could be because older dentists may be more stable in their career and with their clientele and more likely to work within one state.

However, based on the known working status of the dentists followed, there are some encouraging findings that suggest that the projected general dentistry professional shortage due to retirement may not be as severe as anticipated in Virginia. Slightly less half of those who intended to retire within five years of 2013 did so in that period. Thus, it is reassuring that, even though a lot of baby boomer dentists will be exiting the workforce, several remain past their intended and planned exit. Further, individuals often retire in stages so some of the retired dentists may return to work fewer hours but may still help respond to the increased dentistry demand. Also, specialists constitute a slightly higher proportion of the retiring dentists; there were 26% specialists among the retirees whereas there are 22% specialists in the general dentist population. Thus, retirement seems to be impacting general dentistry less than specialty dentistry contrary to the fear nationally[5]. The condition of the economy will likely also play a critical role in how closely dentists' retirement intentions and plans match their behavior.

[5] https://bhw.hrsa.gov/sites/default/files/bhw/health-workforce-analysis/research/projections/oral-health-2017-2030.pdf