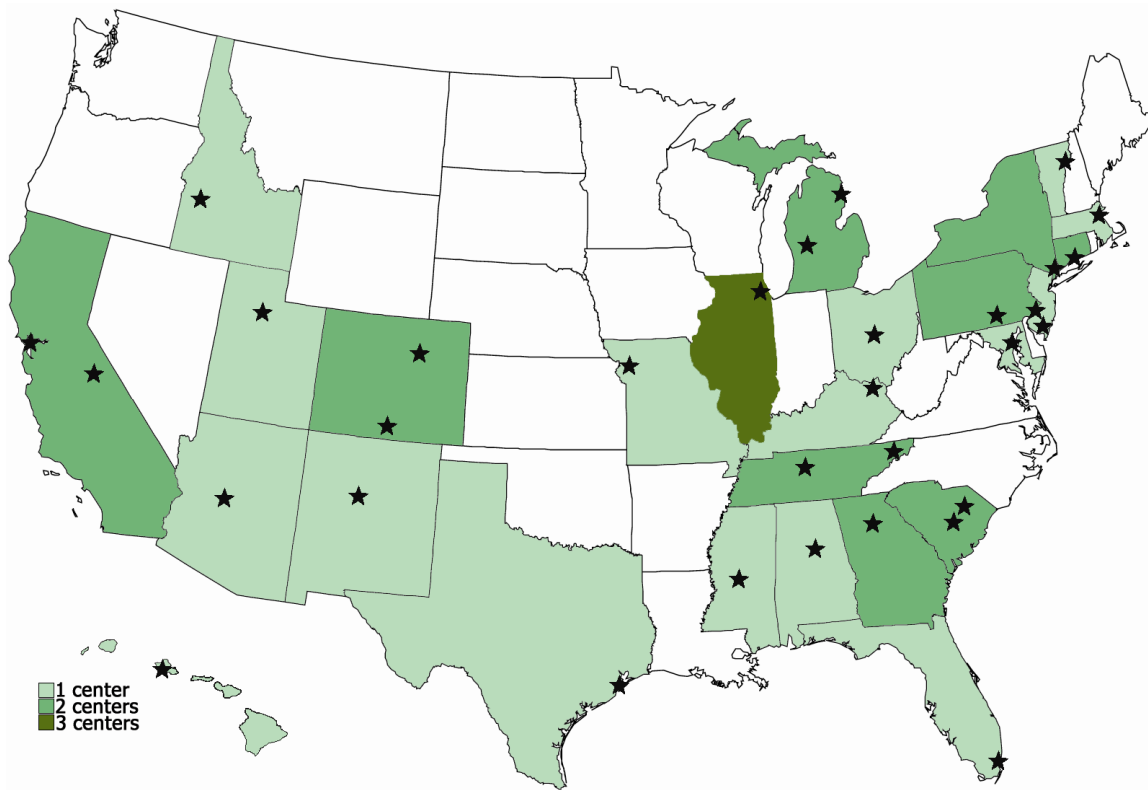




# Sentinel Centers Network

## 2005 Aggregate Report Executive Summary August 2007



Funding for the Sentinel Centers Network provided by:



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Center for Collaborative Research  
in Health Outcomes & Policy at  
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## **Executive Summary**

The Sentinel Centers Network (SCN) is a membership of 63 health centers and 1 additional health care delivery site (representing 38 health center organizations) located throughout the United States. Goals of the SCN include assessing the level and quality of care provided by health centers to their patient population. The SCN is funded by the Bureau of Primary Health Care (BPHC) at the Health Resources and Services Administration (HRSA), and conducted in partnership with the Michigan Public Health Institute (MPHI).

The SCN 2005 Aggregate Report summarizes the data submitted to the SCN by participating health centers for the 2005 calendar year. Each participating center received a similar individualized report that summarized the data for their particular health center. This report includes information related to the overall SCN patient and encounter volume, patient demographics, diagnosis groupings and selected health conditions, procedures and services provided, resource utilization, and selected screenings and diagnostic tests provided to patients.

Key findings from the SCN 2005 Aggregate Report include:

### **Patient & Encounter Volume**

- In 2005, there were a total of 1,571,606 patients who visited one of 64 SCN health center, averaging 24,556 patients per health center.
- SCN patients accounted for a total of 6,256,776 encounters during 2005, averaging 97,762 encounters per health center. This translated to an average of 4.0 encounters per patients.
- The SCN patient population accounted for 5,868,405 visits to participating centers during 2005, translating to an average of 91,694 visits per health center and 3.7 visits per patient.
- The month with the highest number of encounters and visits was March with 568,642 encounters and 534,734 visits, while July had the fewest encounters and visits at 463,012 and 433,061, respectively.

### **Provider Information**

- There were a total of 6,251 health care providers at SCN health centers in 2005. These providers had contact with an average of 497 patients per provider and accounted for an average of 987 encounters per provider.

### **Patient & Encounter Demographics**

- Stratifying patients by age showed that patients 18 to 44 years of age were the largest age group among SCN health centers at 37.8%, followed by patients 0 to 17 years (36.0%), 45 to 64 (18.8%), and 65 years or older (7.4%).
- Female patients outnumbered male patients (60.5% to 39.5%, respectively). Females also accounted for a higher percentage of the patient population when stratified by age and race/ethnicity.

- Hispanic patients accounted for the largest race/ethnicity group at 38.3%. Caucasian and African-American patients accounted for a similar proportion of health center patients at 23.7% and 23.0%, respectively.
- Patients with incomes less than 100% FPL were nearly 4 times more common than patients with incomes between 100% and 200% FPL. However, income levels were unknown for 60.8% of patients.
- In the payment source category, 35.3% of the SCN patients were uninsured, followed by patients with Medicaid (31.4%) and patients with other government programs (13.6%).
- Investigation of demographic characteristics by encounters showed similar demographic patterns as the patient demographics, but with slightly different proportions. For example, females accounted for 60.5% of the patient population but accounted for 64.6% of encounters.

### **Overview of Health Conditions**

- Based on the major ICD-9 groupings, it was found that the majority (54.6%) of health center patients received a diagnosis related to routine and preventive care. The next most common diagnoses were related to the respiratory system (25.5%) and ill-defined conditions (23.2%).
- Comparison of the average number of encounters within each of the major ICD-9 groupings showed that Endocrine, Metabolic, and Immunity category accounted for the highest average number of encounters at 6.4 encounters per patient in 2005.
- Categorizing patients into diagnosis categories that are consistent with those listed within the Uniform Data Set (UDS) found that hypertension was the most prevalent UDS health condition accounting for 12.5% of patients, followed by diabetes mellitus (7.2%) and Otitis Media and Eustachian Tube Disorders (5.0%).
- Patients with symptomatic and asymptomatic HIV had the highest average number of encounters (11.6 and 11.5, respectively) compared to other UDS identified health conditions, followed by other substance related disorders (9.6) and diabetes mellitus (8.5).

### **Chronic Health Conditions**

- Among the 1,571,606 patients identified within the SCN in 2005, 637,500 (or 40.6%) had at least one chronic health condition.
- The most common chronic health condition found among SCN patients was Hypertension (12.5% of all patients), followed by Disorders of lipid metabolism (7.3%) and Diabetes mellitus without complication (6.0%) -- 2.7% of patients had a diagnosis of diabetes with complications and 1.4% had a diagnosis of both sometime during the year.
- Among the 637,500 SCN patients with at least one chronic condition, nearly half (48.3%) had a second (or co-morbid) chronic condition. This translates to an overall co-morbidity rate among all SCN patients of 19.6%.
- The average number of encounters for patients with a chronic condition was 5.7, slightly more than twice the average number of encounters for patients without a chronic condition (2.8).

## **Selected Health Conditions**

- There were a total of 113,543 (or 7.2%) patients with at least one visit to an SCN health center in 2005 in which a diabetes related ICD-9 code was assigned, averaging 8.5 encounters per diabetic patient. The diabetes rate increased steadily with age from 0.3% among patients less than 18 years of age to 24.6% among those 65 years and older.
- There were a total of 196,281 (or 12.5%) patients with at least one visit to SCN health centers in 2005 in which a hypertension related ICD-9 code was assigned, averaging 5.3 encounters per hypertensive patient. The hypertension rate sharply increased with age from 0.3% among patients less than 18 years to 48.5% among patients 65 years or older.
- There were a total of 35,519 (or 2.3%) patients with at least one visit to an SCN health center in 2005 in which a heart disease related ICD-9 code was assigned, averaging 5.3 encounters per patient with heart disease. The highest heart disease rates were found among patients 65 years of age and older (14.3%) and Medicare patients (13.5%).
- There were a total of 66,890 (or 4.3%) patients with at least one visit to SCN health centers in 2005 in which an asthma related ICD-9 code was assigned, averaging 3.7 encounters per asthmatic patient. The highest asthma rates within the various demographic categories were found among patients on Medicaid (5.9%), patients less than 18 years of age (5.8%), and patients classified as African-American (5.8%).
- There were a total of 67,840 (or 4.3%) patients with at least one visit to SCN health centers in 2005 in which a depression (including other mood disorders) related ICD-9 code was assigned, averaging 3.9 encounters per patient with depression. Patients between the ages of 45 and 64 years demonstrated the highest depression rate at 8.4%. Patients classified as White (7.7%) and patients with Medicare (7.6%) were also found to have depression rates well above the overall average of 4.3%. Females showed depression rates 60% higher than males.
- There were a total of 6,637 (or 0.42%) patients with at least one visit to SCN health centers in 2005 in which an HIV (symptomatic or asymptomatic) related ICD-9 code was assigned, averaging 13.6 encounters per HIV patient. The highest HIV rate within demographic categories was found for patients over 200% poverty level (1.0%). Patients between the ages of 45 and 64 years and African-Americans also had high HIV rates at 0.9%..

## **Services & Procedures**

- Of the nearly 12.2 million procedures and services performed at SCN centers during 2005, management and evaluation related procedures accounted for the most frequently performed procedures at 38.9%, pathology and lab procedures were the second most frequently performed procedures accounting for 23.1% of all procedures..
- The number of procedures performed at SCN health centers averaged 7.8 procedures and/or services per patient in 2005. Patients received an average of 3 management and evaluation procedures during 2005, plus an additional 1.8 pathology and lab related procedures.

## **Profile of Evaluation & Management**

- Evaluation and management codes for new patients (CPT codes: 99201 to 99205) accounted for 321,800 ( 2.6%) of the 12,197,767 procedures performed during 2005. Of

these, physicians accounted for 57.9%, while nurse practitioners/physician assistants accounted for 23.5%.

- Evaluation and management codes for established patients (CPT codes: 99211 to 99215) accounted for 3,412,613 (28.0%) of the 12,197,767 procedures performed at SCN health centers in 2005. Of these, physicians accounted for 61.4%, while nurse practitioners/physician assistants accounted for 24.5%.

### **Measure of Resource Utilization**

- Resource utilization was determined by assigning dollar amounts to each service and procedure performed by participating centers by using the Medicare Physicians Fee Schedule (MPFS). According to this methodology, the total standardized dollar amount resulting from all services and procedures provided by all 64 sentinel centers for 2005 was \$358,021,706. This translates to an average value of \$228 per patient, and \$57 per encounter.
- Procedures and services related to routine and preventive care had the highest cost utilization at \$127,797,350, more than 3 times higher than the next major ICD-9 grouping.
- Procedures and services related to the UDS diagnosis categories added up to \$113,417,040 or 31.7% of the total standardized dollar amount. Among the selected UDS health conditions, hypertension and diabetes accounted for the highest percentage of total cost utilization at 8.3% and 6.6%, respectively.
- The average standardized cost for treating patients increased steadily with age from \$191 per patient for patients less than 18 years to \$292 for patients 65 years or older.

### **Selected Screenings & Other Services**

- Among the 30 participating health centers identified as providing HIV tests, 20,624 patients or 1.9% of the patient population received an HIV test. Young adults (18 to 44 years) showed the highest HIV testing rate at 4.0% compared to all other demographic categories.
- Of the 39 health centers identified as providing mammograms, a total of 23,434 mammograms were performed to their overall female patient population of 754,196. Among the 211,408 women 40 to 69 years of age, 15,199 received mammograms, accounting for 7.2%.
- Sixty-two SCN health centers were identified as performing Pap smears in 2005. Of these centers, a total of 165,447 Pap smears were performed on 149,908 women. Among women aged 18 to 64, 151,641 Pap smears were performed on 137,016 (24.0%) different women.
- Sixty-one SCN health centers provided a total of 151,247 contraceptive management consultations or services to 84,508 different women (or 9.2% of the total female patient population of these 61 centers) in 2005. Among women 18 to 44, 124,270 contraceptive management consultations or services were provided, accounting for 17.7% of the 394,522 women within this age range.
- In 2005, 62 SCN health centers performed 427,071 routine infant and child checkups performed on 268,364 children less than 18 years of age. Among children 2 years of age or younger, there were 247,167 routine infant and child checkups performed on 111,082

children within this age range. Overall, 76.4% of children 2 years of age or younger were seen for a routine infant or child care checkup.

- Sixty-two SCN health centers were identified as providing at least one selected childhood immunizations (as defined in HEDIS, 2007) to 353,769 patients less than 18 years of age, totaling 733,866 immunizations in 2005. Among children 5 years of age or younger, 395,823 selected childhood immunizations were administered to 178,434 children, translating to 72.0% of children within this age range receiving at least one immunization at SCN health centers in 2005.

### **Selected Indicators of Quality & Health Care**

- There were 42 SCN health centers that were identified as performing an HbA1c test in 2005. Within these centers, there were 38,139 out of 81,912 (or 46.6%) diabetic patients who received an HbA1c test in 2005. HbA1c testing ranged from a high of 94.6% to a low of 1.4% within these 42 centers.
- Thirty-five SCN health centers were identified as performing an LDL-C test in 2005. Within these centers, there were a total of 22,203 out of 72,855 (or 30.5%) patients with diabetes who received an LDL-C test. The overall LDL-C testing rate for diabetic patients within these center ranged from a high of 75.0% to a low of 1.1%.