

## Project Summary March 2004

### Washington State’s Dental Hygienist Workforce through 2020: Influential Factors and Available Data

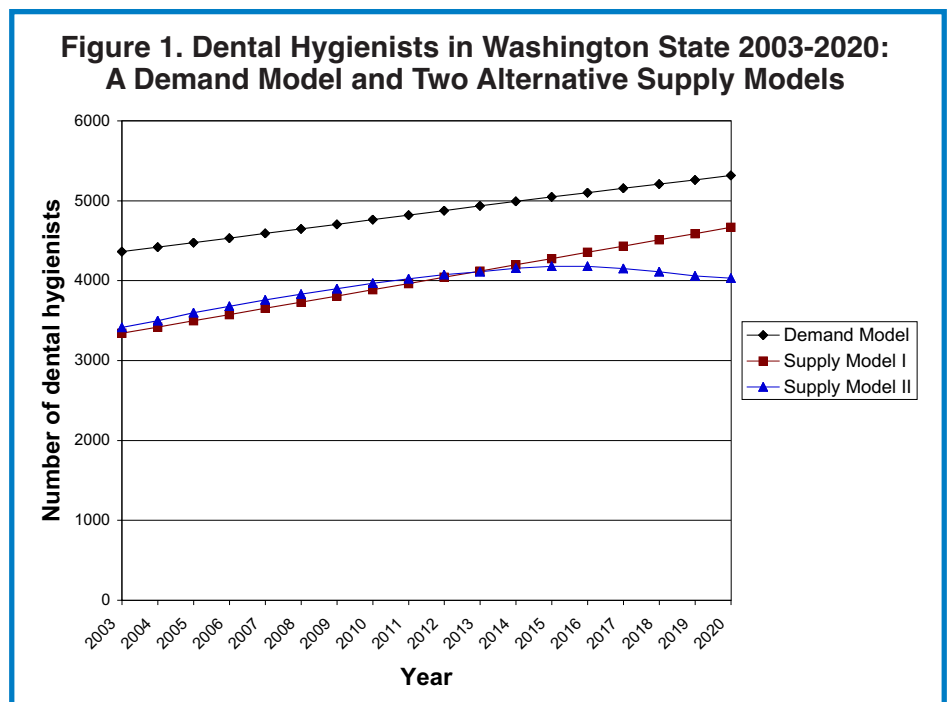
**Background:** Washington State is experiencing a shortage of dental hygienists. We attempted to identify important factors affecting this workforce and data on supply and demand. Using the best available data, we developed two scenarios projecting the dental hygiene workforce through the end of the next decade.

estimated 24.5 percent vacancy rate from the 2001 dentist survey, both scenarios project a slight easing of Washington State’s dental hygiene workforce shortage through 2012, when the projections diverge. One scenario, based on Supply Model I, shows continued improvement; the other scenario, based on Supply Model II, projects a worsening shortage.

**Methods and Data Limitations:** There are few data sources available for dental hygienist workforce projections in Washington, which limits the precision of our models. We used four principal data sources: (1) 1998-1999 state licensing data and a supplementary licensing survey (no longer available) from the Washington State Department of Health, Office of Health Professions Quality Assurance, (2) a one-time survey of dentists in 2001 by the Washington State Dental Association, (3) data on dental hygiene educational program completions in the state from 1996 to 2003, and (4) U.S. Census Bureau state population data. Supply Model I uses recent trends in state licensing to estimate future supply, while Supply Model II projects educational output and retirement trends. Our Demand Model projects dental hygienist vacancies using dental practice and state population growth data.

**Challenges in Projecting Dental Hygienist Supply and Demand:** The questions on the next page address important factors that affect dental hygienist supply and demand. The more we are able to quantify influences on this workforce, the more accurate and useful future supply and demand analyses will be.

**Results:** By comparing each supply model with the demand model, we derived two projection scenarios (Figure 1). Both scenarios assume that demand for services (adjusted for population growth) and rates of increase in supply of providers will continue at current levels. Beginning with an



✘ Recent increases in educational capacity will increase supply. How long will Washington's educational institutions continue to produce dental hygienists at this higher rate?

✘ Do more hygienists migrate into or out of the state?

✘ Will recent state regulatory changes increase supply? What will be the effects of new policies?

✘ How might the decreasing supply of dentists and a possible expansion of dental hygienists' scope of practice affect the supply of dental hygiene services?

✘ Will potential productivity gains through improved technology be offset by increased demand for new types of services?

✘ How will improvements in oral health affect demand for services?

✘ A growing population will increase demand. How will other changing population demographics, such as aging, affect demand in Washington?

✘ How equitably are dental hygienists distributed to meet demand throughout the state?

✘ Demand depends partly on the number of people insured. Will this number rise or fall?

**Policy Implications:** Our projections of the dental hygienist workforce are hampered by numerous critical information gaps, such as lack of data on job turnover, provider migration, and exits from the profession. We are also unable to predict or quantify future changes in the state's health services delivery system and health policy. More resources are needed to collect high-quality data on a regular basis for continued monitoring and for workforce projections in the future.

*This study is more fully described in WWAMI Center for Health Workforce Studies Working Paper #92: Patterson DG, Skillman SM, Hart LG, Washington State's Dental Hygienist Workforce through 2020: Influential Factors and Available Data, March 2004. This working paper, and others projecting the state's radiographer and pharmacist workforces, are available on the Web at <http://www.fammed.washington.edu/CHWS/>.*