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Meeting Present and Future Demand for Nursing and Teaching Professionals in Metro Milwaukee

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Brief Summary

Workforce Development Challenges: Meeting Present and Future Demand for Nursing and Teaching Professionals in Metro Milwaukee

by John Pawasarat and Lois M. Quinn, Employment and Training Institute, School of Continuing Education, University of Wisconsin-Milwaukee, 2004.

The competitive advantages of Wisconsin as a place for families and consequently employees to live and work depend on a high quality elementary and secondary school system, quality health care, and a strong post-secondary education system. The first two are heavily dependent on the third. Of the currently licensed nursing population, 77 percent received a degree from a Wisconsin school. For public school teachers, administrators, and professionals, 84 percent also received a degree from a Wisconsin college or university.

The University of Wisconsin-Milwaukee Employment and Training Institute conducted an analysis of the nursing and teaching work force in Wisconsin using data obtained from the Department of Regulation and Licensing (for registered nurses, RNs, and licensed practical nurses, LPNs) and the Department of Public Instruction (for licensed public school teachers). U.S. Census data was used to examine growth in numbers of college-educated adults in Wisconsin. The analysis focuses primarily on professionals residing in the Milwaukee metro area, including Milwaukee, Ozaukee, Washington, and Waukesha counties.

Issues

1. Analysis of the pool of licensed Wisconsin professionals shows fewer women seeking out nursing and teaching, threatening the supply of nurses and teachers in the state. While the number of women in Wisconsin with a college education has increased numerically and as a percent of the adult population 25 years and over, the percentage of women entering teaching and nursing has declined dramatically as women seek out other career options.
2. Compounding this problem are the increasing numbers of professionals who retire or leave nursing and teaching for other careers, as well as the aging of the teaching and nursing populations, a factor that will radically impact employment separations in the next five to ten years. Most previous studies estimating labor market demand in these occupations have not examined the age distribution of the present teaching and nursing staff and consequently understate the impact retirements will have on the largest age cohorts of Wisconsin teachers and nurses.
3. The population of employed public school teachers retiring at age 55 or shortly thereafter are of particular concern as these professionals have at least ten more years of potential workforce attachment and are a population we want to keep in the state.
4. The problem of retirements of nurses is compounded by the large number of women leaving the field before retirement age and the relatively small number entering the profession. Notably, there are in Wisconsin 3,289 licensed nurses born in the five-year period from 1950-1954, compared to only half that (1,608) licensed with dates of births in the more recent five-year period 1970-1974.
5. The overall demographics of the Wisconsin population show that the labor force will not increase much if at all in the next ten years. At the same time that the baby boom population exits the labor force, a very young and in urban areas growing minority population will replace it. This impact will be most pronounced in occupations historically dominated by white women. Without effective workforce development strategies, the nursing shortage will likely worsen as fewer individuals seek out nursing as a career choice while others are or will be leaving in substantial numbers in the next ten years. Meanwhile, as the state population ages, client demand for skilled health care will increase.
6. The nursing replacement issue may be most acute in Milwaukee, where the very young minority population will make up an increasing share of the potential incoming labor force. Current trends show this young minority population less likely to complete high school. If trends continue without effective intervention, the resident minority populations will be relatively less likely to complete nursing programs in the numbers required for the upcoming demand. Even in the Milwaukee metro area, the current nursing population is 90 percent white. It will need to be replaced by a substantially minority population.
7. As of June 2002, of the registered nursing population ages 23-27 (that is, born from 1975-1979), in the four-county Milwaukee metro area only 62 were minorities (including 33 African Americans, 13 Hispanics, 13 Asian, and 3 Native American) compared to 826 who were whites.
8. A higher proportion of the licensed practical nurses (LPNs) in the Milwaukee metro area are minority, but even here, only 30 of those ages 23-27 were minorities (including 24 African Americans, 5 Hispanics,

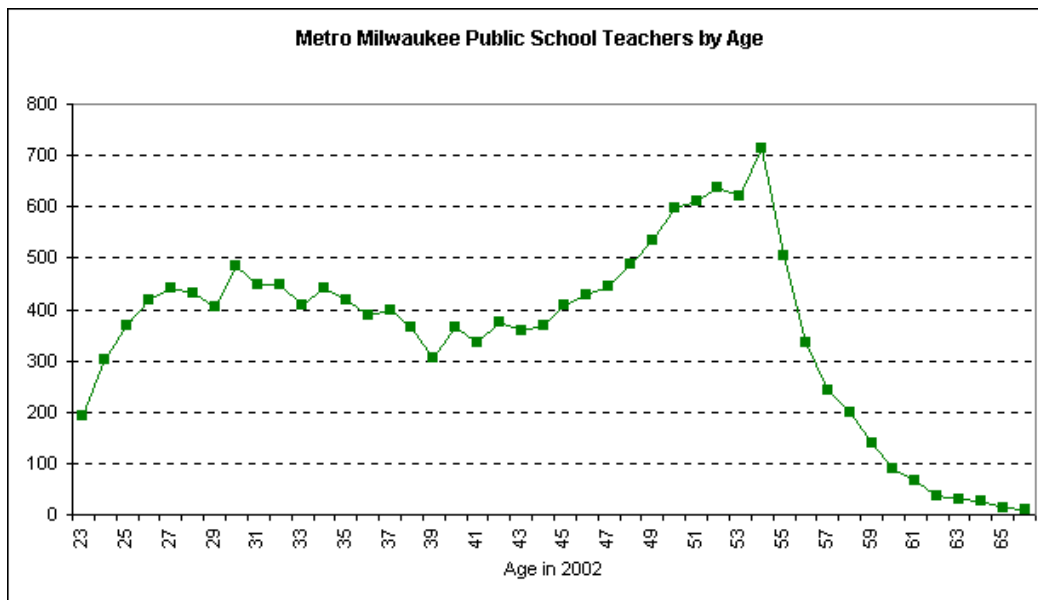
and 1 Asian). The failure to engage minorities, and particularly African Americans, in nursing does not bode well for future quality of health care in the state.

I. Demographics of the Public School Teaching Population

The Wisconsin Department of Public Instruction licensing files were analyzed for the employed public school teaching population. The population of employed public school teachers in Wisconsin totaled 60,656 as of the 2002-2003 school year, of which 72 percent were females. The population is heavily skewed to the older cohort of 50-55 year olds where about 2,400 teachers per year of birth are employed in public schools, compared to the 25-30 year old population where teachers averaging 1,500 per year of birth are employed.

Very few teachers are employed into their sixties as evidenced by the steep cliff which occurs after ages 55 to 56. The earliest retirement age for those in the state pension system is 55 and it appears that many teachers choose this option. Assuming that the large majority of teachers will choose retirement at or near the age of 55, statewide annual replacement requirements will be about 1,000 a year short of those currently entering public school teaching.

Graph 1:



The gap is not uniform, however, with demand for elementary education teachers less in the Milwaukee metro area than in the balance of the state (where 6 elementary education teachers may be leaving for every 4 entering). Demand for secondary school teachers and other educational professionals is higher in both metropolitan Milwaukee and the balance of the state.

Recent proposals to change health care coverage and insurance co-payment requirements for retiring teachers may make the separation rates even higher. Unlike state employees, City of Milwaukee teachers retain the level of health insurance coverage they have at retirement for the rest of their life. If teachers remain in the system during this period when teachers' health insurance co-payments are increasing, their annual co-payment requirements in retirement will go up accordingly.

II. Demographics of the Registered Nursing Population

Considerable attention has been given to the shortage of registered nurses. Yet little attention has been paid to the pending baby boom effect which will make the problem much worse. Annual job vacancy surveys conducted in the metropolitan Milwaukee area by the UWM Employment and Training Institute for the Private Industry Council have documented the persistent high demand for registered nurses and other health professionals. As of October 2002 there were 813 full-time and 669 part-time openings for registered nurses. There were a total of 17,043 registered nurses aged 25-64 in the metro area as of June 2002, or 1 opening for every 11.5 registered nurses.

Again, in October 2003, the Employment and Training Institute job vacancy survey showed high demand for nurses. Health providers reported full-time and part-time openings for 1,256 registered nurses. High demand was also shown for other health care professionals, including openings for 572 nursing assistants, aides and orderlies; 513 health aides; 388 health technologists and technicians (including 151 health record technologists and technicians, and 107 radiologic technicians); 174 licensed practical nurses; and 76 physical therapists.

Statewide, a large number of nurses are in their forties while the number of nurses in their late twenties and early thirties is half that number per year of birth. In the Milwaukee metro area, there are about 660 RNs per year of birth among adults in their forties, compared to only about 240 RNs per year of birth for nurses in their late twenties and early thirties.

Table 1:

REGISTERED NURSES IN THE MILWAUKEE METRO AREA

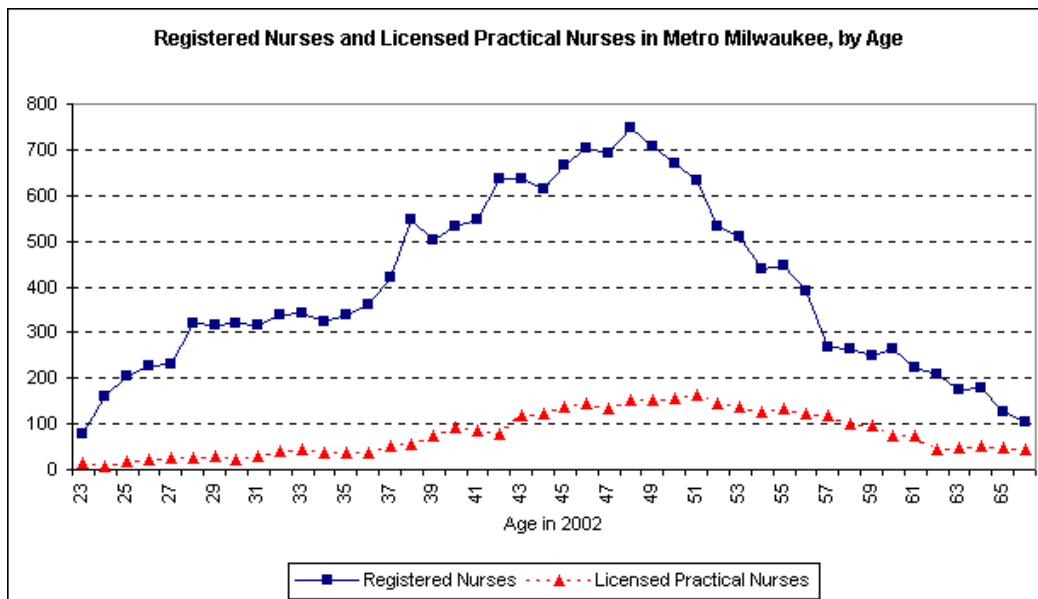
| <u>YEAR OF BIRTH</u> | <u>TOTAL</u> | <u>GENDER:</u> | | <u>RESIDENCE:</u> | | |
|----------------------|---------------|----------------|-------------|---------------------|--------------------|------------------|
| | | <u>FEMALE</u> | <u>MALE</u> | <u>WOW Counties</u> | <u>Milw County</u> | <u>InnerCity</u> |
| Before 1940 | 1,243 | 1,149 | 20 | 604 | 639 | 60 |
| 1940 - 1944 | 1,212 | 1,145 | 23 | 660 | 552 | 57 |
| 1945 - 1949 | 2,057 | 1,913 | 101 | 1,064 | 993 | 110 |
| 1950 - 1954 | 3,289 | 3,007 | 202 | 1,756 | 1,533 | 169 |
| 1955 - 1959 | 3,309 | 3,037 | 181 | 1,827 | 1,482 | 136 |
| 1960 - 1964 | 2,767 | 2,587 | 152 | 1,537 | 1,230 | 120 |
| 1965 - 1969 | 1,788 | 1,661 | 114 | 906 | 882 | 104 |
| 1970 - 1974 | 1,608 | 1,498 | 103 | 661 | 947 | 106 |
| 1975 - 1979 | 894 | 842 | 48 | 344 | 550 | 47 |
| TOTAL | 18,167 | 16,839 | 944 | 9,359 | 8,808 | 909 |
| % of Total | 100.0% | 92.7% | 5.2% | 51.5% | 48.5% | 5.0% |

LICENSED PRACTICAL NURSES IN THE MILWAUKEE METRO AREA

| <u>YEAR OF BIRTH</u> | <u>TOTAL</u> | <u>GENDER:</u> | | <u>RESIDENCE:</u> | | |
|----------------------|--------------|----------------|-------------|---------------------|--------------------|------------------|
| | | <u>FEMALE</u> | <u>MALE</u> | <u>WOW counties</u> | <u>Milw County</u> | <u>InnerCity</u> |
| Before 1940 | 391 | 367 | 3 | 161 | 230 | 59 |
| 1940 - 1944 | 391 | 366 | 6 | 168 | 223 | 43 |
| 1945 - 1949 | 638 | 598 | 18 | 286 | 352 | 72 |
| 1950 - 1954 | 771 | 717 | 30 | 364 | 407 | 82 |
| 1955 - 1959 | 659 | 611 | 33 | 303 | 356 | 89 |
| 1960 - 1964 | 387 | 363 | 18 | 171 | 216 | 62 |
| 1965 - 1969 | 208 | 187 | 19 | 64 | 144 | 42 |
| 1970 - 1974 | 151 | 139 | 12 | 45 | 106 | 35 |
| 1975 - 1979 | 100 | 98 | 2 | 39 | 61 | 14 |
| TOTAL | 3,696 | 3,446 | 141 | 1,601 | 2,095 | 498 |
| % of Total | 100.0% | 93.2% | 3.8% | 43.3% | 56.7% | 13.5% |

Source: Complete file of Wisconsin Department of Regulation and Licenses, 2002. The InnerCity ZIP Codes include 53204, 53205, 53206, 53208, 532120, 53212, 53216, 53218, and 53233. The WOW counties include Waukesha, Ozaukee and Washington counties. Analysis by UWM Employment and Training Institute.

Graph 2:



The looming impact of baby boomers who may soon be leaving the profession is worse in the balance of the state where the number of registered nurses per year of birth has dropped from about 1,500 for nurses in their forties to 600 for those in their late twenties and early thirties.

Statewide, the nursing population remains almost all white (93 percent) and predominantly female (93 percent), and unlike the teaching population, a large portion (40 percent) work less than 36 hours per week. In the Milwaukee metro area 90 percent of RNs and 78 percent of LPNs are white.

TABLE 2:

RACE/ETHNICITY OF REGISTERED NURSES IN THE MILWAUKEE METRO AREA

| YEAR OF BIRTH | TOTAL | RACE, ETHNICITY: | | | | |
|---------------|---------------|------------------|------------|------------|-----------|---------------|
| | | ASIAN | BLACK | HISPANIC | NAT AMER | WHITE |
| Before 1940 | 1,243 | 5 | 45 | 1 | 5 | 1,073 |
| 1940 - 1944 | 1,212 | 9 | 41 | 2 | 1 | 1,096 |
| 1945 - 1949 | 2,057 | 9 | 64 | 10 | 3 | 1,896 |
| 1950 - 1954 | 3,289 | 21 | 101 | 17 | 10 | 3,010 |
| 1955 - 1959 | 3,309 | 32 | 110 | 14 | 8 | 3,007 |
| 1960 - 1964 | 2,767 | 29 | 123 | 39 | 8 | 2,533 |
| 1965 - 1969 | 1,788 | 59 | 98 | 24 | 10 | 1,578 |
| 1970 - 1974 | 1,608 | 45 | 82 | 37 | 6 | 1,430 |
| 1975 - 1980 | 894 | 13 | 33 | 13 | 3 | 826 |
| TOTAL | 18,167 | 222 | 697 | 157 | 54 | 16,449 |
| % of Total | 100.0% | 1.2% | 3.8% | 0.9% | 0.3% | 90.5% |

RACE/ETHNICITY OF LICENSED PRACTICAL NURSES IN THE MILWAUKEE METRO AREA

| YEAR OF BIRTH | TOTAL | RACE, ETHNICITY: | | | | |
|---------------|--------------|------------------|------------|-----------|-----------|--------------|
| | | ASIAN | BLACK | HISPANIC | NAT AMER | WHITE |
| Before 1940 | 391 | 0 | 81 | 1 | 0 | 275 |
| 1940 - 1944 | 391 | 1 | 52 | 2 | 2 | 309 |
| 1945 - 1949 | 638 | 1 | 60 | 3 | 0 | 541 |
| 1950 - 1954 | 771 | 4 | 75 | 4 | 6 | 639 |
| 1955 - 1959 | 659 | 2 | 79 | 8 | 4 | 536 |
| 1960 - 1964 | 387 | 2 | 74 | 5 | 3 | 295 |
| 1965 - 1969 | 208 | 4 | 60 | 3 | 0 | 139 |
| 1970 - 1974 | 151 | 5 | 48 | 5 | 0 | 90 |
| 1975 - 1980 | 100 | 1 | 24 | 5 | 0 | 70 |
| TOTAL | 3,696 | 20 | 553 | 36 | 15 | 2,894 |

% of Total 100.0% 0.5% 15.0% 1.0% 0.4% 78.3%

Source: Complete file of Wisconsin Department of Regulation and Licenses, 2002. Analysis by UWM Employment and Training Institute for Milwaukee, Ozaukee, Washington and Waukesha County residents.

Licensed practical nurses make up about 17 percent of the nurses in the four-county Milwaukee area, with 3,696 LPNs compared to 18,167 RNs on file as June 2002. African Americans are more likely to obtain LPN degrees, with 45 percent holding LPN rather than RN degrees (compared to 17 percent of whites holding LPN rather than RN degrees). The small number of African Americans and Hispanics completing nursing programs raises concerns about the future stability of this critical workforce. As of June 2002, among nurses in their mid-to-late twenties (that is born from 1975-1980), less than 60 RNs and LPNs were African American and less than 20 were Latina.

III. Changing Employment and Education Choices of Women

The number and percentage of females completing four or more years of post-secondary education have increased steadily over the decades. In 1970, 94,935 women aged 25 years and over in Wisconsin had four or more years of college, making up 8 percent of women 25 or over. By 2000, 389,841 women 25 years and over had a bachelor's degree or higher, making up 27 percent of those 25 years and over.

Despite the increasingly college-educated population, the number of both nurses and teachers by age has declined numerically and as a percent of total college-educated women. Thirty years ago women were more likely to seek out teaching or nursing as a profession. For the important 55-year-old group at which the teacher population peaks, 29 percent of college-educated women are teachers and 23 percent are nurses.

For females with a four-year college degree, the portions who are teachers drops from 17 percent for 45-54 year-olds to 10 percent for 25-34 year olds, while the percent who are nurses drops from 22 percent for 45-54 year-olds to 9 percent for 25-34 year-olds. (Note: These percentages are approximations since registered nurses do not necessarily have a four-year college degree.)

TABLE 3:

STATE OF WISCONSIN POPULATION 25 YEARS AND OVER

| FEMALES | | | | Total | With 4 or More Years of College: | |
|----------------|--------------------------------------|----------|-----------|--------------------|---|----------------|
| Census | Number with Years of College: | | | Population | Number | Percent |
| <u>Year</u> | <u>1-3</u> | <u>4</u> | <u>5+</u> | <u>25 and Over</u> | | |
| 1970 | 128,601 | 68,292 | 26,643 | 1,211,850 | 94,935 | 8% |
| 1980 | 206,806 | 113,325 | 59,427 | 1,415,744 | 172,752 | 12% |
| 1990 | 386,524 | 190,564 | 67,401 | 1,617,555 | 257,965 | 16% |
| 2000 | 514,790 | 276,835 | 113,006 | 1,795,048 | 389,841 | 22% |
| MALES | | | | Total | With 4 or More Years of College: | |
| Census | Number with Years of College: | | | Population | Number | Percent |
| <u>Year</u> | <u>1-3</u> | <u>4</u> | <u>5+</u> | <u>25 and Over</u> | | |
| 1970 | 102,273 | 66,128 | 66,280 | 1,117,946 | 132,408 | 12% |
| 1980 | 181,717 | 114,872 | 113,452 | 1,289,644 | 228,324 | 18% |
| 1990 | 348,963 | 185,039 | 105,966 | 1,476,671 | 291,005 | 20% |
| 2000 | 461,585 | 253,433 | 135,999 | 1,680,830 | 389,432 | 23% |

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