Health Workforce Assessment of Hawaii Physicians: Analysis of data from the DHHS Health Resources and Services Area Resource File, 2001

Megan Inada, Kelley Withy, January Andaya, Allen Hixon

University of Hawaii, John A. Burns School of Medicine

Abstract

Rural Americans suffer significant health disparities compared to their urban counterparts. One of the explanations for this is lack of adequate workforce. Rural communities in the State of Hawai‘i are no exception. Although there is an adequate supply of providers in the state, the disproportionate distribution leaves rural areas lacking. The PowerPoint prepared provides a cross sectional picture of the number of practicing physicians, a description of their specialties, age distribution, and location of training by county based on data collected by the federal government. We hope that this will help highlight current and future physician needs for medical and non-medical professionals working to provide Hawai‘i’s rural communities with adequate health care.

Introduction

Access to high quality health care services for rural Americans continues to be hindered (Beachler, Holloman, & Herman, 2003, Lundeen, Tenopir, & Wermager, 1994) due to a shortage of medical doctors in rural areas (LaRavia, Clavert, Zavala, Smith, Talley, Gingrich et al., 2002). In this situation, people living a country that spent $1.7 trillion on health care in 2003 (National Coalition on Health Care, 2004) are deprived of basic health care services. Persistence of rural-urban physician disparities are a result of doctors’ affinities to practice in affluent non rural areas (LaRavia et al., 2002).

An estimated 20 percent of America’s population lives in rural areas. However, only 9 percent of the nation’s physicians practice in rural communities (LaRavia et al., 2002). The Hawaiian Islands of Maui, Kauai, Lanai, Molokai, and Hawaii, federally designated as rural areas (Lundeen et al., 1994), are no exception to this trend of health care inequality (The Department of Business, Economic Development & Tourism, 2005). In 1989 the Hawaii State Department of Health reported that rural areas in the State do not receive the same quality of health care and social services that are provided in urban areas (Lundeen et al., 1994).

Instructions

One of the first steps to resolving a problem is to clearly understand the situation. In 2000, the U.S. Department of Health and Human Services reported that Hawaii had 19 more physicians and 15 more primary care doctors per 100,000 persons than the national average. When this data remains aggregated, it hides the numerous areas within the State suffering from disproportionately low doctor to population ratios.

The intent of creating this PowerPoint presentation is to provide a cross sectional picture of the number of practicing physicians and a description of their specialties in each county. In turn this will highlight State physician shortage areas to medical and non-medical professionals working to provide Hawai‘i’s rural communities with adequate health care.

Methods

All data presented on non-federal medical doctors was obtained from the 2000 American
Medical Association (AMA) Physician Masterfiles. This survey is sent out every three years to all physicians known to the AMA via records of medical schools, state registries, local AMA chapters, other professional societies, residency programs, and AMA membership rosters.

Evaluation
This presentation was given at Hawaii Health Workforce Collaborative meetings and Hawaii’s October 2005 Primary Care Roundtable, where efforts are underway locally to develop a health workforce database that can be regularly updated and can provide guidance in training and planning for future needs.

Outline of PowerPoint Presentation
1. Title Page
2. Statement of the Problem
3. Objectives of Presentation – to provide a cross sectional picture of the number of active non-federal patient care physicians and their specialties in each of Hawaii’s counties.
4. Overview of Hawaii’s MD Workforce Composition – In 2001 there were 4044 total practicing physicians in Hawai’i, 3593 of them reported to work more that 50%, and 3343 of these active MDs were non-federal.
5. 95% of active non-federal MDs reported patient care as their major professional activity.
6. Distribution of MDs by County – 20% of Hawaii’s physicians practiced on neighbor islands.
7. Hawai’i MDs by Specialties.
8. MDs Specialty by county. Primary care doctors made up a larger percentage the MD population on the Neighbor islands than in the national average and Honolulu County.
9. This table illustrates the disparity in the neighbor islands’ primary care, medical, and surgical specialists/100,000 persons compared to the national average and Honolulu County.
10. This slide displays the same information in a bar graph.
11. 23% of Hawaii’s primary care MDs practiced on neighbor islands. This comes out to 78 primary care MDs/100,000 persons on the neighbor islands compared to Oahu’s 104.
12. Medical specialist MDs by subspecialties highlights the lack of medical specialists on Kauai.
13. Medical Specialist MDs/100,000 person, 1995-2001 illustrates the disparity of the neighbor islands compared to the national average, but also that the rates are slowly increasing.
14. Surgical Specialist MDs by subspecialties highlights the lack of surgical specialists on Kauai.
15. Surgical Specialist MDs/100,000 person, 1995-2001 illustrates the disparity of the neighbor islands compared to the national average, but that the majority of rates are slowly increasing.
16. MD Age by County shows that neighbor islands have a proportionally older MD workforce than Honolulu County and the national average.
17. Graduation Location MDs, 1999.
18. This shows the same information in a bar graph.
19. Overview summary. Although Hawaii’s total state physician/population ratio is comparable to the national average, but when examined by County Maui County, Kauai, and the Big Island have fewer physician per capita rates especially in medical and surgical specialties.
20. For the Future - We found evidence of slowly increasing rates of medical and surgical specialists/population on the majority of neighbor islands. The American Academy of Family Physicians (2004) suggest that to reduce the shortages of physicians in rural areas we must a) increase and strengthen recruitment and retention programs for physicians in rural and other underserved areas and b) promote to primary care and rural locations to medical graduates.

References


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Created in August 2005 by Megan Inada, MPH
Kelley Withy, MD, January Andaya, Allen Hixon, MD
Hawaii Health Workforce Collaborative
For Hawaii Health Workforce Collaborative

The Problem:
- In the State Health Workforce Profiles, the Department of Health and Human Services reported that in 2000, Hawaii’s rate of active primary care physicians was 10 more per 100,000 population than the national rate. When this data remains aggregated it hides the fact that:
  - There are numerous areas which suffer from disproportionately low doctor to population ratio.
  - There is a shortage of physicians in Maui, Kauai, and Hawaii counties when compared to Honolulu County.

Objectives:
- To provide a cross sectional picture of the number of physicians practicing and a description of their specialties in each of Hawaii’s county.
- To highlight physician shortage areas to medical and non-medical professionals working to provide Hawaii’s rural communities with adequate health care.

Composition of Hawaii’s MD Workforce
- 4044 total practicing physician in Hawaii
- 3593 reported working more than 50%
- 93% of these MDs were non-federal.

Hawai'i Active Physicians' Federal/Non-Fed Status
- 93%
- 7%

Hawai'i Physicians' Activity Status
- 98%
- 2%

Hawai'i Physicians' Major Professional Activity
- “Other” includes Research, Administration, Teaching
- 95%
- 5%

Distribution of MDs by County
- 20% Hawaii's physicians practiced on neighbor islands (Maui County, Kauai, and The Big Island)
- 8% Maui County
- 8% Kauai
- 9% Big Island
- 89% Oahu

*Major Professional activity of 117 MDs Unknown

**Hawaii MDs by Specialty**
- 38% Primary Care
- 28% Surgical Specialists
- 26% Medical Specialists
- 7% Ob/GYN
- 1% Unspecified/Other

**MDs Specialty by County**

**MDs/100,000 Persons by Specialty**
- Maui County has 24 fewer medical specialist and 12 fewer surgical specialist per 100,000 persons than the national average
- Kauai has 23 fewer medical specialists and 25% fewer surgical specialist per 100,000 persons than the national average.

<table>
<thead>
<tr>
<th>County</th>
<th>Primary Care</th>
<th>Ob/GYN</th>
<th>Medical specialists</th>
<th>Surgical Specialists</th>
</tr>
</thead>
<tbody>
<tr>
<td>National</td>
<td>80</td>
<td>14</td>
<td>62</td>
<td>67</td>
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<tr>
<td>Oahu</td>
<td>69</td>
<td>20</td>
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<td>78</td>
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<tr>
<td>Big Island</td>
<td>75</td>
<td>14</td>
<td>43</td>
<td>43</td>
</tr>
<tr>
<td>Kauai</td>
<td>81</td>
<td>14</td>
<td>39</td>
<td>46</td>
</tr>
<tr>
<td>Maui County</td>
<td>77</td>
<td>14</td>
<td>57</td>
<td>55</td>
</tr>
</tbody>
</table>

**Primary Care MDs by County**
- 23% Hawaii’s Primary Care MDs practiced on neighbor islands
- The neighbor island had 78 Primary Care MDs/100,000 compared to Oahu’s 104 Primary Care MDs/100,000 persons

**Medical Specialist MDs by Subspecialties**

<table>
<thead>
<tr>
<th>Specialty</th>
<th>Big Island</th>
<th>Kauai</th>
<th>Maui</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allergy &amp; Immunol.</td>
<td>2</td>
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<tr>
<td>Cardiology</td>
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<td>Child Psychology</td>
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<tr>
<td>Dermatology</td>
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</tr>
<tr>
<td>Emergency Medicine</td>
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<td>3</td>
</tr>
<tr>
<td>Gastroenterology</td>
<td>4</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Internal Subspecialties</td>
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<tr>
<td>Nephrology</td>
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</tr>
<tr>
<td>Occupational Medicine</td>
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<td>8</td>
<td>4</td>
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<tr>
<td>Pediatric Subspecialties</td>
<td>2</td>
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<tr>
<td>Physical Med. Rehab</td>
<td>2</td>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td>Psychiatry</td>
<td>10</td>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td>Pulmonary Disease</td>
<td>1</td>
<td>3</td>
<td>1</td>
</tr>
</tbody>
</table>
Overview Summary

- Although Hawaii’s total state physician to population ratio is better than or equal to the national average, when examined by county we see that Maui County, Kauai, and the Big Island have fewer physician per capita rates especially in medical and surgical specialties.

- Kauai has no full time non-federal medical physicians specializing in Neurology, Occupational Medicine, Pediatric Subspecialties, Physical Med/Rehab, or Psychiatry.

- The neighbor islands have a proportionally older MD workforce than Honolulu County and the national average.

For the Future

- Although rural-urban physician disparities is a reoccurring feature of the American health system it can be remedied.

- We found evidence of slowly increasing rates of medical and surgical specialists per populations on the majority of neighbor islands.

- The American Academy of Family Physicians (2004) suggest that to reduce the shortages of physicians in rural areas we must:
  - Increase and strengthen recruitment and retention programs for physicians in rural and other underserved areas
  - Promote to primary care and rural locations to medical graduates

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- There are numerous areas which suffer from disproportionately low doctor to population ratio.

- There is a shortage of physicians in Maui, Kauai, and Hawaii counties when compared to Honolulu County.

(The Department of Business, Economic Development & Tourism & State of Hawaii, Department of Commerce and Consumer Affairs, Professional and Vocational Licensing Division 2005 Figures)
Objectives:

- To provide a cross sectional picture of the number of physicians practicing and a description of their specialties in each of Hawaii’s county.

- To highlight physician shortage areas to medical and non-medical professionals working to provide Hawaii’s rural communities with adequate health care.
Composition of Hawaii’s MD Workforce

- 4044 total practicing physician in Hawai’i
- 3593 reported working more than 50%
- 93% of these MDs were non-federal.

Hawai’i Physicians’ Activity Status

- 89% Active
- 11% Inactive

Hawai’i Active Physicians’ Federal/Non-Fed Status

- 93% Non-Fed
- 7% Federal
Hawai‘i Physicians’ Major Professional Activity

- “Other” includes Research, Administration, Teaching

*Major Professional activity of 117 MDs Unknown
Distribution of MDs by County

- 20% Hawaii’s physicians practiced on neighbor islands (Maui County, Kauai, and The Big Island)

- 80% Oahu
- 8% Maui County
- 9% Big Island
- 4% Kauai
Hawai’i MDs by Specialty

- 38% Primary Care
- 28% Surgical Specialists
- 26% Medical Specialists
- 7% Ob-GYN
- 1% Unspecified/Other
Maui County has 24 fewer medical specialist and 12 fewer surgical specialist per 100,000 persons than the national average.

Kauai has 23 fewer medical specialists and 25% fewer surgical specialist per 100,000 persons than the national average.

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<th>Surgical Specialists</th>
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</thead>
<tbody>
<tr>
<td>National</td>
<td>80</td>
<td>14</td>
<td>62</td>
<td>67</td>
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<tr>
<td>Oahu</td>
<td>99</td>
<td>20</td>
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<tr>
<td>Big Island</td>
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<td>Maui County</td>
<td>77</td>
<td>14</td>
<td>37</td>
<td>55</td>
</tr>
</tbody>
</table>
MDs/ 100,000 Persons by Specialty

- National
- State of Hawai‘i
- Big Island
- Kauai
- Maui County

**Bar Chart**

- **Primary Care**
- **Ob-GYN**
- **Medical specialists**
- **Surgical Specialists**

10
23% Hawaii’s Primary Care MDs practiced on neighbor islands

The neighbor island had 78 Primary Care MDs/100,000 compared to Oahu’s 104 Primary Care MDs/100,000 persons
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<th>Maui</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allergy &amp; Immunology</td>
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<td>Cardiovascular</td>
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<tr>
<td>Child Psychology</td>
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<tr>
<td>Dermatology</td>
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<td>3</td>
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<tr>
<td>Emergency Medicine</td>
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<td>Internal Subspecialties</td>
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<td>Physical Med/ Rehab</td>
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<td>Psychiatry</td>
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<tr>
<td>Pulmonary Disease</td>
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</table>
Medical Specialist MDs/100,000 Persons, 1995-2001

- National
- Big Island
- Kauai
- Maui
## Surgical Specialist MDs by Subspecialties

<table>
<thead>
<tr>
<th>Specialty</th>
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<td>Neurology</td>
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<td>Thoracic</td>
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<td>0</td>
</tr>
<tr>
<td>Urology</td>
<td>3</td>
<td>2</td>
<td>4</td>
</tr>
</tbody>
</table>
Surgery Specialist MDs/ 100,000 Persons, 1995-2001
MD Age by County

Percentage

National  Oahu  Big Island  Kauai  Maui County

< 35  35-44  45-54  55-64  65-74  75 +
Graduation Location MDs, 1999

- Hawaii: 17%
- Other State: 20%
- International: 63%
Graduation Location of Non-Federal Medical Doctors in 1999

Oahu: Hawaii - 20%, Other State - 60%, International - 20%
Big Island: Hawaii - 10%, Other State - 90%
Kauai: Hawaii - 0%, Other State - 100%
Maui County: International - 100%
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