B. QUALITY OF CARE

Importance	The Institute of Medicine defines health care quality as "the degree to which health care services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge."[1] The goal of improving quality of care is to decrease the complication rate, morbidity, mortality, and cost of care.
Highlights	▪ In Santa Cruz County, the percentage of mothers receiving early (1st trimester) and adequate prenatal care has decreased in the past few years—primarily among Latina mothers.[3] ▪ In the United States, low-income populations tend to have higher rates of preventable hospital admissions.[5] ▪ Low-income and uninsured populations are known to face barriers to health care.[5] ▪ Hospice use in the State of California increased over 27% from 2003 to 2007.[10] ▪ Medical expenditures for managing diabetes were over $92 billion in 2002.[7]
Definitions	APNCU: Adequacy of Prenatal Care Utilization Index (also referred to as the Kotelchuck Index). The APNCU is a measure of prenatal care utilization that combines the month that prenatal care began with the number of prenatal visits. Rates can be classified as "intensive use," "adequate," "intermediate," or "less than adequate." Preventable Hospital Stays / Ambulatory Care Sensitive Conditions (ACSC): Preventable hospital stays are also known as ACSC – conditions for which good outpatient care can prevent the need for hospitalizations or for which early intervention can prevent complications or more severe disease.[5] Prevention Quality Indicators (PQIs): PQIs are a set of conditions used with hospital inpatient discharge data to evaluate quality of care for ACSC.[5] Diabetic Screening Rate: the percentage of diabetic Medicare patients whose blood sugar control was screened in the past year by testing their glycated hemoglobin (HbA1C) levels.[7] Hospice: Hospice care is designed to give supportive care to people in the final phase of a terminal illness and focus on comfort and quality of life, rather than cure. The goal is to enable patients to be comfortable and free of pain, so that they live each day as fully as possible. The philosophy of hospice is to provide support for the patient's emotional, social, and spiritual needs as well as medical symptoms as part of treating the whole person.[9]
Healthy People 2010 Objective	▪ Increase the percentage of pregnant females receiving early (1st trimester) prenatal care to **90%** ▪ Increase the percentage of pregnant females receiving adequate or better prenatal care by the APNCU to **90%**

i. PRENATAL CARE

EARLY (1ST TRIMESTER)

It is recommended that women seek prenatal care as soon as they suspect or know they are pregnant—ideally within the first trimester. In addition to monitoring the baby's health during prenatal visits, an early provider visit can also be helpful and informative regarding nutrition; alcohol, tobacco or substance abuse; infections; fertility; family changes and much more.

In Santa Cruz County, the rate of mother's receiving early prenatal care fell from 90% to 80% between 2004 and 2008 (see Figure IIIBi-1). The drop coincided with the economic decline. When looking at rates by race/ethnicity, although the same trend can be seen among White mothers, the magnitude of the change is greatest among Latina mothers, dropping roughly 20% from 2004 to 2008.[3]

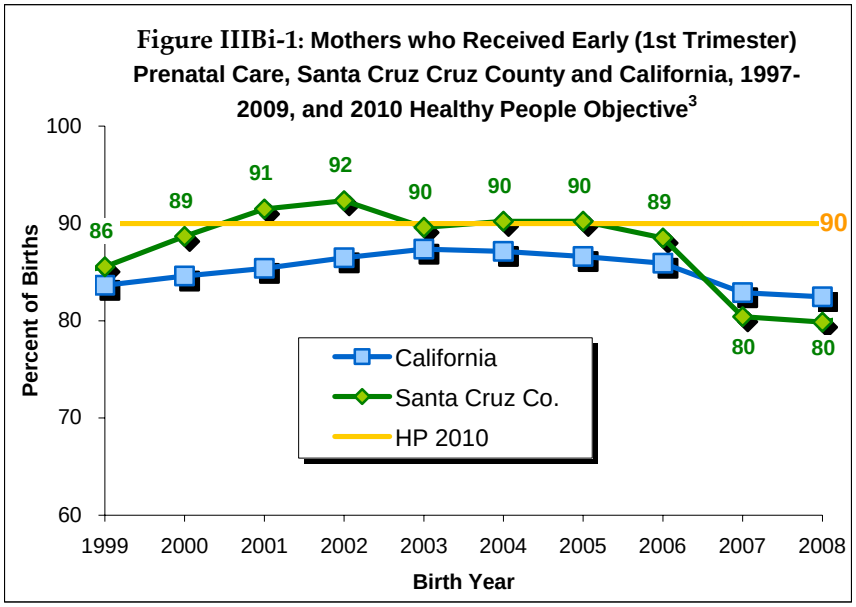


Figure IIIBi-1: Mothers who Received Early (1st Trimester) Prenatal Care, Santa Cruz Cruz County and California, 1997-2009, and 2010 Healthy People Objective[3]

ADEQUACY (KOTELCHUCK INDEX)

The adequacy measure is based on the number of visits for prenatal care. The Kotelchuck Index is a standard for the appropriate number of prenatal visits, while considering the baby's gestational age and when the mother first sought prenatal care. The Index is a ratio of the actual number of visits over the expected number. Attending 80% or more of the expected visits equates to a Kotelchuck Index of Adequate or better. Figure IIIBi-2 shows the percentage of Santa Cruz County mothers meeting that level of utilization over time.

In Santa Cruz County, the percentage with adequate or better care increased significantly from 1999 to 2006. However, the percentage dropped significantly in 2007. Similar changes occurred statewide, although they were not as pronounced.[3]

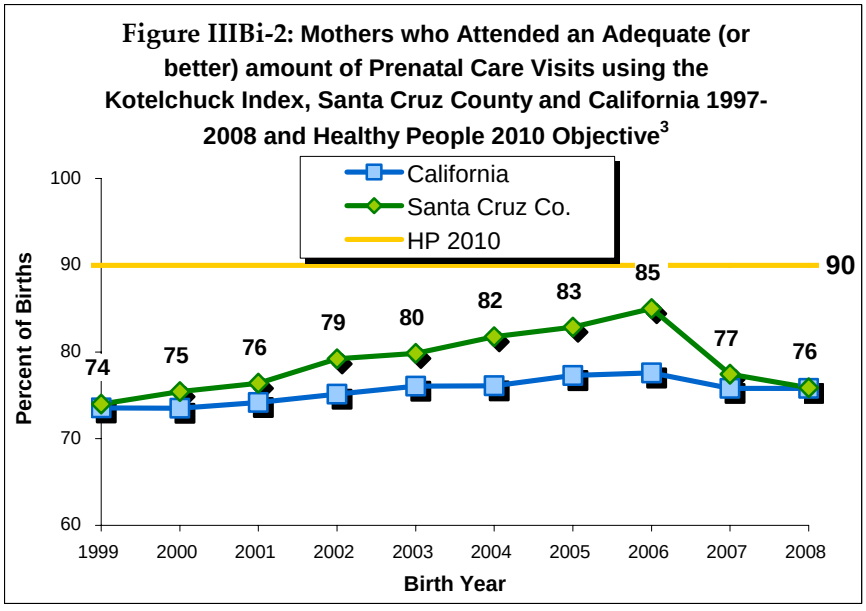


Figure IIIBi-2: Mothers who Attended an Adequate (or better) amount of Prenatal Care Visits using the Kotelchuck Index, Santa Cruz County and California 1997-2008 and Healthy People 2010 Objective[3]

Again, these changes both upward and downward occurred primarily among Latina mothers. In fact, there was no significant change over time among White mothers, and an increasing trend (without the decrease) among Black mothers in Santa Cruz County.[3]

ii. PREVENTABLE HOSPITAL STAYS

Certain chronic medical conditions (e.g., asthma, diabetes, and hypertension) can often be managed with timely and effective treatment in an outpatient setting, thereby preventing hospitalizations; these conditions are also known as Prevention Quality Indicators (PQIs). With high-quality community-based primary care, hospitalizations for these illnesses often can be avoided. However, this measure may also represent a population's tendency to overuse the hospital as their primary source of care.[5]

According to the MATCH report and data derived from the Dartmouth Atlas of Healthcare, using Medicare claims data from 2005-2006, Santa Cruz County had 52 preventable hospital stays per 1,000 enrollees, while California had 62 per 1,000 Medicare enrollees.[4]

The figures to the right display both county and state hospitalization rates (admissions per 100,000 population) from 1997 to 2003 for selected PQIs.[5] Santa Cruz County rates were better than statewide rates for all the PQIs shown.

The table below compares the admission rates for PQIs (excluding diabetic indicators) for Santa Cruz County and California in 2007.[6] For most indicators, Santa Cruz County rates are fairly similar to state rates. COPD and hypertension are areas where Santa Cruz County does particularly well, while angina (without procedure) is a condition for which our primary care may need to be looked at more closely.

Figure IIIBii-1: Hospital Admissions for Hypertension per 100,000 Population, 1997-2003[6]

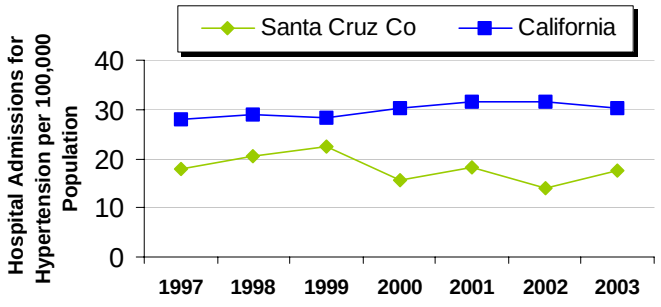


Figure IIIBii-2: Hospital Admissions for Pediatric Asthma per 100,000 Population, 1997-2003[6]

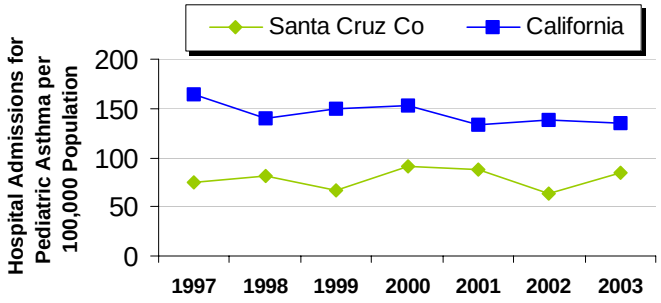


Figure IIIBii-3: Hospital Admissions for Adult Asthma per 100,000 Population, 1997-2003[6]

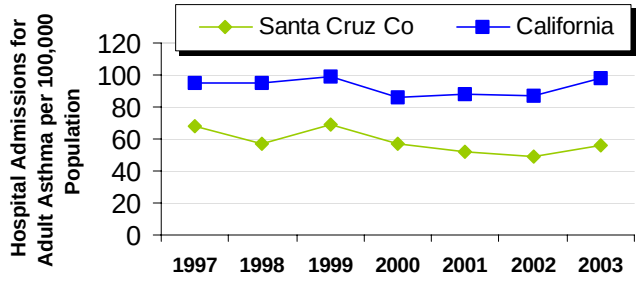
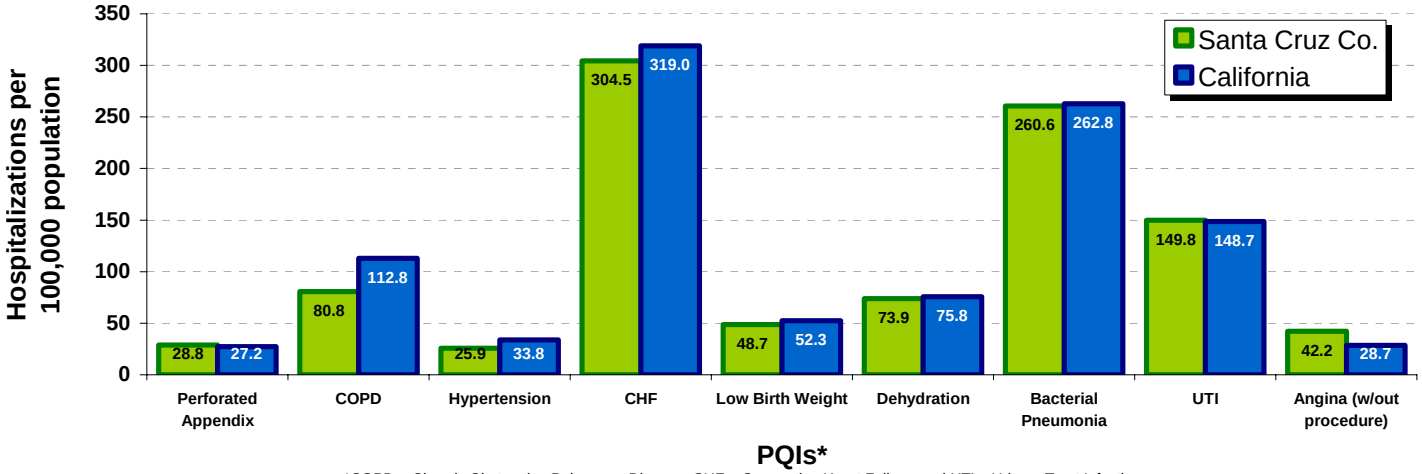


Figure IIIBii-4: Proportion of Population Hospitalized with Prevention Quality Indicators (PQIs*), Santa Cruz County and California, 2007[6]



*COPD = Chronic Obstructive Pulmonary Disease; CHF = Congestive Heart Failure; and UTI = Urinary Tract Infection

iii. DIABETIC SCREENING

Seventy-eight percent of the Medicare diabetic population in Santa Cruz County are screened regularly for diabetes, compared with 76% of the Medicare diabetic population in California.[4] The diabetic screening rate is the percentage of diabetic Medicare patients whose blood sugar control was screened in the past year by testing their glycated hemoglobin (HbA1c) levels.[4]

The figures to the right compare the rates of hospitalizations in Santa Cruz County and statewide due to short-term and long-term diabetes complications, and rates of lower extremity amputation among diabetic patients.[5] In California five to eight percent increases in admission rates were seen across all three diabetic indicators; short-term complications or uncontrolled (5.0%), long-term complications (8.2%), and lower extremity amputation (4.9%).[5] In Santa Cruz County there was a large increase (57%) in the proportion of hospitalizations per 100,000 population due to short term diabetes complications or lack of control.[6] The proportion of hospital admissions for long term diabetes complications (2.4%) and diabetes related lower extremity amputations (15.3%) both decreased in Santa Cruz County during that same time period.

The costs for treating diabetes are rising: direct medical expenditures were estimated at $92 billion in 2002, compared with $44 billion in 1997.[7] In 2002, the breakdown for the costs included 44% inpatient hospital care, 15% nursing home care, and 11% physician office visits. Health care costs for people with diabetes are higher than for those without diabetes.[7] In 2002, medical expenditures totaled $13,243 for people with diabetes, compared to $2,560 for people without diabetes; that difference when age-adjusted is 2.4 times more for people with diabetes.[7]

Figure IIIBiii-1: Hospital Admissions for Diabetes - Short Term Complications / Uncontrolled per 100,000 Population, 1997-2003[6]

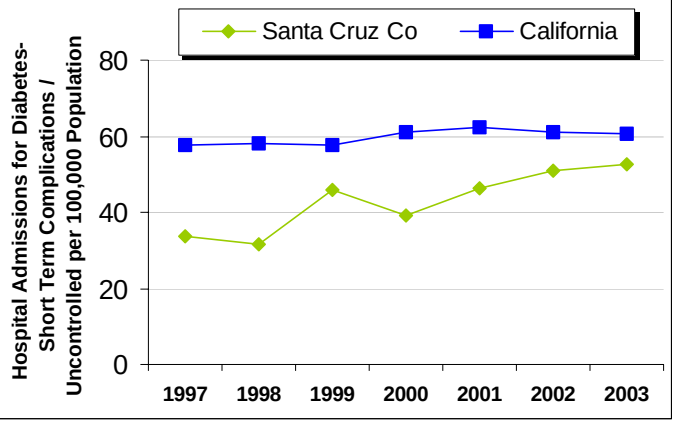


Figure IIIBiii-2: Hospital Admissions for Diabetes - Long Term per 100,000 Population, 1997-2003[6]

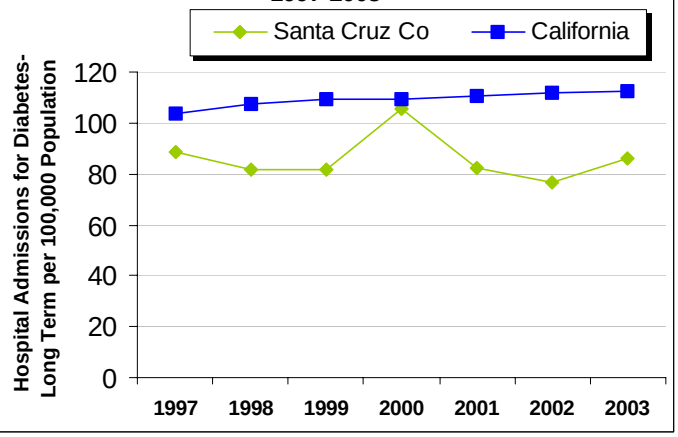


Figure IIIBiii-3: Hospital Admissions for Diabetes - Lower Extremity Amputations per 100,000 Population, 1997-2003[6]

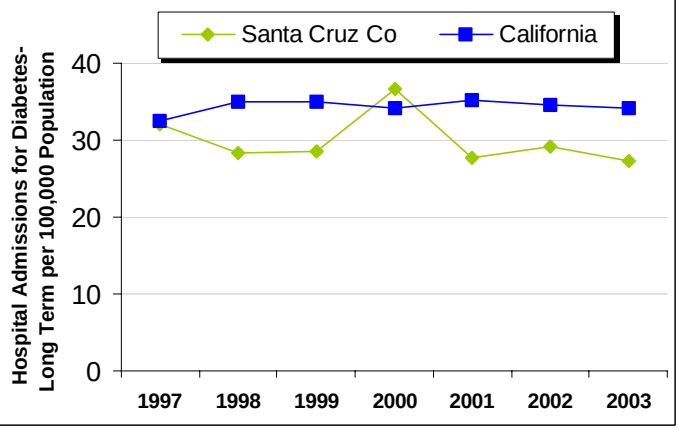


Figure IIIBiv-2: Hospice Use by Age, Santa Cruz County 2004 {10}

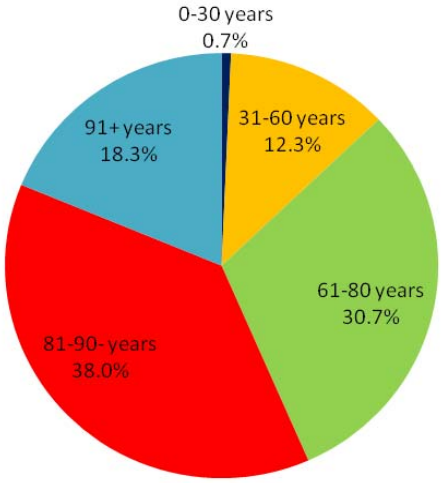
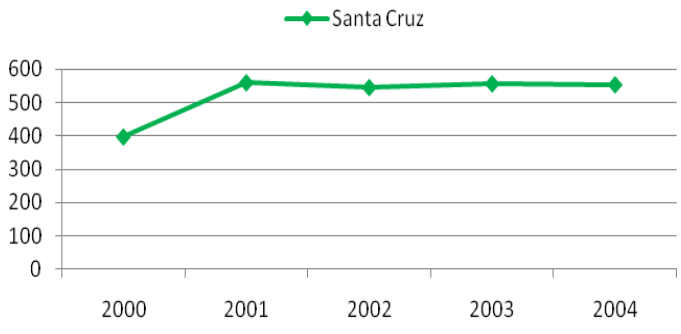


Figure IIIBiv-3: Patients of Hospice, Santa Cruz County 2000-2004 {10}



IV. HOSPICE USE

Thirty-six percent of terminally ill Medicare patients in Santa Cruz County were enrolled in hospice care during their last 6 months of life,[4] ranking Santa Cruz County fifth among all California counties; statewide, only 28% were enrolled in hospice. This significant difference may be one reason why Santa Cruz County health care costs are relatively low, according to the Dartmouth Atlas, despite one of the highest cost-of-living indexes in the country. Medicare remains the dominant payer source for hospice services in California. Between 2003 and 2007, United States Medicare expenditures for hospice increased by 79%, while California Medicare expenditures for hospice increased only 67%.[9]

As the population ages, the demand for long-term care will likely increase. The number of California residents age 65 and older is projected to triple from 2000 to 2050.[9] The use of hospice services in California increased by 27.1% just from 2003 to 2007.[9] The use of hospice services also increased in Santa Cruz County from 2000 to 2004.[9]

Persons in the age group 81 to 90 years (38.0%) were the largest users of hospice services in Santa Cruz County in 2004, and persons in the age group 61 to 80 years (30.7%) were the next largest users of hospice services.[10]

Primary Prevention Activities	▪ **Comprehensive Perinatal Services Program (CPSP):** Health care practitioners in the community provide prenatal care that also includes assessments, education, childbirth education classes, support, and referrals for other needed services. All pregnant Central Coast Alliance for Health members and pregnancy-only Medi-Cal recipients are eligible to receive CPSP services. ▪ **Pregnancy Outreach and Education (POE):** Program provides education, information, referrals, and coordination to assist pregnant women in obtaining early and comprehensive prenatal health care and other needed services. In particular, program assists pregnant women with substance use and/or mental health concerns.

Sources	1. Institute of Medicine. *Medicare: A Strategy for Quality Assurance, Volume I.* Washington, DC: The National Academy Press; 1990. 2. DATA2010...the Healthy People 2010 Database [Internet]. Atlanta (GA): Centers for Disease Control and Prevention; [modified Jan 2010; cited 2010 Apr 6]. http://wonder.cdc.gov/data2010/index.htm. 3. 2009 Birth Certificate Data (unpublished). County of Santa Cruz, Vital Statistics. 4. University of Wisconsin Population Health Institute. *County Health Rankings 2010*. http://www.countyhealthrankings.org/. 5. Parker, JP; Simon, V; Parham, C; Teague, J; and Li, Z; *Preventable Hospitalizations in California: Statewide and County Trends (1997-2003)*. 6. Office of Statewide Health Planning and Development. AHRQ – Prevention Quality Indicators (PQIs) Area-level for California. http://www.oshpd.ca.gov/HID/Products/PatDischargeData/ResearchReports/PrevntbleHosp/SantaCruz.pdf. 7. Hogan P, Dall T. "Economic costs of diabetes in the U.S. in 2002." *Diabetes Care*. 2003;26:917-932. 8. Caro JJ, Ward AJ, O'Brien JA. "Lifetime costs of complications resulting from type 2 diabetes in the U.S." *Diabetes Care*. 2002;25:476-481 (graph). 9. Medicare Home Health Agency Utilization, Calendar Year 2003-07. www.cms.hhs.gov/DataCompendium/16_2008_Data_Compendium.asp#TopOfPage. 10. OSHPD Annual Hospital Financial & Utilization Disclosure Reports (http://www.oshpd.ca.gov/HQAD/Hospital/financial/hospAF.htm) (http://www.oshpd.ca.gov/HQAD/Hospital/hosputil.htm)