

# Delaware

## Community Assessment Factbook

### Executive Summary

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DaimlerChrysler and the International Union, United Auto Workers (UAW) launched a Community Health Initiative in Delaware to encourage continued improvement in the state's health care delivery system. The initiative seeks to ensure appropriate high quality care, promote healthy lifestyles, prevent disease and reduce health care costs through the efficient and appropriate delivery of services.

This is a summary of a comprehensive Factbook which reports the results of a community assessment. Findings are organized by health status, health resources and service utilization, quality and costs.

Key findings from the assessment include:

- Delaware is rich in data and leadership to address health care concerns within the community;  
High cancer and chronic disease prevalence and mortality in Delaware influence the demand for services;  
Delaware residents have higher hospital admissions for some chronic diseases and cancer;
- Higher inpatient admissions for several ambulatory sensitive conditions (e.g., diabetes, pediatric asthma) and higher admissions for some invasive procedures may reflect a hospital-centered system of care;
- Hospital and physician-based resources appear adequate to meet current demand within the community, except in some specialty areas, such as dentistry; and
- Many Delaware residents are using preventive health care screenings, such as mammograms, appropriately; however, patient education for those with chronic disease could improve.

#### Purpose of the Assessment

The findings outlined in the Factbook represent one part of an overall assessment process. The

health initiative includes gathering information from community leaders and health care providers, as well as reviewing previous and ongoing assessments done by the community. The assessment reflects the experience of the entire community, not just that of auto industry employees.

Information from these sources is used in combination with findings from the Factbook to facilitate the "action planning phase" of the initiative. Rather than providing conclusive recommendations regarding what or how the community should change, the Factbook aims to:

- provide a common understanding of local population needs and health care resources;
- compare performance of the current health care delivery system in Delaware to other communities and national standards;
- identify gaps between needs and resources and target opportunities for feasible change;
- provide a "fact base" to facilitate community-level action planning and priority setting.

#### Methodology

The experience and performance of Delaware was compared against a wide range of "benchmarks". Benchmarks serve as reference points against which the community can assess its performance and identify opportunities for improvement. Delaware benchmarks include:

- norms, such as national averages;
- neighboring states of Maryland, New Jersey and Pennsylvania, as well as other areas that provide both similarities and contrasts to Delaware, including Washington State; Seattle, WA; San Joaquin, CA; and Wichita, KS;
- industry standards and consensus-based standards, such as Healthy People 2000 objectives.

## Overview of Key Findings

Delaware has several assets on which to build:

- Residents have a healthy social and economic environment. The demographic profile of Delaware residents is comparable to other communities, while the socioeconomic status of residents is favorable.
- Health care resources in Delaware appear to match current demand within the community. Delaware has an adequate supply of inpatient beds. The physician supply in Delaware is comparable to the U.S.
- Delaware residents seek screening and prevention services, including pap smears, mammograms, blood pressure screenings and prenatal care, more often than residents in comparison communities.

Delaware could improve health status and service delivery in several areas:

- The prevalence and mortality rates for several health care indicators are higher in Delaware than in other communities, including cancer, heart disease and diabetes. Rates of sexually transmitted diseases, teen pregnancy and infant mortality are also higher.
- The supply of dentists in Delaware is inadequate. Despite a growing demand, Delaware has 23 percent fewer dentists than recommended by the industry standard.

### Health status:

- Favorable demographic and socioeconomic profile: lower risk from social determinants of health
- Poorer performance on most disease-related indicators: high rates of disease prevalence and mortality related to cancer, heart disease and diabetes

### Health care resources and utilization:

- Appropriate staffed bed capacity in hospitals
- Slightly fewer physicians per 100,000 persons relative to benchmarks and fewer dentists
- Higher utilization of inpatient care, comparable inpatient charges and slightly lower estimated costs

### Quality of care indicators:

- Favorable use of preventive health services
- Less favorable in invasiveness and setting and timeliness of diagnosis and treatment
- Room for improvement in patient education (diabetes, asthma and heart disease)

- Inpatient utilization, including admissions and total days, is slightly higher in Delaware than in other communities. Delaware residents use inpatient services more often for circulatory conditions, respiratory disorders and mental health treatments. Inpatient charges in Delaware hospitals are comparable to other communities, while costs are slightly lower.<sup>1</sup>

- High utilization of some hospital services suggests that care is not always provided in the most appropriate setting or with the least invasive technologies. Delaware has high inpatient admissions for several ambulatory sensitive conditions<sup>2</sup> (e.g., diabetes, pediatric asthma) that may be more appropriately treated in outpatient settings. In addition, Delaware residents more commonly utilized some invasive surgical procedures relative to other communities, including cardiac catheterization, back surgery and gall bladder surgery.

- Based on a mail survey of Delaware residents, patient education for diabetes, asthma and heart disease could improve.
- Three disease categories appear to pose particular areas of concern for Delaware. The state performs less favorably on a number of indicators specific to respiratory disease, cardiovascular disease and mental health.

<sup>1</sup> Average charge data is based on data from the Delaware Health Statistics Center and hospital discharge data from the benchmark communities. It reflects the amount charged per inpatient stay, regardless of the payor or hospital.

<sup>2</sup> An ambulatory care sensitive condition is defined as a condition where timely and appropriate outpatient treatment would reduce the risk of inpatient hospitalization for common health problems, such as asthma and diabetes.

# Health Status

Categories of Health Concerns	
Demographic and Socioeconomic Characteristics	+
Chronic Disease	↔/-
Cerebrovascular Mortality	+
Heart Disease Mortality, Diabetes Mortality	-
Cancer	-
Behavioral Risk Factors	↔
Mammograms, Pap Smears	+
Sedentary Lifestyle, Smoking	-
Communicable Disease	↔
Tuberculosis	+
AIDS, Gonorrhea, Chlamydia	-
Maternal and Child Health	↔
Teenage Births, Infant Mortality, Low Birth Weights	-
Environment	↔
Surface Water Quality	-
Social Environment	↔
Racial Disparities in Health	↔

Performance Relative to Benchmarks: + More Favorable ↔ Comparable - Less Favorable

- Delaware’s population is not at increased risk of poor health status associated with socioeconomic factors relative to comparison communities. Research has shown many demographic and socioeconomic factors influence population health status. Compared to other communities, Delaware residents:
  - have similar incomes;
  - experience a lower poverty rate than the nation, but a higher rate than some neighboring states;
  - have a slightly lower unemployment rate;
  - are less likely to be uninsured;
  - and are slightly less likely to graduate from high school, but a comparable number possess college and graduate/professional school degrees.
- Delaware’s performance on health indicators is mixed. Specifically, Delaware exhibits:
  - Higher mortality rates for heart disease, cancer and diabetes and higher estimated prevalence rates for ischemic heart disease, asthma, hypertension and diabetes.
  - favorable results for some behavioral risk factors, such as health screenings, binge drinking and seatbelt use, but unfavorable results in other areas, including exercise, smoking and alcohol-related motor vehicle accidents.
  - mixed results in terms of communicable disease, with higher rates for some sexually transmitted diseases and AIDS and lower rates for tuberculosis and syphilis.
  - higher incidence and mortality rates for most cancers.
  - comparable results on some maternal and child health status indicators, including prenatal care, as well as smoking and alcohol use during pregnancy, but higher rates of teenage births and infant mortality.
  - favorable results with respect to air quality, except ozone, but some problems with surface water quality.

**Delaware exhibits comparable death rates for most indicators but higher rates of death for cancer, heart disease and diabetes.**

Indicator	Delaware (Rate per 100,000 persons)	Delaware Compared to Benchmarks	
		Below	Above
+ Cerebrovascular Disease Deaths	22.2	14%	11%
⇔ Chronic Liver Disease Deaths	6.5	11%	10%
⇔ Kidney Disorder Deaths	4.9	17%	11% ..... +113%
⇔ Major Cardiovascular Disease Deaths	169.3	2%	25%
⇔ Chronic Obstructive Pulmonary Disease Deaths	21.2	15%	29%
— Heart Disease Deaths	138.3	0%	37%
--- Diabetes Mellitus Deaths	16.1	5%	33%
--- All Cancer Mortality	186.3		6% - 20%
--- Breast Cancer Mortality*	27.5	1%	22%
--- Prostate Cancer Mortality^	26.9		6% - 37%

\* per 100,000 females  
^ per 100,000 males

Performance Relative to Benchmarks: + More Favorable ⇔ Comparable - Less Favorable

- comparable or favorable performance on most social environment indicators, such as crime and homicide rates, but higher rates of rape offenses and child abuse and neglect.

**Resources**

- Generally, Delaware has an adequate supply of hospital beds and physicians to meet current demand within the community. However, resources are concentrated in New Castle County, and some communities may not have sufficient access to primary care.
  - Delaware residents receive 90 percent of their inpatient care in Delaware hospitals.
  - The total number of hospital beds available in Delaware appears to match capacity needs within the community, with a slight excess of beds available for some bed types (e.g., psychiatric/substance abuse beds in private sector hospitals).<sup>3</sup>

- Delaware has a similar supply of physicians relative to benchmarks, with exceptions in some specialties.

- Delaware has approximately 194 physicians per 100,000 persons, which is slightly lower than most benchmarks. Kent County has the fewest physicians, while New Castle County has the most.
- Delaware has slightly fewer primary care and specialty care physicians than most comparison communities.
- A higher proportion of Delaware physicians practice pediatrics and OB/GYN compared to the nation.

- Delaware's supply of dentists is inadequate relative to the industry standard.

- Delaware has fewer than 39 full-time dentists for every 100,000 persons in the state, 23 percent less than the industry standard of 50 full-time dentists for every 100,000 persons.
- Sussex County has the lowest proportion of full-time dentists.

<sup>3</sup> Data for this analysis is based on hospital-identified psychiatric/substance abuse beds in private acute and psychiatric hospitals. This analysis does not include either the supply or utilization of psychiatric/substance abuse beds in Delaware's public inpatient psychiatric facility. Public hospital utilization data in benchmark communities was not available for this analysis.

## Value (Utilization, Quality and Costs)

- Inpatient care is utilized at higher rates in Delaware than in most comparison communities.
  - Utilization of total inpatient days is higher for Delaware residents.
  - Delaware residents' hospital admission rates are higher for medical, surgical and psychiatric care.
  - The average lengths of stay for Delaware residents are longer for surgical, maternity and well-newborn care but comparable for medical, psychiatric and substance abuse care.
  - Delaware residents' use of inpatient days for care related to the circulatory system (e.g., heart attacks and congestive heart failure) exceeds that of residents in most comparison communities.
- High utilization rates for ambulatory sensitive conditions and some surgical procedures may reflect a more hospital-centered delivery system than in other communities.
  - Mortality rates for Delaware residents undergoing open heart surgery are favorable relative to other communities.
  - Delaware residents are admitted for ambulatory care sensitive conditions, including diabetes, pediatric asthma and pneumonia, at rates higher than those in most comparison communities.<sup>4</sup>
- Delaware uses invasive procedures at higher rates than comparison communities for cardiac catheterization, back surgery and gall bladder surgery.
- Delaware performs comparably to most communities on indicators measuring use of preventive care.
  - Over 90 percent of Delaware residents report receiving pap tests, mammograms and blood pressure screenings.
  - The Medicare population in Delaware utilizes mammography services at a higher rate and were immunized at rates comparable to other communities.
- More emphasis on patient education for chronic disease management in Delaware may be appropriate.
  - Based on responses to a mail survey, less than 60 percent of respondents with asthma report being counseled about how to handle severe flare-ups or were told how to adjust their medication.
  - Only 57 percent of respondents with diabetes report being asked by their doctor about foot care.

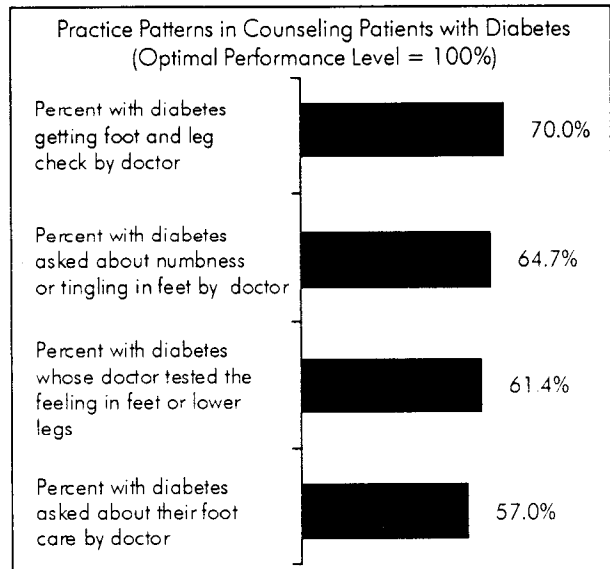
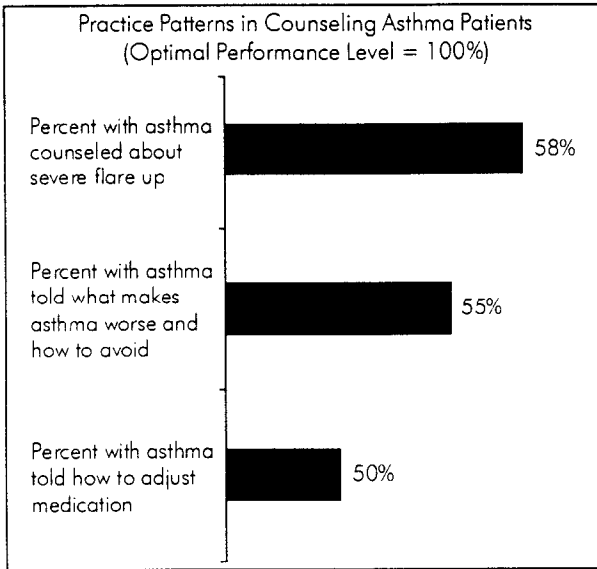
### Inpatient admissions by selected major diagnostic categories.

	Percent of Total Admissions	Delaware (Rate per 1,000 persons)	Delaware Compared to Benchmarks	
			Below	Above
↑ Total Admissions	--	123.5	9%	48%
↑ Circulatory System	17.3%	21.4	11%	61%
↑ Respiratory System	10.3%	11.6	12%	57%
↑ Digestive System	8.0%	9.9	7%	41%
↑ Mental Diseases and Disorders	5.3%	6.5	22%	124%
↔ Musculoskeletal System	7.5%	9.2	16%	35%
↔ Newborns/Neonates	10.1%	12.4	12%	7% ..... ♦ 218%

Performance relative to benchmarks: ↓ Lower than Benchmarks ↔ Comparable to Benchmarks ↑ Higher than Benchmarks

<sup>4</sup> An ambulatory care sensitive condition is defined as a condition where timely and appropriate outpatient treatment would reduce the risk of inpatient hospitalization for common health problems, such as asthma and diabetes.

**Patient education for asthma and diabetes could be improved.**



- Average charges in Delaware across all payors and types of admissions for inpatient care are within the range of charges in comparison communities, while average costs appear to be slightly lower. Charges are higher, on average, for Kent County residents than for residents of Sussex or New Castle County.
- Professional services use rates for Medicare enrollees are generally lower, and payments for Medicare enrollees are comparable relative to benchmarks.

*Disease Category Analysis*

Three disease areas are highlighted because they pose particular problems for the community: respiratory disease, cardiovascular disease and mental health.

- Delaware residents utilize more inpatient services and experience slightly more deaths for indicators related to respiratory disease than do residents of benchmark communities.
  - State residents are diagnosed with and die from trachea, lung, and bronchus cancer more often than benchmarks.
  - Hospital admissions for respiratory system diagnoses, including chronic obstructive pulmonary disease, pneumonia and

pleurisy, are higher in Delaware than other communities.

- The pediatric asthma admission rate is higher in Delaware than in comparison communities but comparable to the national rate.
- The percent of asthma patients who reported receiving adequate patient education falls short of optimal physician practice standards.
- Cardiovascular disease is one of the leading causes of death in Delaware.
  - Higher rates of smoking and less physical activity place Delaware residents at higher risk for developing cardiovascular conditions relative to other communities.
  - Heart disease prevalence and mortality rates in Delaware are higher than the nation.
  - Hospital admission rates for heart failure and shock, chest pains, transient ischemic attacks, heart attacks and cardiac catheterization are higher in Delaware than in other communities.
  - Delaware residents seek a considerable portion of their inpatient circulatory system care in neighboring states.

- Delaware residents utilize more inpatient mental health services<sup>5</sup> relative to other communities and have a surplus of beds available for psychiatric care in private facilities.<sup>6</sup>
  - Utilization of inpatient services for psychiatric diagnoses are higher in Delaware than in benchmark communities. In particular, hospital admissions for psychoses, depressive neuroses and childhood mental disorders are higher than benchmarks.
  - Mental diseases and disorders account for a substantial portion of total inpatient admissions and days utilized in Delaware's private hospitals. The majority of this care is delivered in New Castle County.
  - Based on current use, Delaware appears to have a surplus of inpatient psychiatric/substance abuse beds available in private hospitals.
  - Delaware has a higher proportion of physicians practicing psychiatry relative

to the total number of physicians than benchmark communities.

## Conclusions

- Delaware assets:
  - Delaware as a whole has low poverty, high employment and low crime.
  - The supply of hospital and physician resources is adequate.
  - Appropriate use of preventive care.
- Delaware improvement targets:
  - Respiratory disease, cardiovascular disease and mental health.
  - Chronic disease and cancer prevalence and mortality.
  - Communicable disease (e.g., chlamydia, gonorrhea and HIV/AIDS).
  - Reliance on hospital-centered care.
  - Access to dentists.
  - Patient education for heart disease, asthma and diabetes.

<sup>5</sup> Information on the prevalence of mental health disorders was not available for Delaware or the benchmark communities.

<sup>6</sup> This analysis does not include either the supply or utilization of psychiatric/substance abuse beds in Delaware's public inpatient psychiatric facility. Information from the community suggests that inpatient psychiatric care is harder to obtain in the state's public facility and that beds are now being purchased from private hospitals for public-sector clients to deal with the shortage.

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