# Acute Care Opportunities for Cost Saving in Hawaii

December 4, 2013

# Purpose

Hawaii Health Information Corporation was contracted by Healthcare Transformation, Office of the Governor, to identify areas where there was greatest opportunity to provide more efficient quality healthcare in the State of Hawaii.

The purpose of this report is to identify potentially avoidable hospitalizations and ER visits and provide a best estimate of their cost. Highlighting areas where there is the greatest opportunity to prevent potentially preventable hospital or ER utilization is an important step in ensuring adequate, appropriate and cost efficient care.



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# Highlights*

- In Hawaii, approximately one in every 10 hospitalizations and ER visits are potentially preventable.
- The majority (58%) of potentially preventable hospital stays were paid by Medicare.
- Among potentially preventable ER visits, 32% were paid by Medicare, followed by private insurers (30%), Medicaid/Quest (29%) and the uninsured/self pay (5%).
- Total annual costs associated with potentially avoidable stays/visits:
  - To ER: $93 Million (charges)
  - To hospital: $159 million (estimated cost)
  - For hospital readmissions: $103 million (estimated cost)

*Based on CY2012

# Highlights (continued)*

- Differences in potentially preventable ER utilization and hospital readmission exist by race/ethnicity and by County of patient residence.
  - Race/ethnicity: highest among Other Pacific Islander and Hawaiians; lowest among Japanese/Chinese/Other Asian
  - County of patient residence: highest on Kauai, lowest on Maui
- The impact of Mental Health or Diabetes as a co-existing condition has an important impact on the percent of hospitalizations and readmissions
  - Mental health is a co-existing condition for 34% potentially preventable hospitalizations and almost 10% of hospital readmissions
  - Diabetes is a co-existing condition for 28% potentially preventable hospitalizations and 10% of hospital readmissions

*Based on CY2012

# Statewide Annual Hospital and ER Utilizations and Associated Costs

Overall Hospital and ER Utilizations: Number Visits and Cost, 2012 - Hawaii

# Hawaii Hospital and ER Utilization and Annual Costs, 2012

| Type | Total Discharges* | Total Estimated Cost** |
|---|---|---|
| Hospitalizations | 88,263 | $1,348,620,254 |
| ER Visits | 444, 721 | $2,950,961,551 |

*Hospitalizations exclude obstetrics and newborns for the purpose of this report.
**Hospital-based financials defined by estimated cost (based on CMS Cost Reports); ER visits are in charges, or that billed by the provider; charges are not necessarily how much was reimbursed and do not necessarily reflect the actual cost. In general costs are less than charges. However, ER costs are usually reported as the amount charged.

# Hospitalization Payer Mix, 2012

## Medicare is the Primary Payer of Hospital Care

| Primary Payer | Number of Visits | Estimated Cost | Share of Total Cost |
|---|---|---|---|
| Medicare | 42,035 | $689,159,047 | 51% |
| Private Insurance | 24,654 | $345,327,611 | 26% |
| Medicaid/Quest | 17,042 | $242,931,054 | 18% |
| Miscellaneous* | 2,522 | $45,758,302 | 3% |
| Self Pay | 2,010 | $25,444,240 | 2% |
| **Total** | **88,263** | **$1,348,620,254** | **100%** |

Hospitalizations exclude obstetrics and newborns.
*Miscellaneous includes: No Fault, Worker's Comp, Department of Defense

# ER Payer Mix, 2012

Private Insurance is the Largest Payer of ER Services; Medicaid/Quest is Second Largest Payer, followed by Medicare.

| Primary Payer | Number of Visits | Charges | Share of Total Charges |
|---|---|---|---|
| Private Insurance | 153,086 | $762,049,719 | 26% |
| Medicaid/Quest | 142,840 | $632,398,214 | 21% |
| Medicare | 95,225 | $1,328,190,510 | 45% |
| Miscellaneous* | 27,671 | $131,390,030 | 4% |
| Self Pay | 25,899 | $96,933,078 | 3% |
| **Total** | **444,721** | **$2,950,961,551** | 100% |

*Miscellaneous includes: No Fault, Worker's Comp, Department of Defense

# Potentially Preventable Hospital and ER Utilization

Definitions and Overall Potentially Preventable Utilization

# Potentially Preventable Utilization Definitions Used in this Report

- Potentially Preventable Hospitalizations (PPH)
  - The Prevention Quality Indicators (PQIs) were developed by the Agency for Healthcare Research and Quality (AHRQ) and can be used with hospital inpatient data to measure quality of care for conditions sensitive to ambulatory care. For these conditions, good outpatient care could potentially prevent the need for hospitalization ("preventable hospitalizations"), or early intervention could prevent complications or limit disease severity. The PQIs have been approved by the National Quality Forum. (http://www.qualityindicators.ahrq.gov/modules/pqi_resources.aspx)
- Potentially Preventable Readmissions (PPR)
  - 3M's Potentially Preventable Readmissions (PPR) classification system is a clinically-based system that identifies acute care readmissions that are potentially preventable based on the discharge abstract data. PPRs identify return hospitalizations that may have resulted from either the process of care and treatment or the lack of post-admission follow-up, rather than unrelated events that occur post-admission. (www.3Mhis.com)
- Potentially Avoidable ER Visits
  - The Medi-Cal Managed Care Division of the California Department of Health Care Services formed a collaborative that reviewed published literature and consulted experts on ER use to define an "avoidable ER visit" as "a visit that could have been more appropriately managed by and/or referred to a primary care provider in an office or clinic setting." (Source: Statewide Collaborative Quality Improvement Project, Reducing Avoidable Emergency Room Visits. California Department of Health Care Services, September, 2011.)

# Potentially Preventable Utilization, Hawaii

| Type* | Potentially Preventable Hospitalizations /ER Visits | Percent Total Hospitalizations /ER Visits** | Estimated Total Cost/Charges*** |
|---|---|---|---|
| Potentially Preventable Hospitalizations (PPH) | 10,427 | 11.8% | $159,324,560 |
| Potentially Preventable Readmissions (PPR) | 7,015 | 7.9% | $103,020,699 |
| Potentially Avoidable ER Visits | 46,792 | 10.5% | $93,888,325 |

CY2012

*Note: Potentially Preventable Hospitalizations and Potentially Preventable Readmissions are not mutually exclusive as a PPH may also be a PPR.

Definitions: PPHs defined by the Agency of Healthcare Research and Quality (http://www.qualityindicators.ahrq.gov/modules/pqi_resources.aspx ); PPRs defined by 3M, Health Information Systems (wwww.3Mhis.com); Potentially Avoidable ER Visits, California Department of Health Care Services, September, 2011). For purpose of report, PQI composite- overall used to count PPH.

** Percent Total Hospitalizations/ER Visits = (PPH or PPR or ER Visits/Total of PPH or PPR or ER Visits) * 100

***Hospital-based financials defined by estimated cost (based on CMS Cost Reports); ER visits are in charges, or that billed by the provider; charges are not necessarily how much was reimbursed and do not necessarily reflect the actual cost. In general costs are less than charges. However, ER costs are usually reported as the amount charged.

# Payer Mix: Potentially Preventable Re-Hospitalizations

## The majority (58%) of PPRs are Medicare-covered stays

| Primary Payer | Number of Readmissions | Estimated Readmission Cost | Share of Total Cost |
|---|---|---|---|
| Medicare | 3,902 | $59,850,033 | 58% |
| Medicaid/Quest | 1,648 | $23,971,193 | 23% |
| Private Insurance | 1,224 | $15,534,328 | 15% |
| Miscellaneous* | 132 | $2,470,929 | 3% |
| Self Pay | 109 | $1,194,216 | 1% |
| **Total** | **7,015** | **$103,020,699** | 100% |

*Hospitalizations exclude obstetrics and newborns.
*Miscellaneous includes: No Fault, Worker's Comp, Department of Defense

# Medicare Detail Payer Mix:

## Potentially Preventable Re-Hospitalization Visits

| Primary Payer | Number of Readmissions | Estimated Charges** | Share of Total Charges |
|---|---|---|---|
| Medicare FFS | 2,232 | $34,488,902 | 58% |
| Other Medicare Advantage Plans | 582 | $8,599,888 | 14% |
| Kaiser Senior Advantage | 364 | $5,126,933 | 9% |
| HMSA Akamai Advantage | 347 | $5,901,146 | 10% |
| HMSA 65C+ | 207 | $2,880,680 | 5% |
| Secure Horizons Medicare Advantage | 132 | $2,074,069 | 3% |
| AlohaCare Advantage | 38 | $778,416 | 1% |
| **Total:** | **3,902** | **$59,850,033** | 100% |

**Hospital-based financials defined by estimated cost (based on CMS Cost Reports); ER visits are in charges, or that billed by the provider; charges are not necessarily how much was reimbursed and do not necessarily reflect the actual cost. In general costs are less than charges. However, ER costs are usually reported as the amount charged.

# Payer Mix: Potentially Preventable ER Visits

Although Medicaid/Quest is the largest payer for ER visits, Medicare has the largest share of total charges for potentially preventable ER visits.

| Primary Payer | Number of Readmissions | Estimated Charges** | Share of Total Charges |
|---|---|---|---|
| Medicare | 6,720 | $29,955,121 | 32% |
| Private Insurance | 15,401 | $27,953,270 | 30% |
| Medicaid/Quest | 19,112 | $27,537,016 | 29% |
| Self Pay | 2,974 | $4,281,123 | 5% |
| Miscellaneous* | 2,585 | $4,161,795 | 4% |
| **Total:** | **46,792** | **$93,888,325** | 100% |

**Hospital-based financials defined by estimated cost (based on CMS Cost Reports); ER visits are in charges, or that billed by the provider; charges are not necessarily how much was reimbursed and do not necessarily reflect the actual cost. In general costs are less than charges. However, ER costs are usually reported as the amount charged.

*Miscellaneous includes: No Fault, Worker's Comp, Department of Defense

# Medicare Detail Payer Mix:

## Potentially Preventable ER Visits

| Primary Payer | Number of Readmissions | Estimated Charges** | Share of Total Charges |
|---|---|---|---|
| Medicare FFS | 3,857 | $16,323,682 | 54% |
| Other Medicare Advantage Plans | 1,193 | $5,215,513 | 17% |
| Kaiser Senior Advantage | 624 | $2,297,142 | 8% |
| HMSA Akamai Advantage | 375 | $2,228,042 | 7% |
| HMSA 65C+ | 351 | $2,384,062 | 8% |
| Secure Horizons Medicare Advantage | 271 | $1,272,410 | 4% |
| AlohaCare Advantage | 49 | $234,270 | .8% |
| **Total:** | **6,720** | **$29,955,121** | 100% |

**Hospital-based financials defined by estimated cost (based on CMS Cost Reports); ER visits are in charges, or that billed by the provider; charges are not necessarily how much was reimbursed and do not necessarily reflect the actual cost. In general costs are less than charges. However, ER costs are usually reported as the amount charged.

# Top 5 Potentially Preventable Hospitalizations and ER Visits, by Total Cost

The following series of slides highlight the top potentially preventable hospitalizations and avoidable ER visits in Hawaii based on volume and cost.

# Top 5* Conditions, 2012

| Hospital Readmissions | Potentially Preventable Hospitalizations | Avoidable ER Visits |
|---|---|---|
| Septicemia | Heart Failure | Infections of Upper Respiratory Tract |
| Heart Failure | Pneumonia | Kidney & Urinary Tract Infections |
| Chronic Obstructive Pulmonary Disease | Chronic Obstructive Pulmonary Disease | Migraine & Other Headaches |
| Other Pneumonia | Long-term Diabetes Complication | Other Back & Neck Disorders/Fractures |
| Cardiac Arrhythmia | Urinary Tract Infection | Signs, Symptoms & Other Factors Influencing Health Status |

*Rank based on total annual estimated cost (hospitalizations) and total annual charges (ER visits).

# Top 5* Reasons for Potentially Preventable Hospitalization

| Reason for Hospitalization | Number of Potentially Preventable Hospitalizations | Estimated Cost | Share of Total Potentially Preventable Hospitalization Cost |
|---|---|---|---|
| Heart Failure | 2,683 | $40,996,240 | 26% |
| Pneumonia | 2,058 | $31,446,240 | 20% |
| Chronic Obstructive Pulmonary Disease | 1,880 | $28,726,400 | 18% |
| Urinary Tract Infection | 1,074 | $16,410,720 | 10% |
| Long-term Diabetes Complication | 887 | $13,553,360 | 9% |
| **Top 5 Conditions** | **8,582** | **$131,132,960** | **82%** |

*Rank based on total annual estimated cost. Cost assumption: Average cost per discharge (CY2012): $15,280 (excludes obstetrics/delivery and newborns.)

Hospitalizations exclude obstetrics and newborns.

# Top 5* Reasons for Readmission

| Reason for Initial Hospitalization | Number of Readmissions | Estimated Cost | Share of Total Estimated Readmission Cost |
|---|---|---|---|
| Septicemia | 451 | $8,227,748 | 8% |
| Heart Failure | 428 | $6,203,776 | 6% |
| COPD | 227 | $3,698,648 | 4% |
| Other Pneumonia | 253 | $3,646,773 | 4% |
| Cardiac Arrhythmia | 172 | $2,406,471 | 2% |
| **Top 5 Conditions** | **1,531** | **$24,183,416** | **24%** |

*Rank based on total annual estimated cost; CY2012.

# Top 5* Reasons for Potentially Avoidable ER Visits

| Reason for Visit | Number of Visits | Charges | Share of Total Potentially Avoidable ER Visit Charges |
|---|---|---|---|
| Infections of Upper Respiratory Tract** | 14,502 | $15,880,141 | 17% |
| Kidney & Urinary Tract Infections | 8,251 | $32,258,152 | 34% |
| Migraine & Other Headaches | 7,682 | $20,265,870 | 22% |
| Other Back & Neck Disorders/Fractures | 6,757 | $13,108,960 | 14% |
| Signs, Symptoms & Other Factors Influencing Health Status | 4,324 | $3,179,128 | 3% |
| **Top 5 Conditions** | 41,516 | $ 84,692,251 | **90%** |

*Rank based on total annual charges, CY2012

** Infections of Upper Respiratory Tract Number of Visits by Age Group: 00-17 = 7,875; 18-64 = 6,086; 65+ = 541

# Potential Cost Savings with improved utlization…

# Potential Cost Savings from Reduction in Preventable Hospitalization

| Reason for Hospitalization | Estimated Annual Cost Savings with 10% Reduction in Preventable Hospitalizations | Estimated Annual Cost Savings with 20% Reduction in Preventable Hospitalizations | Estimated Annual Cost Savings with 30% Reduction in Preventable Hospitalizations | Estimated Annual Cost Savings with 50% Reduction in Preventable Hospitalizations |
|---|---|---|---|---|
| Heart Failure | $4,099,624 | $8,199,248 | $12,298,872 | $20,498,120 |
| Pneumonia | $3,144,624 | $6,289,248 | $9,433,872 | $15,723,120 |
| Chronic Obstructive Pulmonary Disease | $2,872,640 | $5,745,280 | $8,617,920 | $14,363,200 |
| Urinary Tract Infection | $1,641,072 | $3,282,144 | $4,923,216 | $8,205,360 |
| Diabetes Long-term Complication | $1,355,336 | $2,710,672 | $4,066,008 | $6,776,680 |
| Top 5 Total | $13,113,296 | $26,226,592 | $39,339,888 | $65,566,480 |

CY 2012; Preventable hospitalizations defined by AHRQ PQIs. Cost savings: ( average cost per discharge * annual hospitalization)*percent reduction

# Potential Cost Savings from Reduction in Readmissions

| Reason for Readmission* | Estimated Annual Cost Savings with 10% Reduction in Readmissions | Estimated Annual Cost Savings with 20% Reduction in Readmissions | Estimated Annual Cost Savings with 30% Reduction in Readmissions | Estimated Annual Cost Savings with 50% Reduction in Readmissions |
|---|---|---|---|---|
| Septicemia | $853,310 | $1,706,620 | $2,559,931 | $4,266,551 |
| Heart Failure | $645,649 | $1,291,298 | $1,936,947 | $3,228,245 |
| COPD | $386,223 | $772,445 | $1,158,668 | $1,931,113 |
| Other Pneumonia | $381,210 | $762,420 | $1,143,629 | $1,906,049 |
| Cardiac Arrhythmia | $251,205 | $502,409 | $753,614 | $1,256,024 |
| **Top 5 Conditions** | $2,517,597 | $5,035,193 | $7,552,790 | $12,587,983 |

CY 2012; Hospital readmissions defined based on 3M's Potentially Preventable Readmissions. Cost savings: ( average cost per discharge * annual hospitalization)*percent reduction

# Potential ER Visit Cost Savings

| Reason for Readmission* | Estimated Annual Cost Savings with 10% Reduction in ER Visits | Estimated Annual Cost Savings with 20% Reduction in ER Visits | Estimated Annual Cost Savings with 30% Reduction in ER Visits | Estimated Annual Cost Savings with 50% Reduction in ER Visits |
|---|---|---|---|---|
| Infections of Upper Respiratory Tract | $ 1,588,014 | $3,176,028 | $4,764,042 | $7,940,071 |
| Kidney & Urinary Tract Infections | $ 3,225,815 | $6,451,630 | $9,677,446 | $16,129,076 |
| Migraine & Other Headaches | $ 2,026,587 | $4,053,174 | $6,079,761 | $10,132,935 |
| Other Back & Neck Disorders/Fractures | $ 1,310,896 | $2,621,792 | $3,932,688 | $6,554,480 |
| Signs, Symptoms & Other Factors Influencing Health Status | $317,913 | $635,826 | $953,738 | $1,589,564 |
| **Top 5 Conditions** | $ 8,469,225 | $16,938,450 | $25,407,675 | $42,346,126 |

CY 2012; Potential Avoidable ER visits defined based on California Department of Health Care Services, 2011. Cost savings: (average cost per discharge * annual hospitalization)*percent reduction.

# Mental Health Focus

What is the impact of mental health on potentially avoidable hospitalization and ER utilization?

# Mental Health

## Impact as Primary versus Co-existing Condition

Percent of hospitalizations where a mental health condition is the PRIMARY reason for treatment:

- 6% of hospitalizations; 4% of total costs

Percent of hospitalizations where a mental health condition is a co-existing diagnosis:

- 34% of hospitalizations; 36% of total costs
- The true size and cost of this condition is hidden within the primary reason for care

CY2012
Hospitalizations exclude obstetrics and newborns.
Mental health conditions are defined as ICD9 codes 290 through 319.

# The Significance of Mental Health

| Diagnosis | Number of Hospitalizations | Share of All Hospitalizations | Estimated Cost | Share of Total Annual Estimated Cost |
|---|---|---|---|---|
| Primary Mental Health Diagnosis | 4,855 | 6% | $56,057,385 | 4% |
| Co-Existing Mental Health Diagnosis | 29,992 | 34% | $482,676,678 | 36% |
| Any Mental Health Diagnosis | 31,110 | 35% | $493,945,205 | 37% |
| **All Hospitalizations** | **88,263** | -- | **$1,348,620,254** | -- |

CY2012
Hospitalizations exclude obstetrics and newborns.
Mental health conditions are defined as ICD9 codes 290 through 319.

# Top Reasons for Potentially Avoidable Hospitalizations with Co-Existing Mental Health Condition

| Reason for Hospitalization | Presence of Mental Health as Co-Existing Condition* |
|---|---|
| Heart Failure | 34.8% |
| Pneumonia | 31.4% |
| Chronic Obstructive Pulmonary Disease | 47.4% |
| Septicemia | 39.8% |
| **All Hospitalizations** | **34%** |

*Percentage based on discharges. Hospitalizations exclude obstetrics and newborns.

# Mental Health
# Impact on Hospital Readmissions

- The presence of a Mental Health condition increases the risk of a hospital readmission
- 30 day Readmission (3M PPRs)*
  - Overall/Statewide – 6.4%
  - Psychiatry (primary reason) – 13.1%
  - Substance abuse (primary reason) – 9.6%
  - Overall with mental health as co-existing condition – 9.6%

*Based on 3Ms PPRs. The 30 day Readmission Rates reported on this page are Actual and not adjusted for severity. CY2012 Hospitalizations exclude obstetrics and newborns.
Mental health conditions are defined as ICD9 codes 290 through 319.

# Top 10 Mental Health-Related Reasons for Hospitalization - Hawaii

| Primary Condition* | Discharges | Share of Mental Health Discharges** |
|---|---|---|
| 751 - Major Depressive Disorders & Other/Unspecified Psychoses | 1,351 | 28.8% |
| 750 - Schizophrenia | 1,008 | 21.5% |
| 753 - Bipolar Disorders | 732 | 15.6% |
| 775 - Alcohol Abuse & Dependence | 358 | 7.6% |
| 755 - Adjustment Disorders & Neuroses Except Depressive Diagnoses | 291 | 6.2% |
| 754 - Depression Except Major Depressive Disorder | 236 | 5.0% |
| 776 - Other Drug Abuse & Dependence | 206 | 4.4% |
| 758 - Childhood Behavioral Disorders | 105 | 2.2% |
| 773 - Opioid Abuse & Dependence | 97 | 2.1% |
| 757 - Organic Mental Health Disturbances | 93 | 2.0% |
| **Top 10 Aggregate** | **4,653** | **99.3%** |

*Mental health conditions can be categorized as behavioral (psychiatry) versus substance abuse. Primary conditions highlighted in red are classified as substance abuse.

Note: Primary (mental health) Condition grouped by 3M APR-DRGs (assigned code-description). Mental health conditions are defined as ICD9 codes 290 through 319.

**Percentage based on mental health discharges only. Hospitalizations exclude obstetrics and newborns. CY2012.

# Payer Mix: Mental Health

## Medicare Primary Payer for Hospitalizations with Mental Health Diagnosis

| Primary Payer | Discharges with Mental Diagnosis* | Share of Total Mental Health Discharges |
|---|---|---|
| Medicare | 14,641 | 47.1% |
| Medicaid/Quest | 8,119 | 26.1% |
| Private Insurance | 6,362 | 20.5% |
| Self Pay | 930 | 3.0% |
| Miscellaneous** | 1,058 | 3.4% |
| **Total** | **31,110** | **100%** |

CY2012
Hospitalizations exclude obstetrics and newborns.
*Mental health conditions are defined as ICD9 codes 290 through 319, any diagnosis.

**Miscellaneous includes: No Fault, Worker's Comp, Department of Defense

# Diabetes Focus

What is the impact of diabetes on potentially avoidable hospitalization and ER utilization?

# Diabetes

## Impact as Primary versus Co-existing Condition

The percent of hospitalizations where diabetes is the PRIMARY reason for treatment:

- 2% of hospitalizations; 2% of total costs
- The percent of hospitalizations where diabetes is a co-existing diagnosis:
- 28% of hospitalizations; 32% of total costs
- The true size and cost of this condition is hidden within the primary reason for care

CY2012
Hospitalizations exclude obstetrics and newborns.
Diabetes is defined as ICD9 codes 250.00 through 250.93.

# The Significance of Diabetes

| Diagnosis | Number of Hospitalizations | Share of All Hospitalizations | Estimated Cost | Share of Total Annual Estimated Cost |
|---|---|---|---|---|
| Primary Diabetes Diagnosis | 1,615 | 2% | $22,327,920 | 2% |
| Co-Existing Diabetes Diagnosis | 24,488 | 28% | $432,782,003 | 32% |
| Any Diabetes Diagnosis | 25,534 | 29% | $444,379,338 | 33% |
| **All Hospitalizations** | **88,263** | -- | **$1,348,620,254** | -- |

CY2012
Hospitalizations exclude obstetrics and newborns.
Diabetes is defined as ICD9 codes 250.00 through 250.93.

# Top Reasons for Potentially Avoidable Hospitalizations with Co-Existing Diabetes Diagnosis

| Reason for Hospitalization | Presence of Diabetes as Co-Existing Condition* |
|---|---|
| Heart Failure | 46.6% |
| Pneumonia | 30.9% |
| Chronic Obstructive Pulmonary Disease | 29.5% |
| Septicemia | 38.4% |
| **All Hospitalizations** | **28%** |

*Percentage based on discharges. Hospitalizations exclude obstetrics and newborns.

# Diabetes
# Impact on Hospital Readmissions

- The presence of diabetes as a diagnosis increases the risk of a hospital readmission
- 30 day Readmission (3M PPRs)*
  - Overall – 6.4%
  - Diabetes (primary reason for hospitalization) – 12.9%
  - Overall with diabetes as co-existing condition – 10.3%

*Based on 3Ms PPRs. The 30 day Readmission Rates reported on this page are Actual and not adjusted for severity. CY2012 Hospitalizations exclude obstetrics and newborns.
Diabetes is defined as ICD9 codes 250.00 - 250.93.

# Payer Mix: Diabetes

## Medicare Primary Payer for Hospitalizations with Diabetes Diagnosis

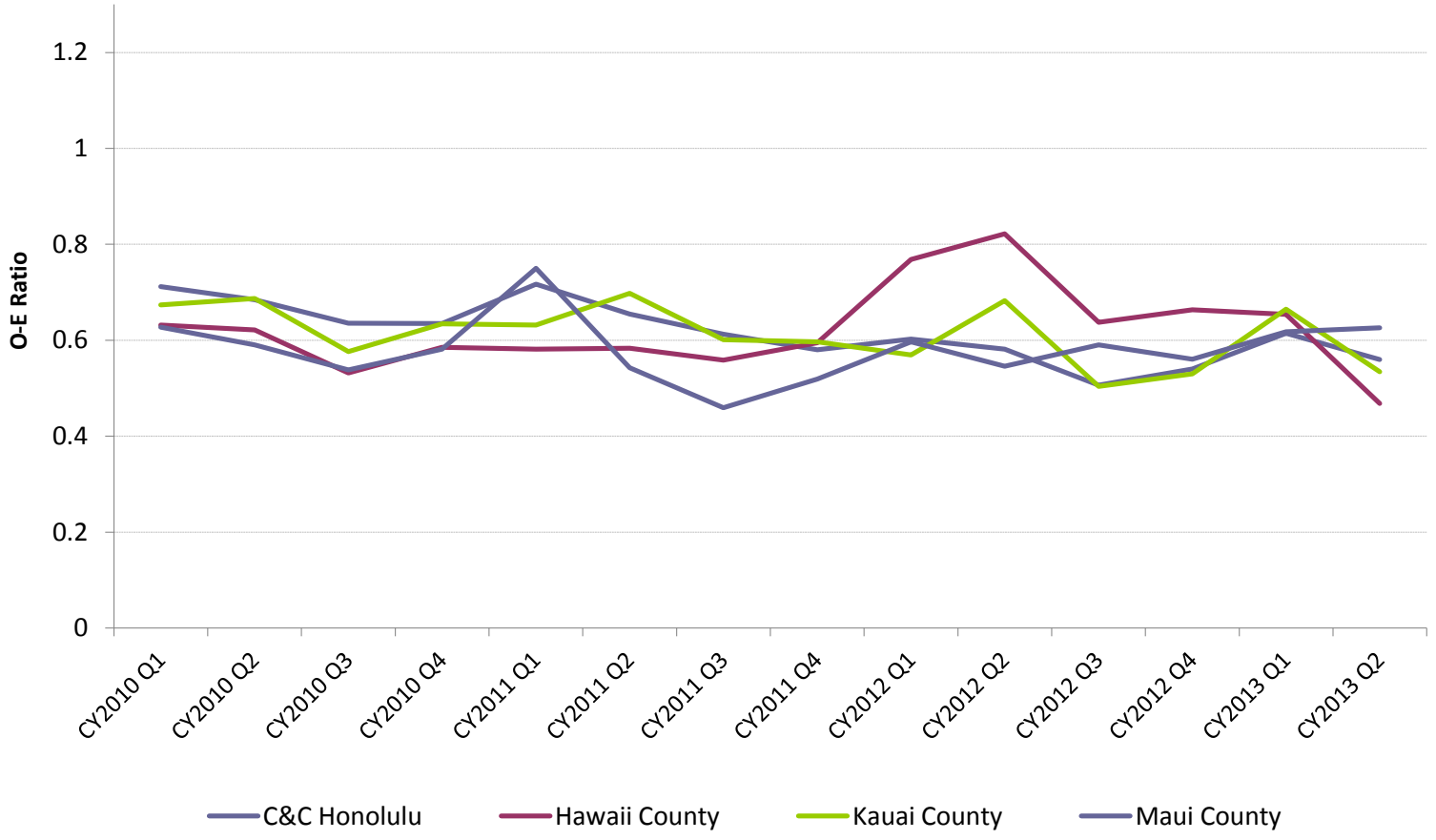
| Primary Payer | Discharges* with Diabetes Diagnosis | Share of Total Diabetes Discharges |
|---|---|---|
| Medicare | 15,344 | 60.1% |
| Private Insurance | 5,407 | 21.2% |
| Medicaid/Quest | 4,000 | 15.7% |
| Self Pay | 339 | 1.3% |
| Miscellaneous** | 444 | 1.7% |
| **Total** | **25,534** | **100%** |

CY2012
Hospitalizations exclude obstetrics and newborns.
*Diabetes is defined as ICD9 codes 250.00 through 250.93, any diagnosis.
**Miscellaneous includes: No Fault, Worker's Comp, Department of Defense

# Disparities

# Potentially Preventable Hospitalizations

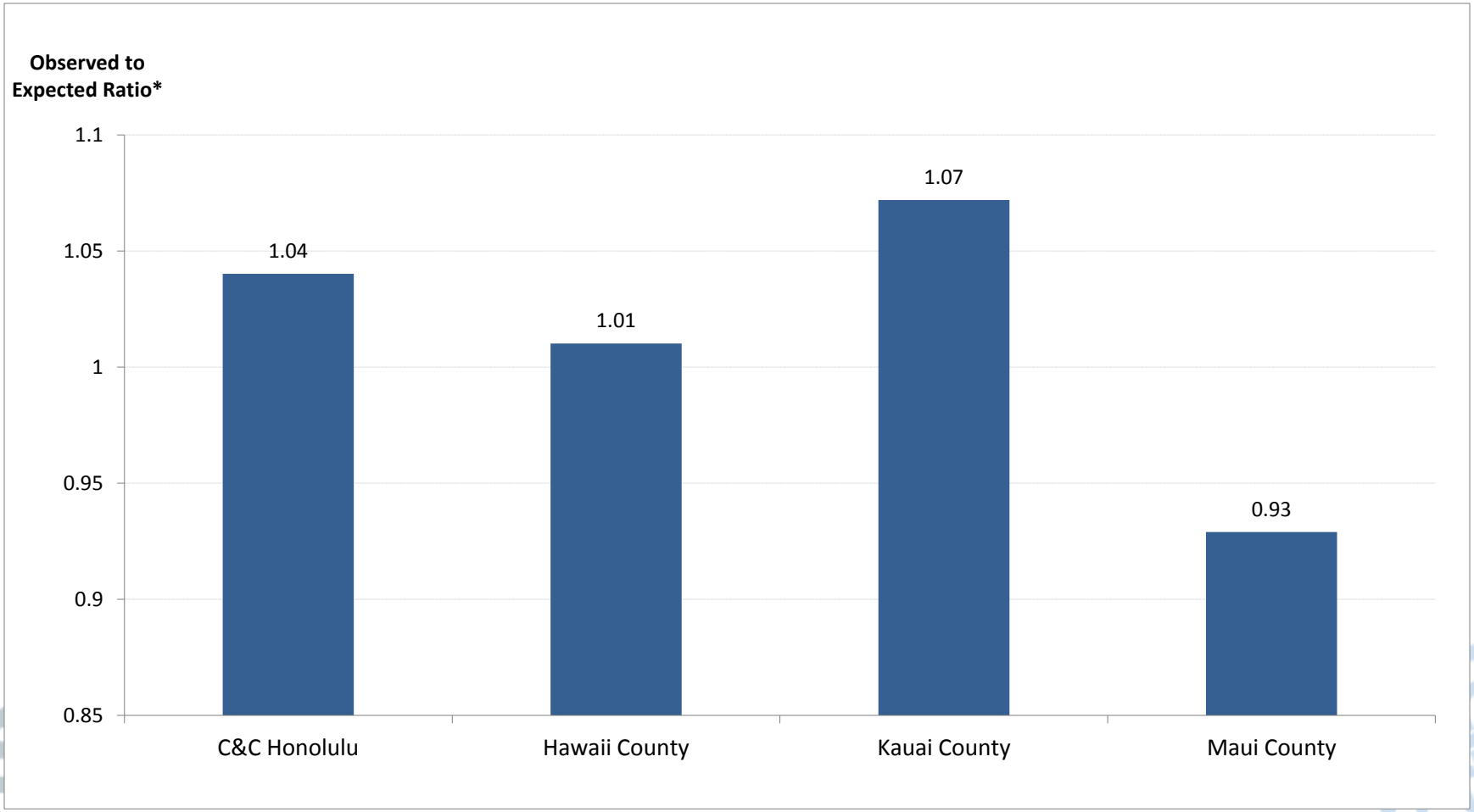
## County Disparity: No Clear Difference Among Counties*




*Based on PQI Composite – Overall. O-E: Observed to Expected Ratio where 1.0 means observed equals expected based on similar risk profile compared to national reference norms (National Inpatient Sample, AHRQ, 2010). A ratio less than 1.0 is considered better; a ratio above 1.0 worse.

# Hospital Readmission Rates

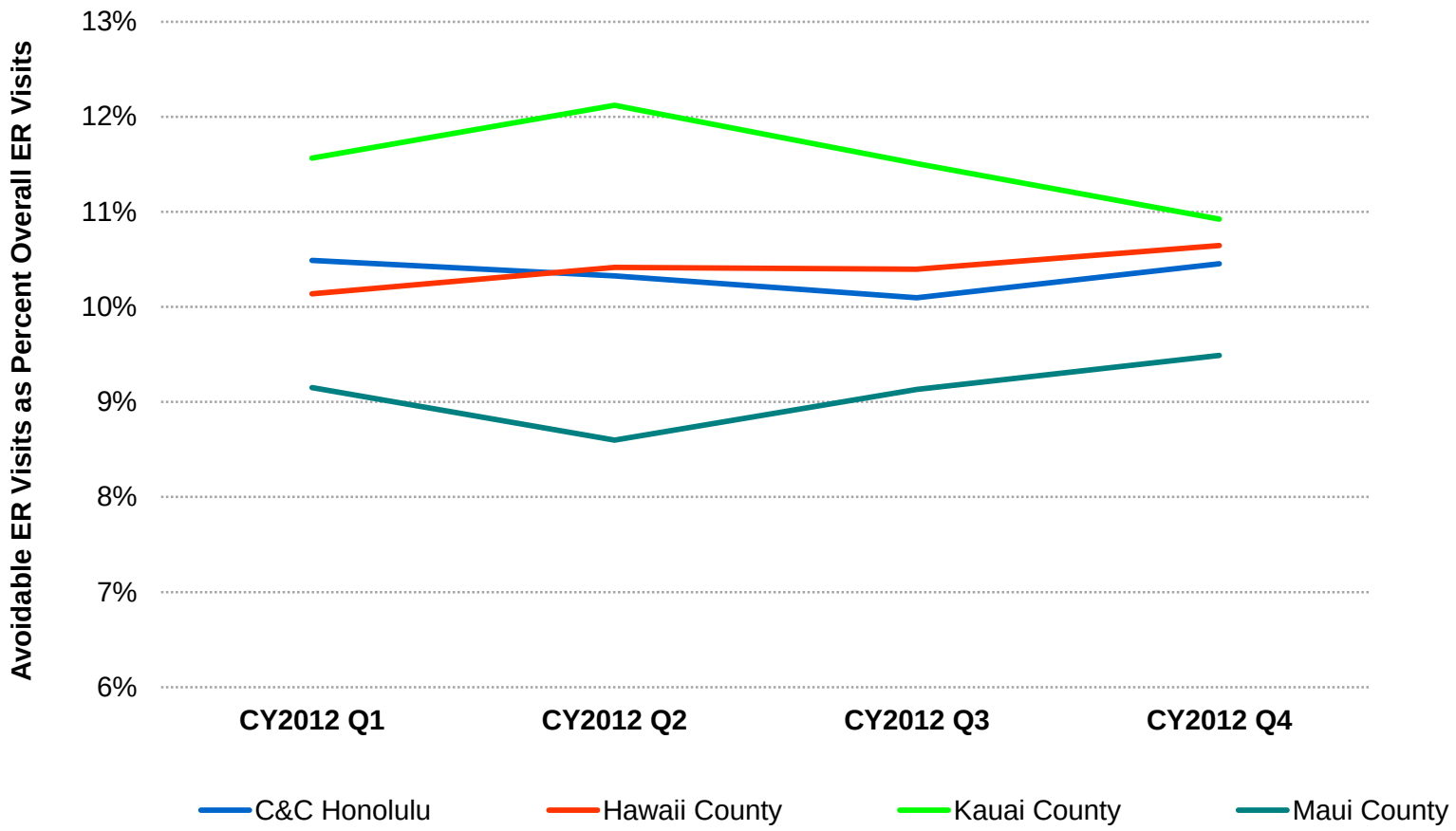
## County Disparity: Maui lowest; Kauai highest *




*Observed to Expected Ratio where 1.0 means observed equals expected based on similar risk profile compared to statewide reference norm. A ratio less than 1.0 is considered better; a ratio above 1.0 worse.

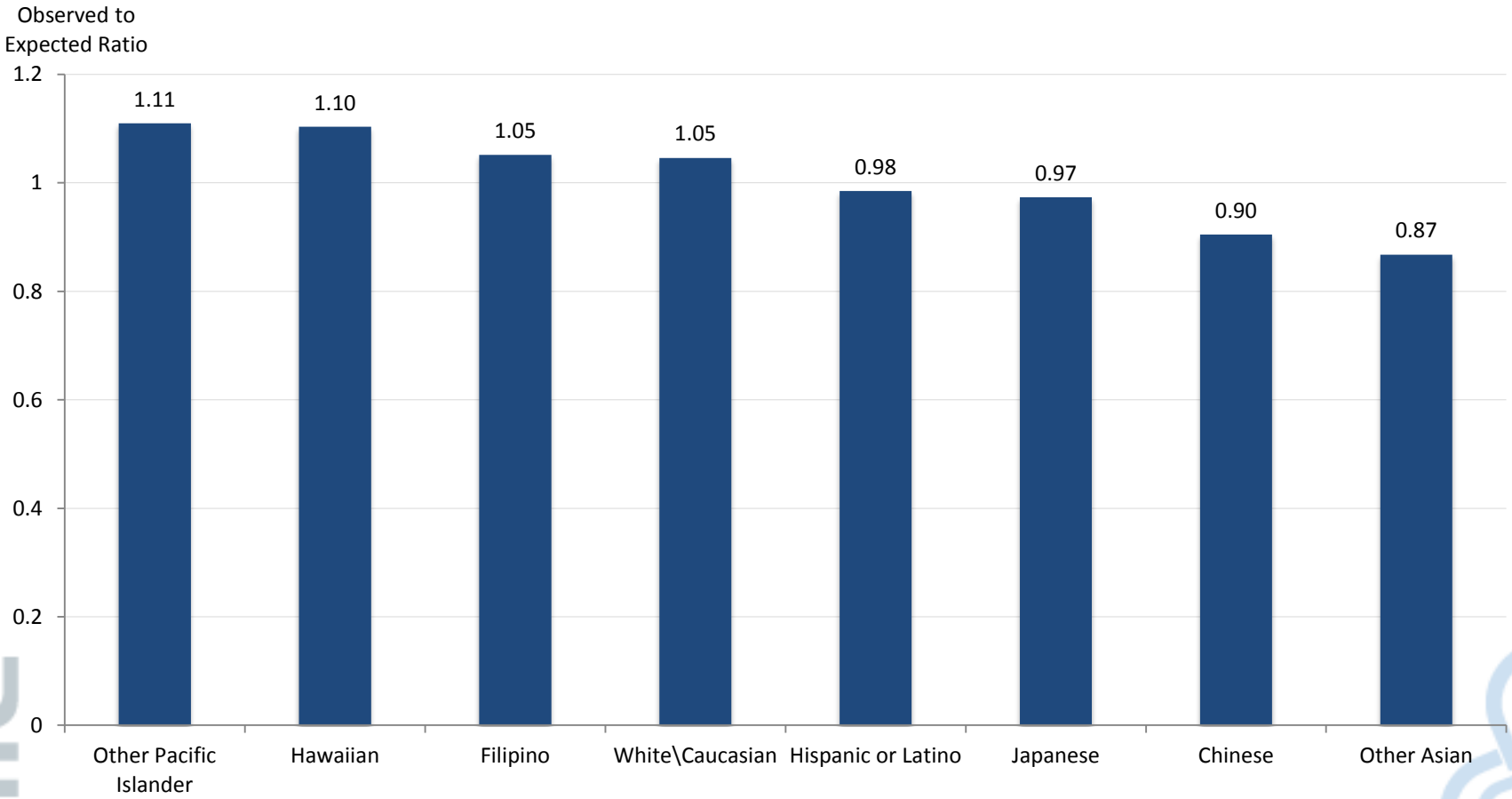
# Potentially Preventable ER Visits

## County Disparity: Maui lowest; Kauai consistently higher rate.



# Hospital Readmissions Rate

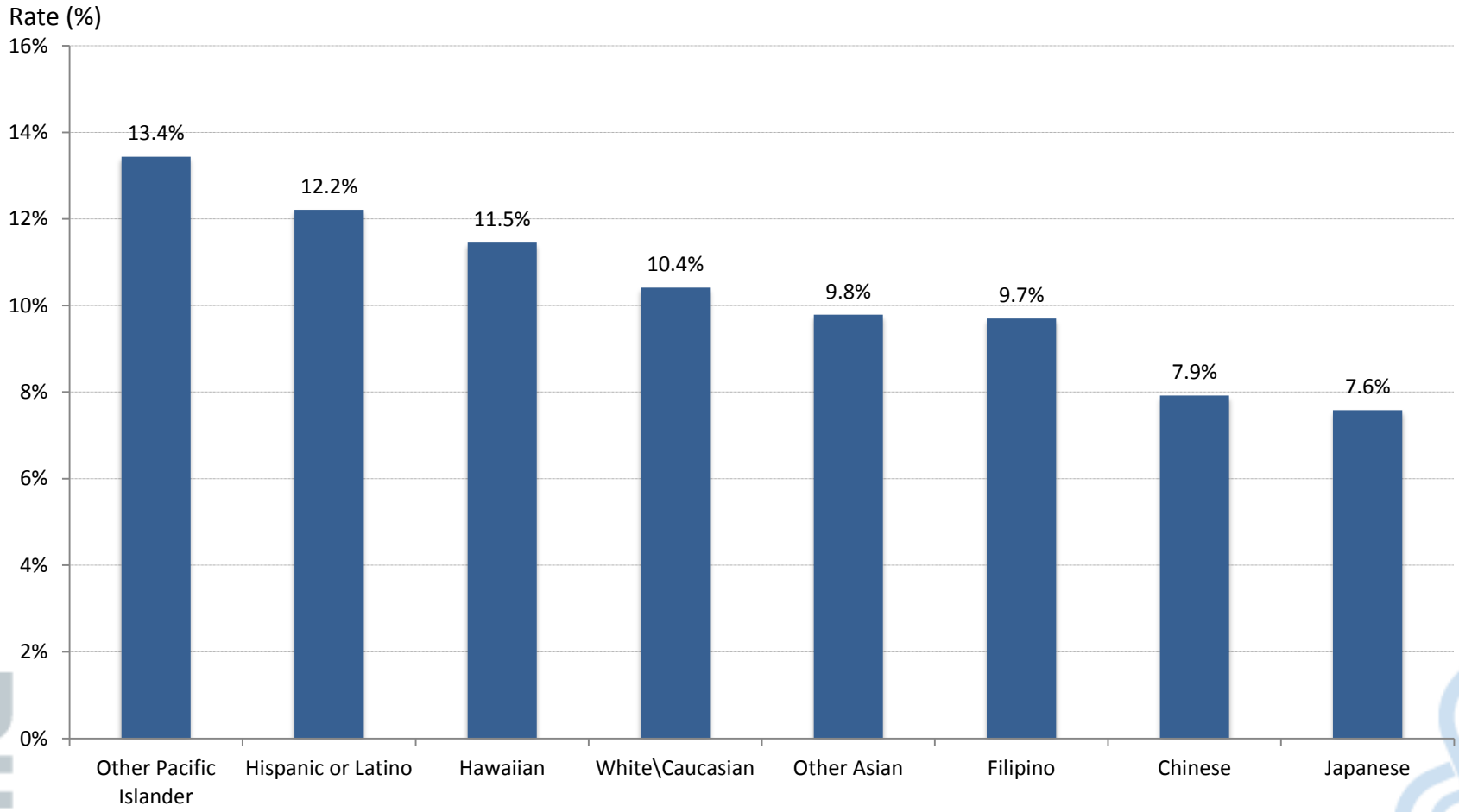
## Race Disparity: Other Pacific Islander and Hawaiian highest rate; Chinese and Other Asian the lowest*




*Observed to Expected Ratio where 1.0 means observed equals expected based on similar risk profile compared to statewide reference norm. A ratio less than 1.0 is considered better; a ratio above 1.0 worse.

# Potentially Preventable ER Visits

## Race Disparity: Japanese lowest; Other Pacific Islander higher rate.




Rate: (Number Potentially Preventable ER visits/Total ER admits)*100; CY2102

# The Waitlist (Financing) Problem

The problem of waitlisted patients in acute care facilities in Hawaii is contributing to both inefficient use of Hawaii's healthcare resources and to less than optimal patient care experiences. The following slides estimate the cost to our healthcare community.

# Waitlist Financial Burden, 2011

Total waitlisted discharges:
7,055

Total cost of waitlisted patients:
$69.9 Million

Total reimbursement:
$ 7.27 Million

Net annual loss:
-$62.7 Million

Net loss per patient:
-$8,889

Net loss per patient per day:
-$1,259

Statewide; based on CY2011 discharges.

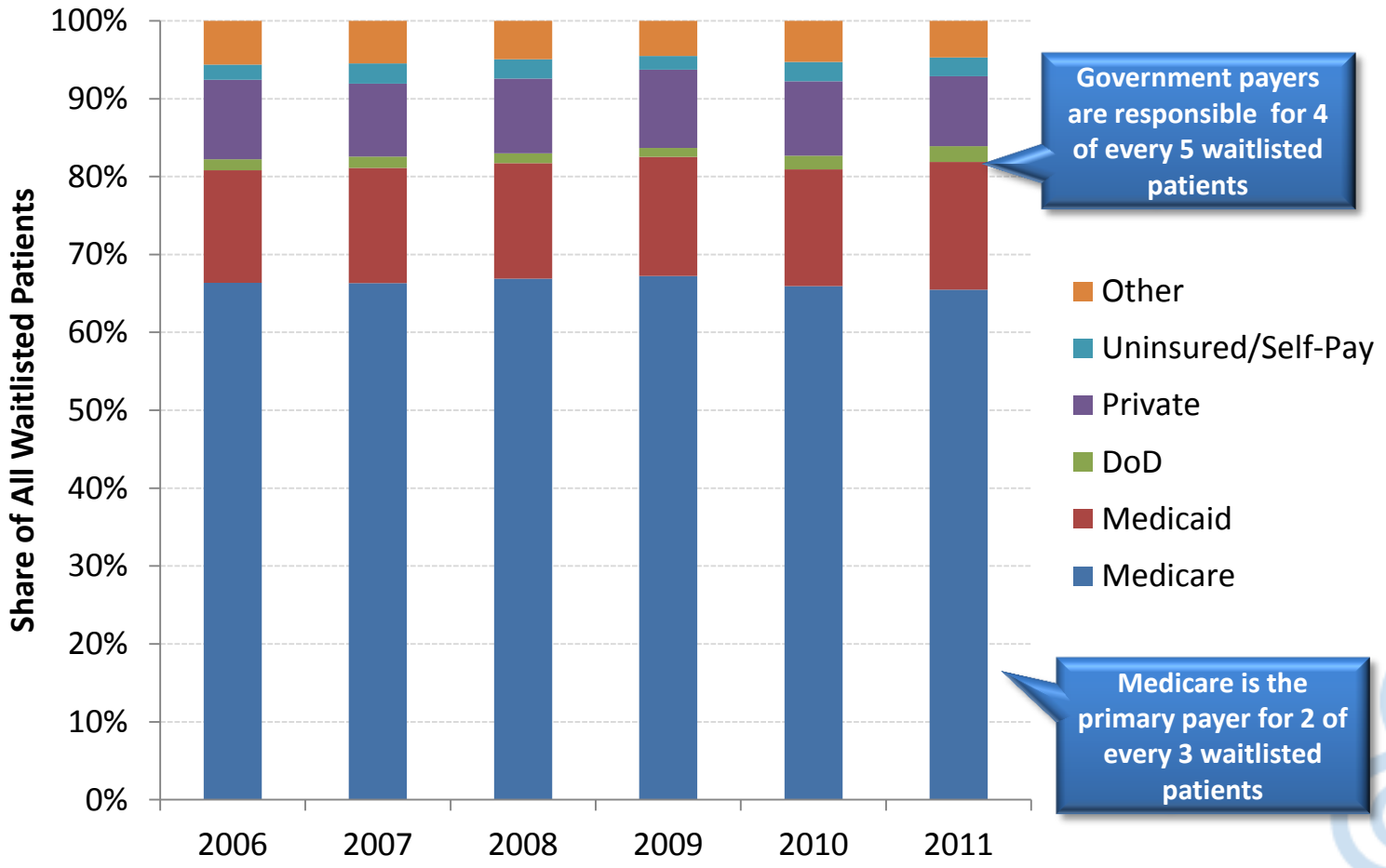
# Financial Burden Trends

2006 – 2011

| Year | Total Waitlist Discharges | Total Waitlist Cost | Total Reimbursement | Net Annual Loss | Net Loss per Patient | Net Loss per Patient Day |
|---|---|---|---|---|---|---|
| 2006 | 6,532 | $64,948,659 | $9,561,504 | $55,387,155 | $8,479 | $849 |
| 2007 | 6,992 | $72,045,167 | $6,231,982 | $65,813,185 | $9,413 | $964 |
| 2008 | 7,376 | $80,618,268 | $7,943,775 | $72,674,493 | $9,853 | $976 |
| 2009 | 7,204 | $74,292,624 | $6,267,576 | $68,025,048 | $9,443 | $1,171 |
| 2010 | 6,558 | $70,034,119 | $7,044,519 | $62,989,600 | $9,605 | $1,209 |
| 2011 | 7,055 | $69,980,024 | $7,267,600 | $62,712,424 | $8,889 | $1,259 |

# Distribution of Waitlisted Patients,

## by Primary Payer Group



# Key Findings – Financial

- Total net loss of $387,601,905 statewide due to waitlisted patients from 2006 to 2011

- Source of largest loss is government payers
  - Primary payer for 4 out of every 5 waitlisted patients
  - 10% of all Medicare inpatients are waitlisted

# Mental Health and the Waitlist Problem

- Mental Health
  - Of Top 12 waitlisted conditions, mental health is a co-existing condition among 49% of waitlisted patients.
  - As a primary condition, mental health patients were waitlisted an average of 27-57 days (compared to 7 days among all waitlisted patients in 2011).
  - As a co-existing condition, mental health plays a significant role among the waitlisted population.
- Issues affecting timely placement post-acute care
  - Higher skill staffing mix required by Long-Term Care (LTC) facility.
  - Lack of community-based resources to support patients with mental health conditions.
  - Reimbursement does not cover costs.

* Total cost aggregated over tracheostomy with and without extensive procedure.