



Relationship Between Patient Characteristics and Hospitalization Length of Stay for Diabetes-Related Skin Infections in Hawai'i Compared to Other States

Daijiro Oshitari; Deborah Taira, Sc.D.

The Daniel K. Inouye College of Pharmacy, University of Hawai'i at Hilo

Introduction

- Diabetes mellitus (DM) is the 7th leading cause of death in the U.S. and the 8th leading cause of death in Hawai'i
- Uncontrolled DM can lead to skin disorders, which are often neglected and underdiagnosed among diabetic patients
- Beyond the medical risk factors, there are social determinants of health that must be considered when assessing risk

Objective

- To examine the relationship between patient characteristics and length of stay for potentially preventable hospitalizations for diabetes infections

Methodology

- Data are from the Health Cost and Utilization Project (HCUP) State Inpatient Database from 2017.
- ICD-10 codes were used to identify diabetes-related skin infections.
- Hospital length of stay was examined in Hawai'i and four state representing the four regions of the U.S. (California, New York, North Dakota, and Texas)

Figure 1. Length of Stay for Diabetes-Related Infections Based on Age

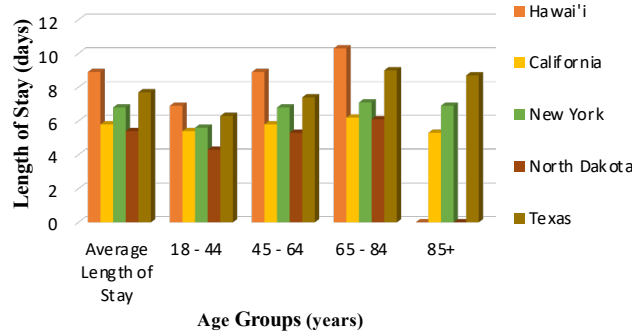


Figure 2. Length of Stay for Diabetes-Related Infections Based on Payer Status

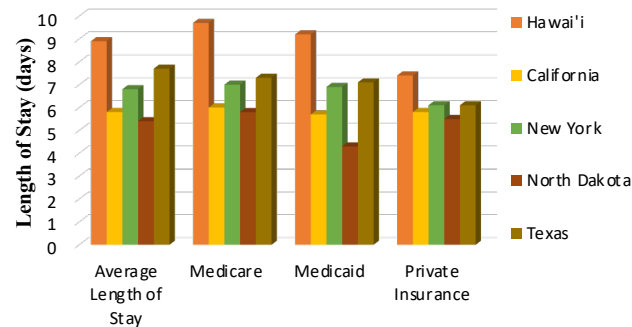


Figure 3. Hospital Costs for Diabetes-Related Infections Based on Payer Status

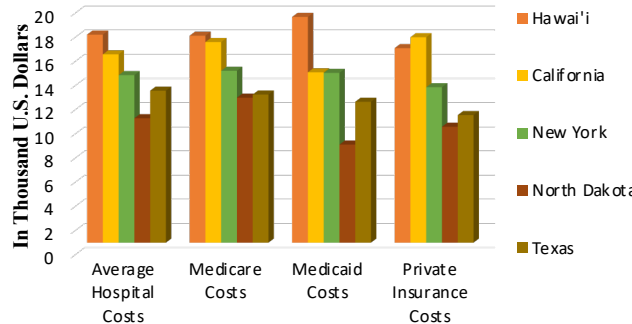


Figure 4. Patient Length of Stay in Medium and Small Metros

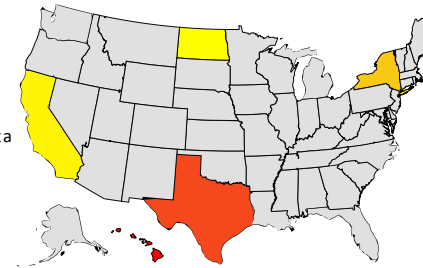
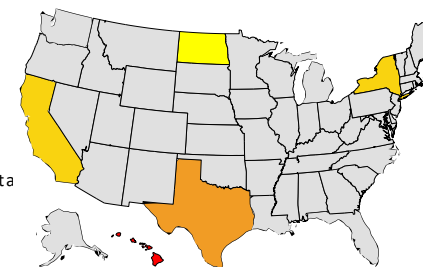


Table 1. Heat Map Key: Fig. 4, 5

State	Medium and Small Metro (Figure 4)	Rural (Figure 5)
North Dakota	5.6	5
California	5.7	6.1
New York	6.1	6.1
Texas	7.3	7.5
Hawaii	8	11.6

Figure 5. Patient Length of Stay in Rural Communities



Results

- Patients in Hawai'i with diabetes-related infections averaged a hospital length of stay of 8.9 days
- Between 20 to 64.8% greater than the other states examined
- The length of stay of patients in Hawai'i with Medicaid or Medicare was longer than similar patients in the examined states
- Residential status does not significantly affect length of stay
- Hawai'i patients in both medium/small metropolitan and rural communities have significantly longer hospital stays than similar patients in examined states

Conclusions

- Patients in Hawai'i spent more days in the hospital for diabetes-related skin infections than in other states, and thus incurred greater hospital costs
- This study suggests that patients in Hawai'i with diabetes-related skin infections tend to have longer hospital stays than similar patients in other examined states
- Further evaluation of data from recent years is required to determine why patients in Hawai'i averaged a greater length of stay relative to other states