

Preventing Hospitalizations in New York City

Fifteen percent of adult hospitalizations in New York City are for conditions that might have been effectively managed on an outpatient basis.* The appropriate use of inhaled corticosteroids, for example, can help asthma patients manage disease without hospitalization.† Similarly, diabetes patients can often avoid hospitalization through appropriate diet, exercise, medication, education and monitoring.‡

Hospitalizations that could potentially be prevented with quality outpatient care are known as ambulatory care-sensitive (ACS) hospitalizations. The Agency for Healthcare Research and Quality (AHRQ) has identified specific ACS conditions for which good clinical preventive services could reduce the need for hospitalization.

Take Care New York, the City's policy for improving the health of New Yorkers, uses ACS hospitalization rates to measure progress toward its goal of promoting quality health care for all. This report examines ACS hospitalization rates and trends among New York City adults. Recommendations on page four suggest opportunities for patients, providers, payors and policymakers to reduce ACS hospitalizations.

* Derived by applying AHRQ Prevention Quality Indicators to New York City SPARCS data (2007).

† Reddy M, Goodman A, Davis L. Managing asthma. *City Health Information*. 2008; 27(10):79-90.

‡ Wang J, Imai K, Engelau MM, et al. Secular trends in diabetes-related preventable hospitalizations in the United States, 1998-2006. *Diabetes Care*. 2009; 32:1213-1217.

Selected Ambulatory Care-Sensitive Hospitalization Indicators

Diabetes: Short-term complications, long-term complications, uncontrolled, lower extremity amputation

Circulatory: Hypertension, congestive heart failure, angina without a procedure

Respiratory: Adult asthma, chronic obstructive pulmonary disease

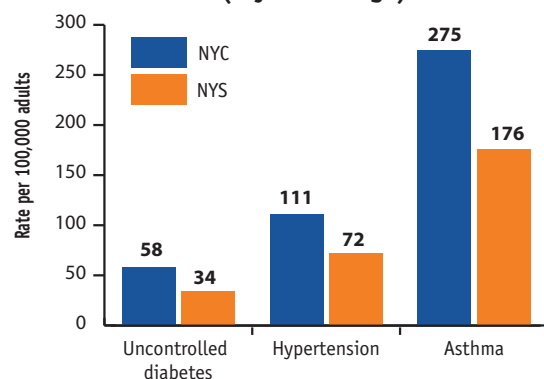
Acute: Dehydration, bacterial pneumonia, urinary tract infection

Source: Agency for Healthcare Research and Quality <http://www.qualityindicators.ahrq.gov/>

New York City has high rates of ACS hospitalizations

- New York City's ACS hospitalization rate is higher than the state's rate (which includes New York City) (1,828 vs. 1,563 per 100,000).
- The city's rates for certain ACS hospitalizations are markedly higher than the state's: uncontrolled diabetes (58 vs. 34 per 100,000), hypertension (111 vs. 72 per 100,000) and asthma (275 vs. 176 per 100,000).

Ambulatory care-sensitive hospitalization rates for selected conditions – NYC and NYS 2008-09 (2 year average)



Source: https://apps.nyhealth.gov/statistics/prevention/quality_indicators/start.map. Rates adjusted by NYS for age and sex.

Data Sources: New York City data are from the New York State Department of Health's Statewide Planning and Research Cooperative System (SPARCS), March 2009 update file health.ny.gov/statistics/sparcs, unless otherwise noted. AHRQ Version 4.2 Prevention Quality Indicators and composite measure were used: qualityindicators.ahrq.gov. Hospitalization data exclude obstetric hospitalizations, as well as transfers from other hospitals and facilities. NYC population estimates were created by the Bureau of Epidemiology Services using unchallenged population estimates from the US Census Bureau. Analyses were limited to adult residents of New York City and rates were age-adjusted to the Year 2000 Standard Population unless indicated. Neighborhood poverty (based on UHF neighborhood) defined as percent of residents with incomes below 100% of the Federal Poverty Level, per Census 2000. All rates and percents are rounded to the nearest whole number.

ACS hospitalizations are a significant financial burden in New York City

Ambulatory care-sensitive hospitalizations, 2007

Five most common ACS hospitalizations	#	% of all ACS	Charges (millions)*	% of all ACS charges
Congestive heart failure	25,896	22%	\$809	26%
Bacterial pneumonia	18,132	15%	\$533	17%
Asthma	16,647	14%	\$277	9%
Diabetes, long-term complications [^]	13,411	11%	\$416	13%
Urinary tract infection	12,244	10%	\$290	9%
Total for 5 most common	86,330	72%	\$2,325	75%
All ACS Hospitalizations	120,277		\$3,086	

* Charges represent the amount of the hospital bill rather than the actual cost of providing the care or the amount received in payment.

[^] Long-term complications of diabetes include renal, eye, neurological and circulatory disorders. Lower extremity amputation is included in a separate category.

Source: SPARCS 2007

- ACS hospitalizations account for more than 12% of hospital inpatient charges, totaling more than \$3 billion in 2007.
- The five most common ACS hospitalizations account for 72% of all ACS hospitalizations and 75% of the total charges for ACS hospitalizations.
- Congestive heart failure accounts for one fifth of ACS hospitalizations and more than one quarter of associated charges.
- The government pays for all or part of 83% of ACS hospitalizations through Medicare, Medicaid or both.

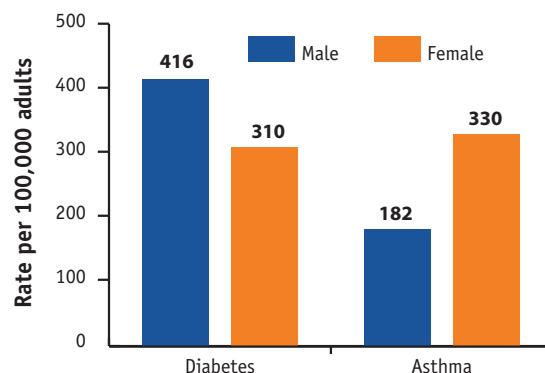
Accountable Care Organizations: Recent health care reform legislation provides financial incentives to encourage the development of accountable care organizations (ACOs) – groups of health care providers that work together to give coordinated high quality care to enrollees across care settings. Medicare ACOs that reduce costs while meeting specific quality goals will share in the savings. One way to reduce costs and improve quality is to provide coordinated ambulatory care that reduces hospitalizations. Some ACO-like organizations have already demonstrated success with such initiatives. For example, Community Care of North Carolina adopted asthma control as an improvement goal and implemented measures such as use of claims data to identify high risk patients, use of shared case management services across practices, and 24 hour on-call access. After five years, the rate of asthma hospitalizations declined 34%.*

* Steiner BD, Denham AC, Ashkin E, et al. Community Care of North Carolina: improving care through community health networks. *Annals of Family Medicine*. 2008; 6(4):361-367. Davis K, Schoenbaum SC. Toward high-performance accountable care: promise and pitfalls. *The Commonwealth Fund* (2010). http://www.commonwealthfund.org/~media/Files/Publications/Blog/Davis_Schoenbaum_ACO_blog_9142010.pdf

ACS hospitalization rates vary by age and sex

- Adults 65 years of age and older account for 40% of all hospitalizations but 53% of ACS hospitalizations.
- Although overall ACS hospitalization rates are similar for men and women, rates for specific conditions differ by sex. Men, for instance, have 34% higher rates of diabetes-related ACS hospitalizations, while women have 81% higher rates of adult asthma ACS hospitalizations.

Ambulatory care-sensitive hospitalization rates for selected conditions by sex, 2007



Source: SPARCS 2007

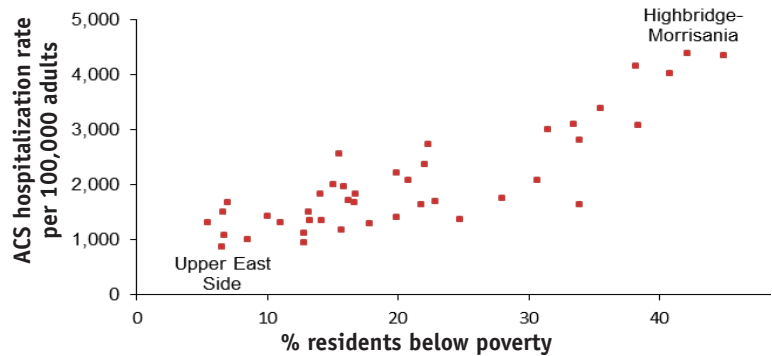
Approximately 17,000 New Yorkers had multiple ACS hospitalizations in 2007

One in five (19%) adults with an ACS hospitalization in 2007 had one or more additional ACS hospitalizations that year, accounting for 39% of ACS hospitalizations.

High-poverty neighborhoods generally have higher ACS hospitalization rates

- Higher neighborhood poverty is associated with higher rates of ACS hospitalizations. Compared with low poverty neighborhoods (less than 10% residents living below the federal poverty level), very high poverty neighborhoods (30% or more residents in poverty) have:
 - More than twice the rate of ACS hospitalizations (3,163 vs. 1,215 per 100,000)
 - More than three times the rate of respiratory (773 vs. 214 per 100,000) and diabetes-related (670 vs. 181 per 100,000) ACS hospitalizations
 - More than six times the rate of uncontrolled diabetes (136 vs. 22 per 100,000) and adult asthma (581 vs. 97 per 100,000) ACS hospitalizations

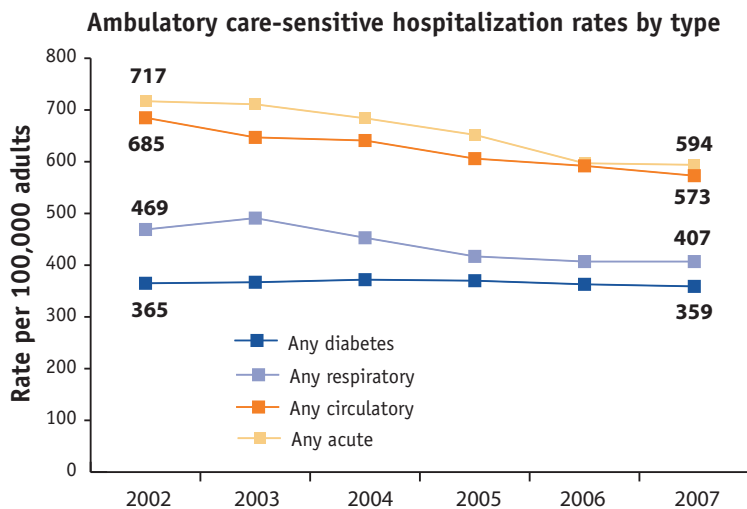
Ambulatory care-sensitive hospitalization rates by neighborhood poverty, 2007



Source: SPARCS 2007; Census 2000

- ACS hospitalization rates in the three neighborhoods with the highest poverty levels (Highbridge-Morrisania, Hunts Point-Mott Haven and Crotona-Tremont, all in the Bronx) are more than four times higher than in the neighborhood with the lowest ACS hospitalization rate (Upper East Side in Manhattan). The Upper East Side has one of the lowest poverty levels in the city.

New York City ACS hospitalizations declined 16% from 2002 to 2008



Source: SPARCS 2002-2006, August 2007 update; SPARCS 2007, March 2009 update.

- The overall adult ACS hospitalization rate dropped each year from 2002 through 2008, for a total decrease of 16% (2,234 to 1,886 per 100,000).
- From 2002 to 2007+, ACS hospitalizations for acute, circulatory and respiratory conditions decreased 17%, 16% and 13%, respectively. The diabetes-related rate, however, declined only 2%.
- The Take Care New York goal to reduce ACS hospitalizations to 1,650 per 100,000 adults by 2012 will require a further reduction of 13% from 2008 rates. Such improvement could reduce annual hospital charges by hundreds of millions of dollars.

* Although the 2008 overall rate is available, the most recent condition-specific rates available are for 2007.

Recommendations

All New Yorkers should:

- Obtain all provider-recommended preventive and chronic care, including testing and treatment for high blood pressure, heart disease, diabetes and asthma. For information on how to find a health care provider, visit <http://www.nyc.gov/html/doh/downloads/pdf/public/dohmhnews3-10.pdf>. For information on obtaining health insurance, call 311 or visit www.nyc.gov/hilink.

Health care systems and providers should:

- Use guidelines and best practices for identification and outpatient management of chronic conditions. For Health Department publications on topics such as medication adherence and management of diabetes, hypertension and asthma, visit www.nyc.gov/health/chi.
- Use electronic health records, registries and outreach to ensure that all patients receive appropriate preventive, primary and chronic care and minimize loss to follow-up. For information on electronic health records, visit <http://www.nycreach.org>. For information on using panel management to improve patient care, visit www.nyc.gov/html/doh/downloads/pdf/chi/chi30-2.pdf.
- Be a Patient-Centered Medical Home by coordinating your patients' care across the health care system. For more information, visit <http://www.nyc.gov/pcip>.
- Support New York State's all-payor database (containing all health care claims state-wide) in order to identify missed opportunities and best practices to reduce ACS hospitalizations.

Payors and health care plans should:

- Encourage consistent use of recommended preventive and chronic care services by incorporating effective incentives for members and providers.
- Promote better coordination and management of care by restructuring reimbursement to emphasize primary care, including preventive and chronic care services.
- Support research and interventions to reduce ACS hospitalizations (for example, payment reform and innovative care models).
- Promote better systems for data exchange among providers to both identify gaps in care and reduce duplicative care.

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