



Center *for*  
Rural Health

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School of Medicine & Health Sciences

# A Survey of North Dakota Physicians Health Profession Tracking Program

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*Connecting resources and knowledge to strengthen  
the health of people in rural communities.*

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## EXECUTIVE SUMMARY

### Background

The Health Professions Tracking Program (HPTP) Center for Rural Health, University of North Dakota School of Medicine and Health Sciences, developed a survey modeled after the University of Nebraska Medical Center's Health Profession Tracking Center. The HPTP is a statewide healthcare provider tracking system with the ability to create and maintain a comprehensive inventory of North Dakota's critical healthcare resources. Data will be analyzed quarterly to monitor healthcare workforce supply and demand trends in North Dakota. The HPTP will provide the data needed to assist in health needs planning and forecasting for the state's healthcare delivery system.

The Physician Workforce Survey was designed to examine demographics, educational background, practice profiles, practice arrangements to include additional practice sites and retirement plans. The survey was distributed to all 1,461 licensed physicians in North Dakota with a response rate of 64%<sup>a</sup> (935/1,461).

This program is supported with funding and personnel from the Center for Rural Health, University of North Dakota School of Medicine and Health Sciences.

### Physician Survey Results

- The majority of physicians in North Dakota and the United States were male and non-Hispanic white.
- Two-thirds of the physicians in the United States and slightly over one-third in North Dakota were under age 45.
- Over half of the North Dakota physicians born in the United States were from North Dakota.
- More than one-third of North Dakota physicians attended medical school in-state while nationally, less than one-third attended medical schools in their home states.
- One-quarter completed residency training in North Dakota.
- North Dakota had 71 active primary care physicians per 100,000 population in 2000 which was higher than the national rate of 69 per 100,000.
- Over half practice in the specialties of Family Medicine, Internal medicine, Pediatrics, and Obstetrics and of these, over half specialize in Family Medicine.

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<sup>a</sup> Survey results vary in response rate from question to question and due to rounding may not add up to 100%.

- Family Medicine physicians were almost three times more likely to work in rural areas.
- The majority of all physicians were self-employed via a partnership/group practice or salaried hospital employees.
- One-quarter were planning to retire in ten years or less.
- Assuming retirement at age 65, twenty-five percent will have retired by 2015 and forty-two percent by 2020.

## INTRODUCTION

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## DEMOGRAPHICS

- **Gender**

79% of physicians in North Dakota were male compared to 74% nationally<sup>2</sup>.

- **Age**

The average age is 49 years compared to 51 years nationally<sup>2</sup>. No major differences in age were noted by rurality of practice location.

40% of the U.S. in 2002<sup>2</sup> and 36% of North Dakota physicians in 2004 were younger than age 45.

- **Race**

In North Dakota, 80% were non-Hispanic white, 5% Asian-Indian descent, 2% American-Indian/Alaska Native while nationally, 74% were non-Hispanic white<sup>3</sup>.

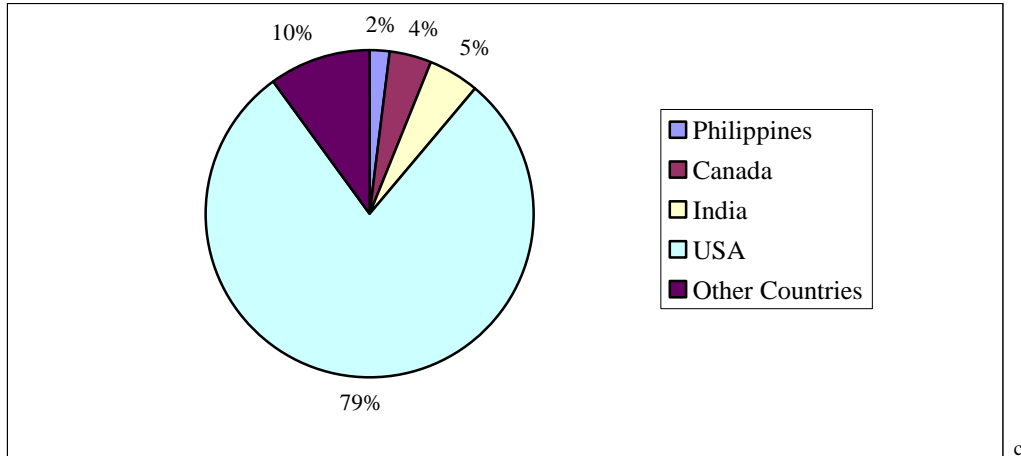
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<sup>b</sup> Survey results vary in response rate from question to question and due to rounding may not add up to 100%.

- **Country of Origin**

79% were from the United States, 5% Canada, 4% India, and 2% from the Philippines (see Figure 1).

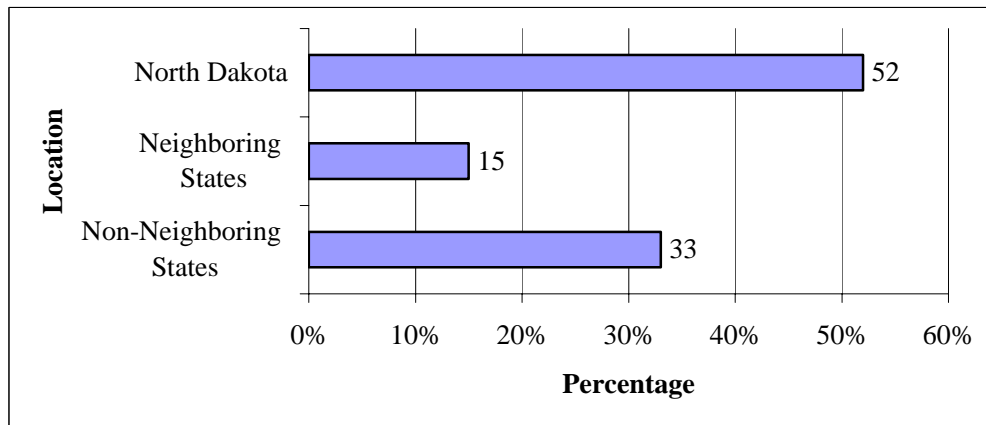
Figure 1: Country of Origin for North Dakota Physicians



- **Home State<sup>c</sup>**

52% attended school in North Dakota and 15% from neighboring states (see Figure 2).

Figure 2: Home State

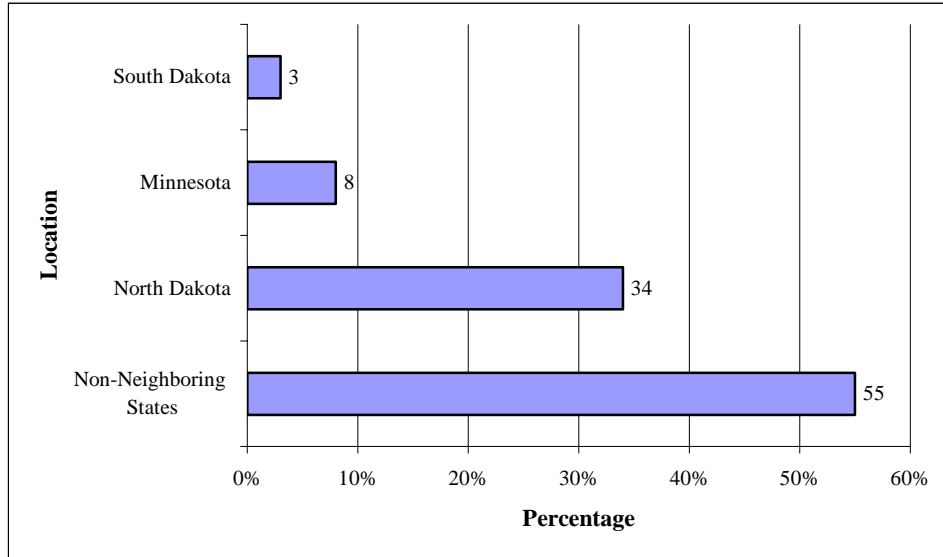


<sup>c</sup> Home state is defined as where the physician graduated from High School.

## EDUCATIONAL BACKGROUND

- 34% attended medical school in North Dakota, 8% Minnesota, and 3% in South Dakota. Nationally, 32% attended school in their home state<sup>3</sup> (see Figure 3).

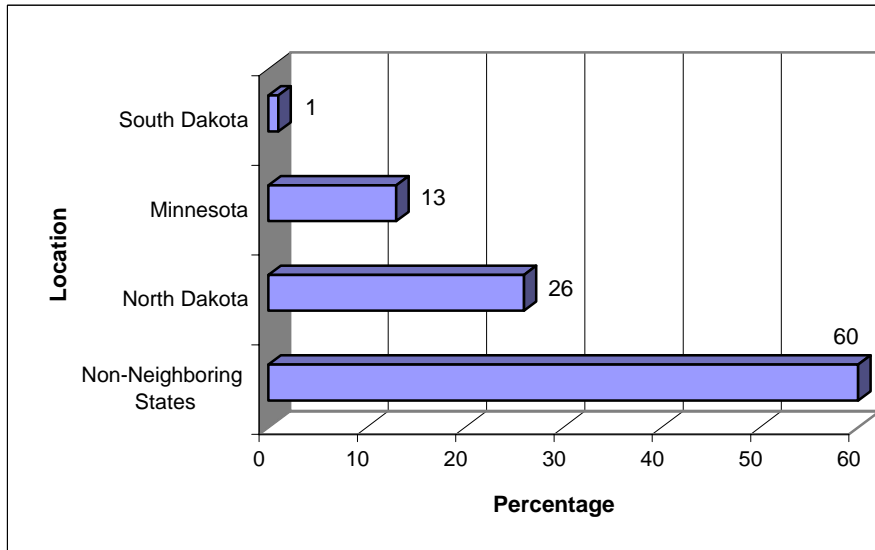
Figure 3: Location of Medical School for Practicing North Dakota Physicians



## RESIDENCY PROGRAM TRAINING LOCATION

- 26% completed their training in North Dakota and 13% in Minnesota (see Figure 4).

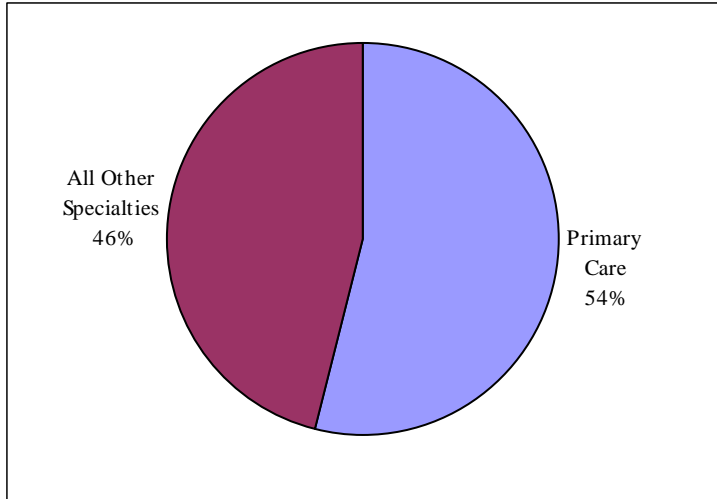
Figure 4: Residency Program Training Location for North Dakota Physicians



## PRIMARY SPECIALTY

- 27% reported Family Medicine as their primary specialty, 19% Internal Medicine, 5% Pediatrics and 3% Obstetrics (see Figure 5).

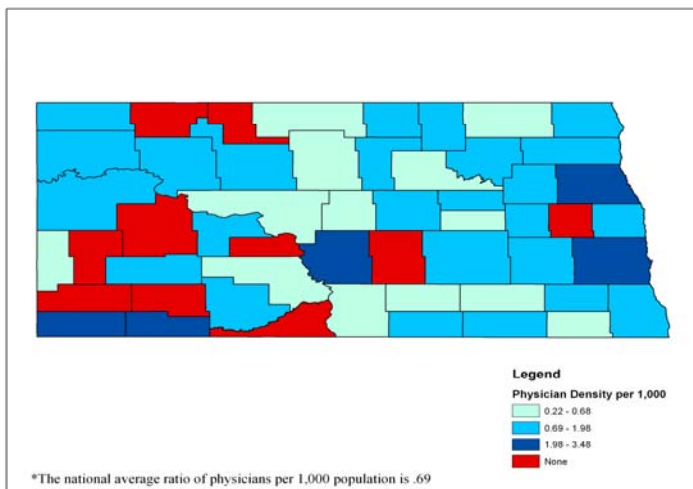
Figure 5: Primary Specialty



## LOCATION OF PHYSICIANS

- Overall, North Dakota had 71 active primary care physicians per 100,000 compared with 69 per 100,000 nationally<sup>3</sup>. Twenty-three North Dakota counties had fewer physicians per 1,000 people than the national average of .69/1,000<sup>3</sup>. Ten of these counties had no resident physicians<sup>d</sup> (see Figure 6).

Figure 6: Location of North Dakota Physicians



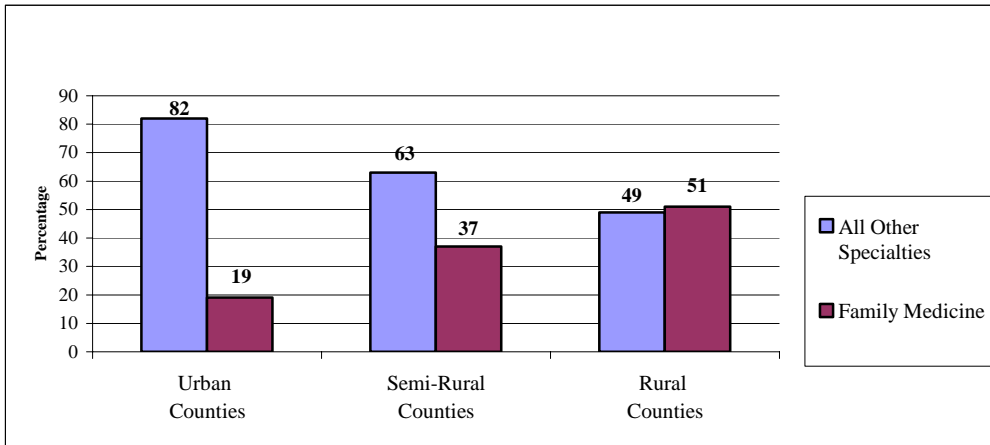
<sup>d</sup>Source: North Dakota Medical Services Directory 2003-2004 and Health Professions Tracking Program database 2004.



## LOCATION OF PHYSICIANS BY SPECIALTY

- Family Medicine physicians were more likely to work in rural (51%) vs. urban (19%) areas (see Figure 7).

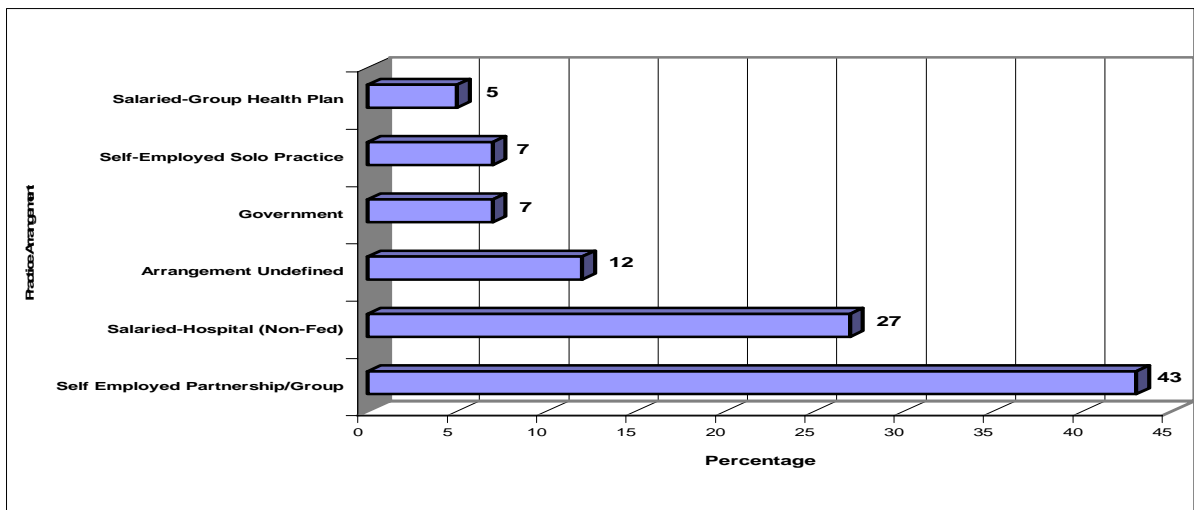
Figure 7: Location of Physicians by Specialty



## PRACTICE CHARACTERISTICS

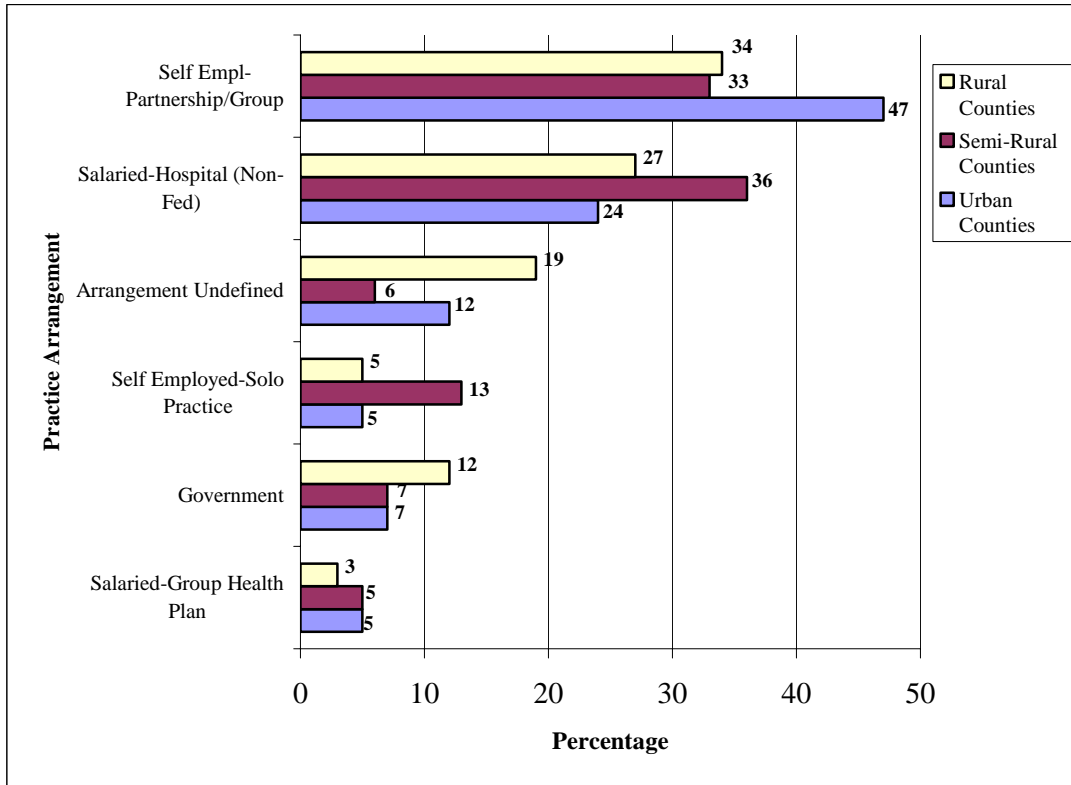
- 27% were self-employed, in partnership or group practices, 27% were salaried and worked in hospitals, and 13% were part of a physician network. Nationally, 88% had an office-based practice and 7% were in hospital practices<sup>3</sup> (see Figure 8).

Figure 8: Practice Arrangement of North Dakota Physicians



- Physicians in urban (47%) practices were more likely to be in self-employed partnerships or groups than their rural (34%)<sup>4</sup> counterparts (see Figure 9).

Figure 9: Practice Arrangement of North Dakota physicians<sup>e,f</sup>.



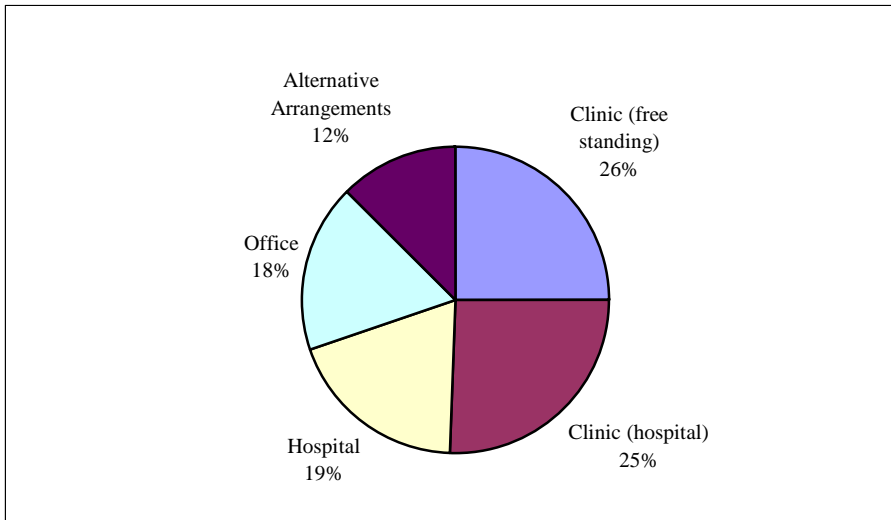
<sup>e</sup> Physician Networks have been included in the self employed-partnership/group category in Figure 8.

<sup>f</sup> Alternative arrangements include UND School of Medicine, Veteran Administration Hospital and other types of arrangements that were not specified by respondents during the data collection process.

## PRIMARY PRACTICE SETTING

- 19% locate their practice in hospital settings compared to 7% nationally<sup>3</sup>.
- 32% of physicians in rural settings work in clinics as part of a hospital compared to 25% of urban physicians; 51% practice in free-standing clinics or clinics as part of a hospital (see Figure 10).

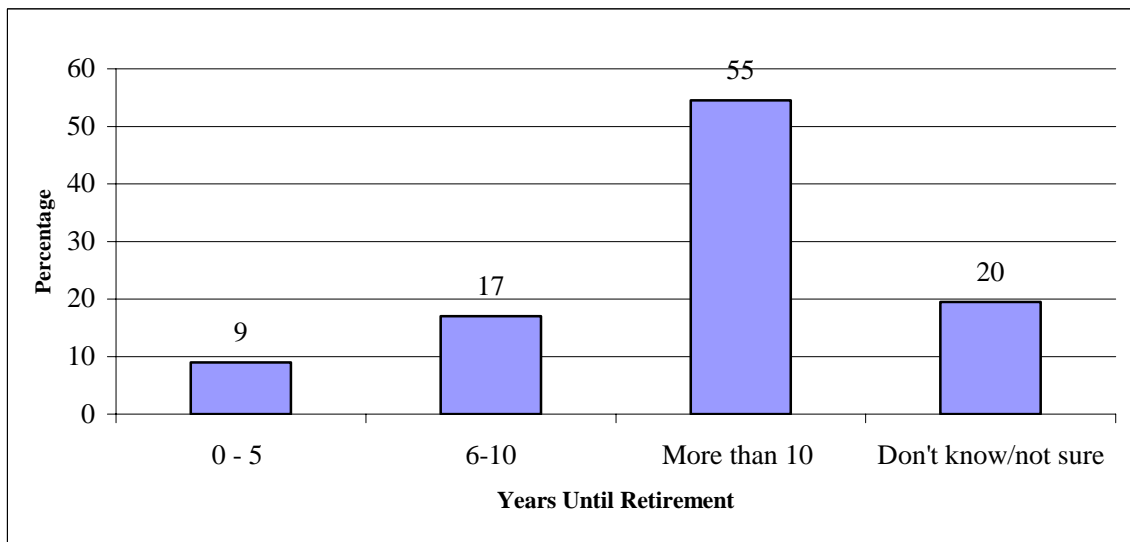
Figure 10: Primary Practice Settings for North Dakota Physicians



## RETIREMENT

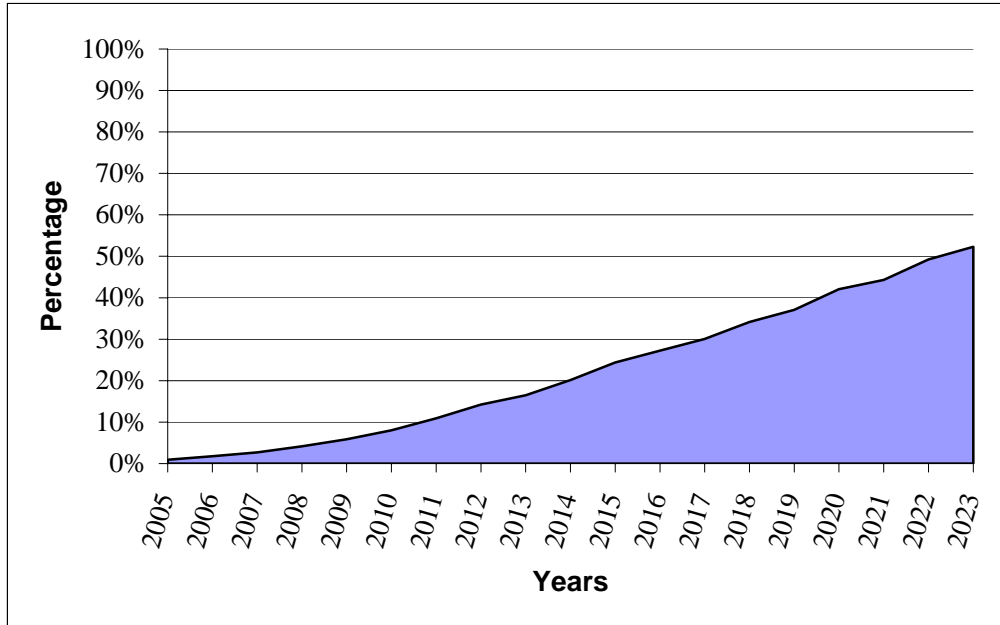
- 26% planned to retire within the next 11 years (see Figure 11).

Figure 11: Years Until Retirement



- Assuming retirement at age 65, 25% will have retired by 2015 and 42% by 2020<sup>g</sup> (see Figure 12).

Figure 12: Cumulative Percent of Physicians Reaching Age 65<sup>h</sup>




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<sup>h</sup> Between 2005 and 2010, the average rate of Physician attrition due to retirement at age 65 will be 1.4% per year. Between 2011 and 2023, the average rate of physician attrition due to retirement at age 65 will be 3.4% per year

## REFERENCES

<sup>1</sup> Gelfi & Parker, 1997

<sup>2</sup> *Physician Characteristics and Distribution in the US*, 2004 Edition; American Medical Association.

<sup>3</sup> *State Health Workforce Profiles*; U.S. Department of Health and Human Services Health Resources Services Administration's Bureau of Health Professions; 2004.

<sup>4</sup> According to *A County-level measure of urban influence*, 1997, data was divided, when appropriate, by Urban Influence Codes. Due to the rural nature of the state, several of the categories include no counties for North Dakota, and some categories have only a small number of the state's counties included. Therefore, North Dakota counties were collapsed as follows into three larger categories based upon their Urban Influence Codes. **Urban Counties:** Those small metropolitan counties (fewer than one million residents including four North Dakota counties). **Semi-rural counties:** Those non-metropolitan counties with a town of at least 2,500 residents adjacent or not adjacent to a small metropolitan county (20 North Dakota counties). **Rural counties:** Those counties that do not contain a town with at least 2,500 residents and are not adjacent to a small metropolitan area (29 North Dakota counties).