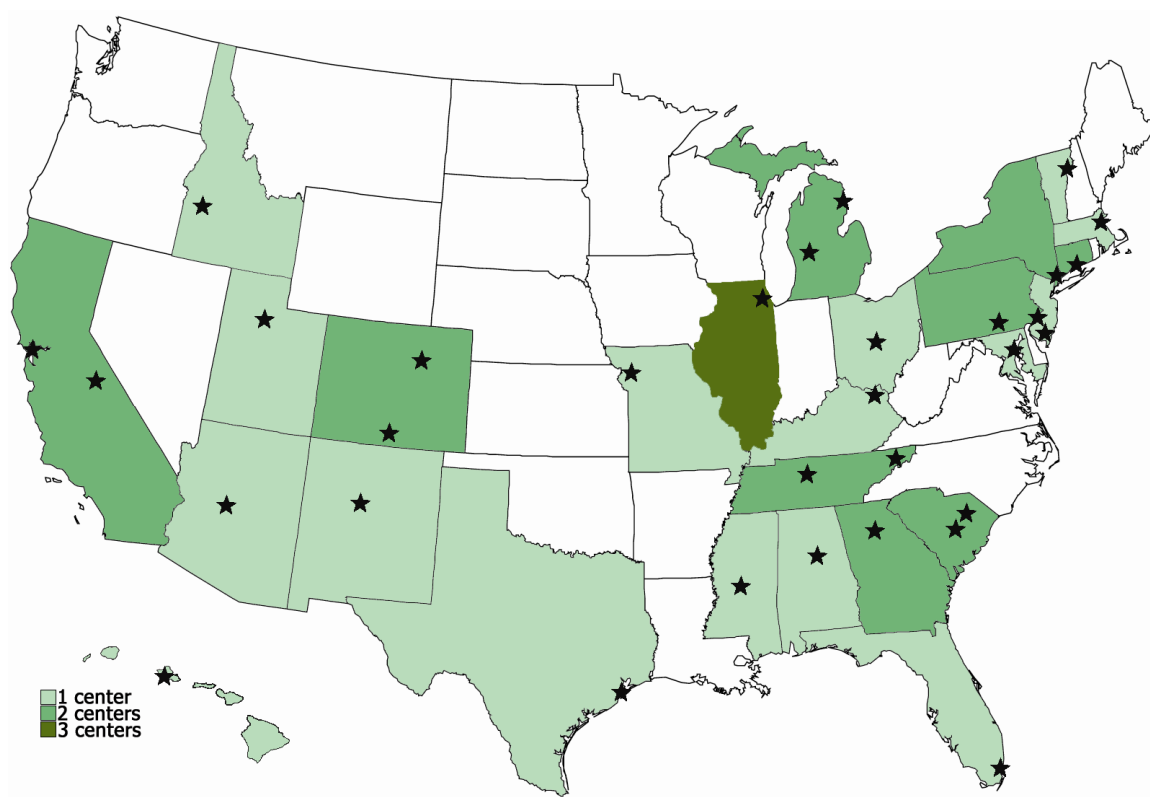




# Sentinel Centers Network 2004 Aggregate Report Executive Summary February 2007



Funding for the Sentinel Centers Network provided by:



U. S. Department of Health and Human Services  
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Prepared by:  
The logo for the Center for Collaborative Research in Health Outcomes & Policy (CRHOP), featuring the letters "CRHOP" in a bold, blue, sans-serif font with a small graphic element to the left.

Center for Collaborative Research  
in Health Outcomes & Policy at  
Michigan Public Health Institute



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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 2004 Aggregate Report summarizes the data submitted to the SCN by participating health centers for the 2004 calendar year. Each participating center received a similar 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. Upon completion of this report, an SCN 2004 supplemental report will be developed that includes additional exploratory analyses.

Key findings from the SCN 2004 Aggregate Report include:

### **Patient & Encounter Volume**

- There were a total of 1,428,651 patients within the SCN health centers in 2004, averaging 23,043 patients per health center. These patients accounted for a total of 5,562,028 encounters with an average of 4.0 encounters per patient.

### **Provider Information**

- There were a total of 5,464 health care providers at SCN health centers in 2004. These providers had contact with an averaged 492 patients per provider and accounted for an average 1,000 encounters.

### **Patient & Encounter Demographics**

- Stratifying patients by age showed that the patients 18 to 44 years of age were the most common age group among SCN health centers at 38.0%, followed by patients 0 to 17 years (36.1%), 45 to 64 (18.2%), and 65 years or older (7.7%).
- Female patients outnumbered male patients (60.5% to 39.5%, respectively). Females also accounted for a higher percentage of the patient population when stratifying for age and race/ethnicity.
- Hispanic patients accounted for the most common race/ethnicity group at 37.9%. Caucasian and African-American patients accounted for a similar proportion of health center patients at 23.9% and 23.3%, 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 57.6% of patients.

- Patients that were uninsured (33.9%) accounted for the higher payment source category followed by patients with Medicaid (30.5%). Patients with private insurance accounted for 13.8%.
- 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**

- Investigation of the major ICD-9 groupings found that the majority (55.1%) of health center patients received a diagnosis related to routine and preventive care. The next most common diagnoses related to the respiratory system (23.6%) and ill-defined conditions (22.9%).
- 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 6.6 encounters per patient in 2004.
- 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 12.1% of patients, followed by diabetes mellitus (6.7%) and Otitis Media and Eustachian Tube Disorders (4.7%).
- Patients with symptomatic and asymptomatic HIV had the highest average number of encounters (12.2 and 11.1 respectively) compared to other UDS identified health conditions, followed by other substance related disorders (9.6) and diabetes mellitus (9.1).

### **Chronic Health Conditions**

- There were a total of 95,751 (or 6.7%) patients with at least one visit to an SCN health center in 2004 in which a diabetes related ICD-9 code was assigned, averaging 9.1 encounters per diabetic patient. The diabetes rate increased steadily with age from a low 0.2% among patients less than 18 years of age to a high of 21.1% among those 65 years and older.
- There were a total of 173,050 (or 12.1%) patients with at least one visit to SCN health centers in 2004 in which a hypertension related ICD-9 code was assigned, averaging 5.6 encounters per hypertensive patient. The hypertension rate sharply increased with age from a low of 0.2% among patients less than 18 years of age to a high of 44.2% among patients 65 years or older.
- There were a total of 33,216 (or 2.3%) patients with at least one visit to SCN health centers in 2004 in which a heart disease related ICD-9 code was assigned, averaging 5.5 encounters per patient with heart disease. The highest heart disease rates were found among patients 65 years of age and older (13.8%) and Medicare patients (13.4%).
- There were a total of 59,898 (or 4.2%) patients with at least one visit to SCN health centers in 2004 in which an asthma related ICD-9 code was assigned, averaging 3.9 encounters per asthmatic patient. The highest asthma rates within the various demographic categories were found among patients classified as

African-American (5.9%), patients with Medicaid (5.8%) and patients less than 18 years of age (5.6%).

- There were a total of 65,969 (or 4.6%) patients with at least one visit to SCN health centers in 2004 in which a depression (including other mood disorders) related ICD-9 code was assigned, averaging 4.0 encounters per patient with depression. Patients between the ages of 45 and 64 years demonstrated the highest depression rates at 9.0%. Patients classified as white (8.1%) and patients with Medicare (7.7%) were also found to have depression rates well above the overall average of 4.6%. Females showed depression rates two-thirds higher than males.
- There were a total of 6,327 (or 0.4%) patients with at least one visit to SCN health centers in 2004 in which an HIV (symptomatic or asymptomatic) related ICD-9 code was assigned, averaging 13.9 encounters per HIV patient. The highest HIV rate within demographic categories was found for patients over 200% poverty (1.5%). African-Americans (1.0%), patients between the ages of 45 and 64 years (0.8%), and patients with other government insurance (0.8%) also had high HIV rates.

### **Services & Procedures**

- Overall, management and evaluation related procedures accounted for the most frequently performed procedures at nearly 40%, pathology and lab procedures were the second most frequently performed procedures at nearly 25%.
- The number of procedures performed at SCN health centers averaged 7.6 procedures and/or services per patient in 2004. Patients received an average of 3 management and evaluation procedures during 2004, plus an additional 2 pathology and lab related procedures.

### **Profile of Evaluation & Management**

- Evaluation and management codes for new patients (CPT codes: 99201 to 99205) accounted for 296,702 (2.8%) of the 10,696,396 procedures performed during 2004. Of these, physicians accounted for 54.0%, while nurse practitioners/physician assistants accounted for 19.6%.
- Evaluation and management codes for established patients (CPT codes: 99211 to 99215) accounted for 2,989,634 (27.9%) of the 10,696,396 procedures performed at SCN health centers in 2004. Of these, physicians accounted for 58.7%, while nurse practitioners/physician assistants accounted for 21.4%.

### **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 the 60 represented health centers for 2004 was \$319,226,979. This translates to an average value of \$228 per patient, and \$58 per encounter.
- The standardized dollar amounts associated with providing services and procedures within each of the major ICD-9 diagnosis categories. Procedures and

services related to routine and preventive care had the highest cost utilization at more than 3 times higher than the next major ICD-9 grouping.

- The average standardized cost for treating patients increased steadily with age from \$161 for patients less than 18 years of age to \$264 per patient 65 years of age or older.

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

- Among the 30 participating health centers identified as providing HIV tests, there were a total of 18,864 patients who received an HIV test, translating to 1.9% of the patient population. Young adults (18 to 44 years of age) showed the highest HIV testing rate at 3.9% compared to all other demographic categories.
- Of the 36 health centers identified as providing mammograms, a total of 15,934 mammograms were performed to their overall female patient population of 847,829. Among the 180,124 women 40 to 69 years of age, 11,638 received mammograms, accounting for 6.5%.
- Fifty-nine SCN health centers were identified as performing Pap smears in 2004. Of these centers, a total of 153,825 Pap smears were performed on 141,582 women. Among women aged 18 to 64, 138,221 Pap smears were performed on 127,095 (24.5%) different women.
- Fifty-seven SCN health centers provided a total of 146,668 contraceptive management consultations or services to 80,815 different women (or 9.5% of the total female patient population) in 2004. Among women 18 to 44, 117,612 contraceptive management consultations or services were provided, accounting for 17.9% of the 362,098 women within this age range.
- In 2004, 58 SCN health centers had 405,324 routine infant and child checkups performed on 260,398 children less than 18 years of age. Among children 2 years of age or younger, there were 226,126 (or 55.8% of all such visits) performed on 104,395 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.
- Fifty-four SCN health centers were identified as providing selected childhood immunizations (as defined in HEDIS, 2000) to a total of 96,311 patients receiving 143,116 selected childhood immunizations in 2004. Among children 5 years of age or younger, 116,131 of these immunizations were administered to 73,703 children, translating to 32.8% of children within this age range receiving at least one immunization at SCN health centers in 2004.

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

- There were 39 SCN health centers that were identified as performing an HbA1c test in 2004. Within these centers, there were a total of 32,342 of 67,819 (or 47.7%) diabetic patients who received an HbA1c test in 2004. HbA1c testing ranged from a high of 90.6% to a low of 0.7% within these 39 health centers.
- Thirty-two SCN health centers were identified as performing an LDL-C test in 2004. Within these centers, there were a total of 19,919 out of 60,955 (or 32.7%) patients with diabetes who received an LDL-C test. The overall LDL-C testing rate for diabetic patients within these 32 health center ranged from a high of 76.9% to a low of 0.3%.