The Public Health Nurse to Population Ratio

Linda Olson Keller, DNP, RN, FAAN
Teresa Garrett, RN MS
Emily A. Litt, CPT, AN, USAR, RN, DNP

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Presenter Disclosures
Linda Olson Keller
Teresa Garrett
Emily Litt

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No relationships to disclose

“One good community nurse will save a dozen policeman.”

Herbert Hoover 1929

PHN Census 1901

Earliest known census of PHNs in US reported in 1901 by Harriet Fulmer at the International Congress of Nurses in Buffalo, New York

58 public health nursing organizations (largely Visiting Nurse Agencies) employing about 130 nurses

(Division of Nursing, 1968, p. 1)

PHN Census 1926

Statistical Department of the National Organization for Public Health Nursing:
3,269 agencies employing 11,171 PHNs

(AJPH, 1926).

PHN Ratio 1927

Ratio of one PHN for every 2000 person in the population "on the basis of evidence already available as to the essentials for adequate community service."

Hiscock, Ira V. "Community Health Problems" published by the Commonwealth Fund, New York, 1927
1932 Commonwealth Fund Committee on Administrative Practice of APHA

An analysis of time spent by PHNs on
1. communicable disease control
2. venereal disease control,
3. tuberculosis control,
4. maternity and child hygiene
5. school hygiene
6. bedside care (for chronic diseases such as cancer and heart disease)

1932 Commonwealth Fund Committee on Administrative Practice of APHA

Hiscock recommended “one nurse to 2,000 population, or 50 nurses in a city of 100,000 population”

1936 Milbank Memorial Fund

PHN task analysis:
✓ number of home visits made
✓ number of clinic visits by patients
✓ number of examinations given to school children

1936 Milbank Memorial Fund

“It has been recommended that there should be one public health nurse to every 2,000 population. Thus the number of people in the district served by a public health nurse may be used as a unit for measuring the adequacy of public health services.”


1943

Subcommittee on Local Health Units, Committee on Administrative Practice of the American Public Health Association


1943

Functions of a local health department 1943

1. Vital statistics
2. Control of communicable diseases, including tuberculosis, the venereal diseases, malaria and hookworm disease
3. Environmental sanitation, including supervision of milk and milk products, food processing, public eating places, and maintenance of sanitary conditions of employment
4. Public health laboratory services
5. Hygiene of maternity, infancy, and childhood, including supervision of the health of the school age child
6. Health education of the general public
In order to fulfill these functions in a community of 50,000 persons

“one full-time professionally trained and experienced medical officer of health, a full-time public health or sanitary engineer and a sanitary of non-professional grade, ten public health nurses, one of whom would be of supervisory grade, and three persons for clerical work”

(Emerson, 1945, p. 2)

1937-1972
“Census of Public Health Nurses”

State Directors of Public Health Nursing & Public Health Nursing Branch of the Division of Nursing, U.S. Public Health Service


1937-1972
“Census of Public Health Nurses”

Quality of public health nursing:
1. Ratio of nurse-to-population coverage
2. Amount of guidance available to staff through supervision and consultation
3. Educational preparation of the nursing personnel

1951

For a number of years the National Organization for Public Health Nursing and the American Public Health Association have advocated one public health nurse to each 5,000 of the population for the usual preventive services rendered by a health department

1951

“When bedside nursing care of the sick is provided, the commonly accepted ratio is one nurse to each 2,000 of the population.

Two and one-half times as many nurses are needed on a health department staff if a bedside nursing service is added to the usual health department services.”

McIver, P. (1951)
A discussion of the study of combination services in public health nursing. AJPH, 42: 63-68.)
"In programs for the prevention and control of disease, one public health nurse to 5000 population is considered to be a reasonable and practical ratio."


"In the best judgment of the Consultant Group, the Nation should have some 850,000 professional nurses by 1970... At this level [one public health nurse to 5,000 population] 43,000 qualified public health nurses would be needed in state and local agencies."


ável existing ratio of 21.3 nurses per 100,000 population or one nurse per 4,703 population (highest ratio ever reported)

National goal of 40 per 100,000, or one nurse per 2,500 population - (District of Columbia & Delaware had achieved this goal)


"Public health nurses do what nobody else is doing. And what every community deserves."

Georges Benjamin, MD, FACP
Executive Director,
American Public Health Association (APHA)
<table>
<thead>
<tr>
<th>State</th>
<th>Population</th>
<th>PHNs per 5,000 Population Ratio</th>
<th>Number PHNs</th>
<th>One Nurse for</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alaska</td>
<td>686,293*</td>
<td>.74</td>
<td>102</td>
<td>6,728 population</td>
<td>Preliminary Data</td>
</tr>
<tr>
<td>Arkansas</td>
<td>2,855,390*</td>
<td>.38</td>
<td>216</td>
<td>13,046 population</td>
<td>Preliminary Data</td>
</tr>
<tr>
<td>California</td>
<td>36,756,666*</td>
<td>.36</td>
<td>2,142</td>
<td>13,874 population</td>
<td>Preliminary Data</td>
</tr>
<tr>
<td>Florida</td>
<td>18,328,340*</td>
<td>.58</td>
<td>2,219</td>
<td>8,609 population</td>
<td>Preliminary Data</td>
</tr>
<tr>
<td>Maryland</td>
<td>5,663,597*</td>
<td>1.47</td>
<td>666</td>
<td>3,406 population</td>
<td>Preliminary Data</td>
</tr>
<tr>
<td>Minnesota</td>
<td>5,210,891*</td>
<td>.83</td>
<td>861</td>
<td>6,054 population</td>
<td>Preliminary Data</td>
</tr>
</tbody>
</table>

*US Census July 1, 2008

**4 counties not reporting; missing 37,942

**22 counties not reporting; missing 7,144,935

**10 counties not reporting; missing 3,365,407

**10 counties not reporting; missing 3,365,407

**10 counties not reporting; missing 3,365,407
Mississippi – Population 2,938,618*

PHNs per 5,000 Population Ratio = .60
1/10 districts (9/71 counties) > 1:5000 ratio
Ratio Range = .38 – 1.05

Number PHNs = 353
One Nurse for 8,325 population

*US Census July 1, 2008

Missouri – Population 5,557,244*

PHNs per 5,000 Population Ratio = .55
39/111 counties > 1:5000 ratio
Ratio Range = .10 – 3.73

Number PHNs = 608
One Nurse for 9,096 population

*US Census July 1, 2008
1 county no PHNs; missing 23,445

North Carolina – Population 9,222,414*

PHNs per 5,000 Population Ratio = .91
47/93 counties > 1:5000 ratio
Ratio Range = .21 – 4.15

Number PHNs = 1,687
One Nurse for 5,487 population

*US Census July 1, 2008
**7 counties not reporting; missing 133,442

Oklahoma - Population 3,642,361*

PHNs per 5,000 Population Ratio = .52
5/67 counties > 1:5000 ratio
Ratio Range = .22 – 3.15

Number PHNs = 399
One Nurse for 5,752 population

*US Census July 1, 2008
**10 counties not reporting; missing 1,296,599

Wyoming - Population 532,668*

PHNs per 5,000 Population Ratio = 1.62
20/22 counties > 1:5000 ratio
Ratio Range = .59 – 4.16

Number PHNs = 159
One Nurse for 3,089 population

*US Census July 1, 2008
**1 county not reporting; missing 41,473

Community Acuity Scale (draft)

- Percent of Individuals below Poverty Level
- Average Life Expectancy
- Percent Low Birth Weight
- Adults ≥ 25 years with no High School Diploma
- Reported cases of Syphilis/Reported cases of Measles/Reported Cases of Pertussis
Implications PHN Ratio

- Identify areas of geographic inequity, i.e. underserved areas
- Permits comparison between states
- Allows investigation between relationship between PHN staffing and community health status

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References


Contact information:
Linda Olson Keller, DNP, RN, FAAN
Clinical Associate Professor
School of Nursing
University of Minnesota
612-626-5144
olson173@umn.edu


