Gaylord Specialty Healthcare

Community Health Needs

Assessment & Implementation Plan

Content

ABOUT GAYLORD

History:
Founded in 1902 as a Tuberculosis Sanitarium, Gaylord has grown into a regional leader in medical rehabilitation after a life-altering accident or illness. It is a 137 bed nonprofit specialty hospital located in Wallingford, CT with three outpatient centers located in Wallingford, Cheshire and North Haven. Gaylord Hospital fills a critical gap in the continuum of care by serving patients with complex medical needs who require hospitalization and rehabilitation for an extended period of time – on average 25 + days.

Our areas of expertise include:

- **Spinal Cord Injury** – we create a personalized treatment plan to maximize physical and emotional recovery and rehabilitation from a spinal cord dysfunction caused by disease or injury.

- **Brain Injury** – we offer one of the most comprehensive brain injury treatment and rehabilitation programs in the Northeast. Our full range of care begins at inpatient, and follows through to an on-campus transitional living center, and on to outpatient services.

- **Stroke Recovery** – our patients receive an individualized care plan to rehabilitate a wide range of impairments including partial paralysis, speech loss, swallowing and visual deficits.

- **Neurological Rehabilitation** – our specialized care team can treat patients suffering from many neurological disorders, some of them rare, including ALS, muscular dystrophy, Guillain Barre, multiple sclerosis, and others.

- **Orthopedic Rehabilitation** – our specialists form interdisciplinary teams to treat musculoskeletal problems for patients with trauma amputations, joint replacements, fractures and arthritis.

- **Pulmonary Disease** – our team is led by a board-certified pulmonologist to offer exceptional care to the many people in our state suffering from a range of diseases resulting in chronic COPD. Our specialists care for patients in need of vent weaning to those seeking better conditioning and enhanced mobility.

As a nonprofit institution, we are governed by a Board of Directors, whose members are not compensated, and which meets six times a year. There are several standing Board committees which oversee the operations of the hospital, including Budget & Finance, Audit, Nominating, Investment, Joint Conference, Development and Human Resources. Our Executive Committee annually assesses the performance of our Chief Executive Officer based upon his stated goals.

Accreditations and Expertise
Gaylord is accredited by the **Joint Commission** and is the only **CARF** (Commission for the Accreditation of Rehabilitation Facilities) accredited facility in CT for inpatient and outpatient as well as having two CARF subspecialty accreditations in Stroke and Spinal Cord.

Gaylord is part of the **Model Spinal Cord System**, of which there are only 14 in the nation and one of only 19 locations in the U.S. to have the Ekso bionic exoskeleton, which enables paralyzed people to walk. We are one of only 14 facilities nationwide to be designed a **Center of Excellence for the Passey-Muir Speaking Valve**, which allows patients with a tracheal tube to speak. Gaylord is the only facility in the nation to be designated a **Center of Excellence for our expertise in using the Vapotherm**, technology which conditions the delivery of air to our vent-dependent patients to allow for improved therapy. We are the flagship hospital for this program, and are working with Vapotherm to set the standards for designation of other hospitals as a Center of Excellence.

Mission, Vision & Values

Gaylord's **mission** is to preserve and enhance a person's health and function. Our **vision** is to promote patient functionality through the best clinical services, most advanced and effective treatment protocols, and documented outcomes for our patients. Our **values** are clinical excellence, compassion, integrity, respect and accountability.

Inventory of Services

Pulmonary Rehabilitation

Pulmonary Rehabilitation is designed to help individuals with pulmonary problems develop new strategies for monitoring and controlling their symptoms, so they can lead a more active life. Under the supervision of our pulmonary specialists, individuals develop the knowledge and skills needed to increase their strength and endurance, and decrease their need for hospitalization and episodes of shortness of breath. Pulmonary Rehabilitation is a supervised program of exercise and education. The program is open to individuals diagnosed with diseases such as emphysema, chronic asthma, chronic bronchitis, pre-lung transplant, pulmonary fibrosis, cystic fibrosis and other pulmonary diseases.

Ventilator Weaning

Gaylord's Ventilator Weaning Program is designed to help patients who have been dependent on a ventilator learn how to breathe on their own again. The program uses the latest research and technologies, together with a multi-disciplinary team approach, to help patients successfully transition from being on a ventilator to breathing independence. Each patient receives a thorough assessment before he or she arrives at Gaylord, so that any special needs can be determined early in the process. Upon arrival at our facility, the entire care team sees the patient and develops an individualized plan of care.

Some patients – those with certain spinal cord injuries or progressive neuromuscular disease, for example – may be unable to be weaned from the ventilator. When that is the case, Gaylord works with the family to determine the best course of care after discharge from Gaylord. If the patient will be cared for at home, Gaylord will train the patient and his or her family in "trach" care, suctioning, home ventilator operation and emergency care, and also helps families select a home

health company, check the home environment, and assist in making sure the ventilator is properly placed for patient comfort and safety. Gaylord also contacts local EMS and utility providers to alert them to the presence of a home ventilator.

Traurig House/Transitional Care: The Louis D. Traurig House is the only transitional living center for people with acquired brain injury in Connecticut. Located in Wallingford on the campus of Gaylord Hospital, Traurig House is an 8-bed, co-ed facility. Typically, residents come to Traurig House after they have completed their inpatient rehabilitation but are not quite ready to go home because of language, physical or cognitive problems. Traurig House provides the necessary transition to ease the patient from hospital to home. Residents participate in the day program in the outpatient therapy department.

Aphasia/Cognitive Day Treatment: The Day Treatment Program offers an intensive outpatient program for people with cognitive deficits following an acquired brain injury such as traumatic brain injury, stroke, or other neurologic disorder. Cognitive impairments result in difficulties with orientation, attention, memory, reasoning, problem solving, planning and organization. These difficulties often affect auditory comprehension, verbal expression, reading comprehension, writing and social communication skills.

Wheel Chair Assessment: Wheelchair Assessment Services can improve mobility through the proper recommendation of customized wheelchairs. Gaylord Specialty Healthcare is the only provider in Connecticut to use the Smart Wheel System. Using ultra lightweight manual wheelchairs, SmartWheel technology provides information on push force, push frequency, push length, push smoothness, and speed. With this information, modifications and adjustments are made to the chair to reduce repetitive stress and optimize push style, reducing force and frequency of pushes to preserve optimal shoulder integrity.

Assistive Device Assessment: As patients with spinal cord injuries and other diagnoses continue their journey to independence, Gaylord offers a full complement of assistive technologies that enable greater independence. Assistive technology is available for phone access, computer access, and various environmental controls, and these technologies are used through computer, switch or voice activation.

Center for Concussion Care: Gaylord's Center for Concussion Care is a comprehensive program for teens and adults. Each plan of care is customized using resources on the Wallingford and/or North Haven campuses. Gaylord’s interdisciplinary team draws upon a long and successful history of treating brain injuries. The collaborative center consists of physiatrists, neuropsychologists, sports medicine physical therapists, vestibular/balance physical therapists and certified athletic trainers. In some cases, specialty treatment options may include

audiologists, occupational or speech therapists, all with advanced training in neurological disorders to maximize recovery.

Aquatic Exercise Program: Gaylord's 75-by-25 foot therapeutic pool on the hospital's Wallingford campus is specially designed for people with disabilities. Aquatic therapy - therapeutic exercise in water - provides a soothing, efficient method of exercise for achieving movement. The water, which is maintained at a temperature between 88 and 90 degrees in Gaylord's therapeutic pool, provides a cushioning effect that protects the body from any pounding, jarring movements.

Think First Program: ThinkFirst is sponsored by Gaylord Specialty Healthcare and the National Spinal Cord Injury Association, Connecticut Chapter. ThinkFirst is an injury prevention program that is offered free to schools (grades K-12) and community groups such as clubs, scout troops, and health fairs, etc. The program is taught by a physical therapist from Gaylord Hospital and addresses the ways to prevent injury when participating in age-specific activities, such as bicycle safety for elementary students and drinking and driving for high school students. An important focus is helping students understand the impact of brain and spinal cord injuries and how they can be prevented.

Sports Association: The Sports Association of Gaylord Hospital supports disabled sports teams and clubs throughout Connecticut. The Association encourages people with physical disabilities to participate in sports and experience new sport activities and is a member of the Disabled Member of Disabled Sports, USA, Paralympic Chapter as designated by the USOC. We underwrite three competitive teams in Quad Rugby, Wheelchair Tennis and sled hockey.

Support Groups:

1. Amputee Success Group
2. Better Breathers
3. Cancer Survivors
4. Community Stroke Group
5. National Spinal Cord Injury Association-CT Chapter Board Meeting
6. Spinal Cord Injury Support Group

Long Term Acute Care Hospital Definition

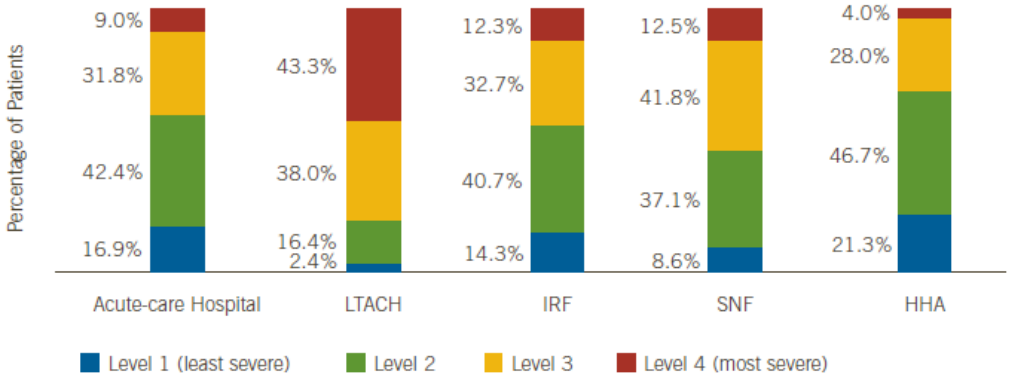
Medicare defines Gaylord as a long-term acute care (LTACH) hospital. LTACH's are part of the post-acute care continuum. Many of the patients treated at Gaylord are transferred from an acute care hospital's intensive or critical care unit. As an LTACH, Gaylord focuses on patients who require extended medical and rehabilitation care for individuals with clinically complex problems, such as multiple acute or chronic conditions, that need hospital-level care for

relatively extended periods (25 days). Our primary services include comprehensive rehabilitation for pulmonary and respiratory care, including vent weaning, traumatic brain injury, stoke and spinal cord injury.

According to Medicare data, LTACH patients have an overall severity of illness that is greater than any other post-acute care setting. Gaylord Hospital's patients require frequent physician oversight and advanced nursing care. Research suggests that patients who receive post-acute care following a major health episode see greater and more rapid clinical improvements compared to patients discharged to their homes without follow-up. Source: Research Triangle Institute. (2009). *Examining Post-Acute Care Relationships In An Integrated Hospital System.* Waltham, MA. There is evidence from national studies that some patients do better in LTACHs when compared to traditional acute hospital care. Patients are weaned from ventilators earlier and have longer survivability after discharge from a LTACH than from traditional acute care alone. This phenomenon is most evident with patients who have been ventilator dependent **(**Gage, B., Bartosch, W., & Green, B.A., 2007).

Patient severity of illness varies by PAC setting.

Chart 1: Short Term Acute-care Hospital (STACH) and PAC Severity of Illness (SOI), in Prior STACH Stay



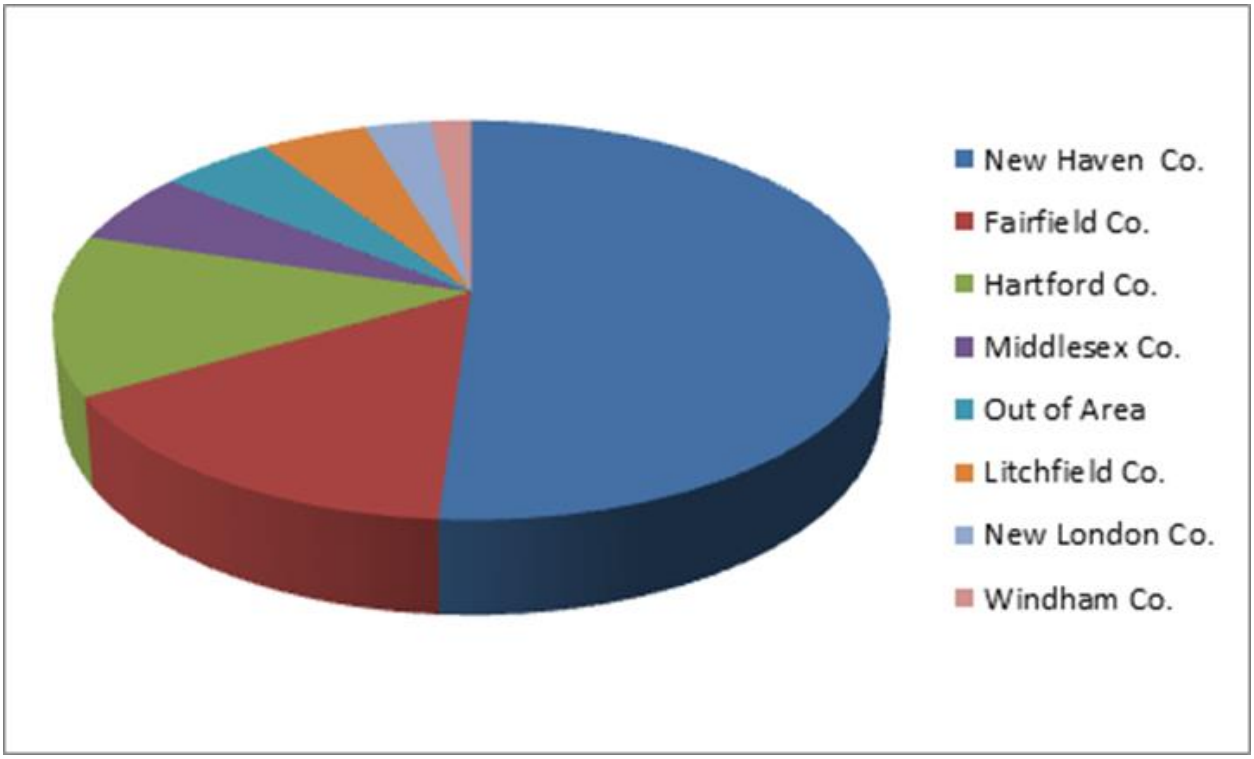
Source: Medicare Payment Advisory Committee (2010)

The Community Gaylord Serves:

The community need for a LTACH has multifaceted medical, nursing, rehabilitation and mental health care needs. Patients have primary diagnoses including traumatic brain, spinal cord injuries, complex stroke, serious respiratory conditions, extensive wounds, resistant infectious diseases, neurological disorders, orthopedic problems, and multisystem complications. The key distinction of patients who are cared for in a LTACH is the multiplicity of diagnoses and

problems leading to an aggregate of care needs that extends beyond the capabilities of a typical acute care hospital.

Gaylord receives admissions from acute care hospitals across the State of Connecticut as well as from out of the area. The following graphic illustrates admissions to Gaylord by county location of the referring hospital. New Haven County has the greatest number of admissions from referral hospitals.



IMPACT FROM PREVIOUS ASSESSMENT

Below is a synopsis of the goals from the last Community Needs Assessment Goals and update. The full review can be found on the Gaylord website.

Community Health Priority Need #1: **Need for community-based primary care physicians willing to accept patients with disabilities requiring rehabilitation services.**

Many persons who have brain and spinal injuries have difficulty finding primary care physicians who are willing to accept new and/or returning patients after they have sustained this type of injury. This is usually due to local primary care physicians' inexperience in treating patients with brain and spinal injuries, lack of knowledge of appropriate standards of care and treatment protocols for common secondary complications experienced by these patients, a lack of physical facilities to adequately examine patients, patient behavioral issues related to their injury, and concerns over adequate reimbursement for services provided.

> **2016 UPDATE:** Gaylord's policy directs Gaylord Care Managers to set up an appointment with the patients' primary care providers prior to being discharged from the Hospital. There are 11 Care Managers overseeing the patient's post discharge care. The intent of the policy is to ensure continuity of care and certify any existing home health care needs as well as to educate the community physician regarding any ongoing needs of their patients and to provide assistance and education about available resources to meet the specific needs of this population.
>
> Dr. David Rosenblum, Medical Director, Rehabilitation, helped develop a standard of care tool for Spinal Cord Injury patients called the New England Spinal Cord Injury Toolkit. This project was done as part of Gaylord's membership in the Model SCI system – one of 14 in the country. The SCI Toolkit can be accessed here. The toolkit is made available to all outpatients in therapy and medical services. Additionally, the Connecticut Chapter of United Spinal has the link to the toolkit on Gaylord.org and it was promoted in their national newsletter.
>
> Gaylord insures that upon discharge every rehabilitation patient leaves is scheduled for a follow up outpatient medical appointment with a Gaylord Physiatrist.
>
> Gaylord's medical staff has given lectures at area hospitals, including summaries of recent research, and treatment protocols.
>
> SCI and TBI consultations are conducted at YNHH by David Rosenblum, MD and at Gaylord Hospital/Wallingford campus by the department of Physiatry medical staff.

Community Health Priority Need #2: Working with area home care agencies, identify the need for specialized home health services to meet the unique needs of persons with brain and spinal cord injuries.

Many persons with brain and spinal cord injuries need specialized services once discharged, designed to address the unique cognitive, medical and rehabilitation needs associated with these types of injuries. For example, a person with a brain injury may need multiple short cognitive rehabilitation interventions each day lasting for relatively short periods of time in order to maximize improvement in functional independence measures. For individuals with spinal cord injuries, they may require education about the signs and symptoms of UTI, dysrelexia, require periodic skin inspection, and DME education.

> **2016 Update:** Bimonthly, the care management department at Gaylord meets with community providers (specifically home health agencies). This an opportunity to identify any gaps in services as well as to educate the provider group about services to meet the needs of specific patient populations. During 2015-2016, presentations were given on Brain Injury and Spinal Cord Injury rehabilitation. The provider community has also been introduced to the Resource Manuals that are available on the Gaylord website.
>
> Outpatient marketing staff meets with Home Care agencies and Skilled Nursing Facilities to educate them on the services and programs at Gaylord and determine needs of their constituency.
>
> Gaylord has opened up enrollment in its Rehab Specialist Course to Home Care therapists so they can become more familiar with the unique needs of our patient population.
>
> Educational programming is presented to increase the knowledge of home care staff about the unique needs of Gaylord's patient population. Meetings are held with individual home care providers as well as during routine onsite home health provider meetings.

Community Health Priority Need #3: Need for community-based programs to provide care-giver education, training and support.

Gaylord's mission is to assist its patients achieve the highest level of functional independence and return to living in their home. While many patients are able to achieve functional independence, there is a substantial need for community-based programs to provide care-giver education, training and support.

> **2016 Update:** Gaylord provides education and support to the care givers during and after inpatient discharge. The Care Managers and Social Workers also provide support groups onsite for some disease specific programs. These support groups and programs cover a

wide range of issues from hands on care giving to caregiver burn-out, to community resources available to financial counseling.

Gaylord's website was redesigned during 2015-2016 to include more patient and caregiver resources. These are available by program on the website such as:

- Example of Brain Injury Resources
- Resources listed on the Medical Library page

Additionally, during 2015-2016, Gaylord published an article on the benefits of Aquatic Therapy which can be viewed here. Gaylord staff has participated in community health fairs as well.

Gaylord provides families with training and education in many settings, including inpatient and outpatient. Families and patients receive educational materials and onsite education and counseling. Gaylord has designed a comprehensive Pulmonary Handbook that is available to all.

Ventilator education is a joint process between the home ventilator provider and the Gaylord respiratory therapy staff. Patients and their families receive a thorough education on the equipment and the family/care giver spends 24 hours in hospital taking care of their loved one on ventilator to show they are comfortable and have a true understanding of care involved. Patient assessment begins immediately during the patient's stay at Gaylord. Once the patient is deemed ready for discharge, the hospitalist or pulmonologist with send a recommendation for pulmonary rehab when appropriate. All appropriate patients will receive a Rehab visit from the Pulmonary Rehabilitation staff while still in the Hospital. The program goals and process is explained to the patient at that time.

Gaylord routinely brings spinal cord injured patients and their families together so that patients who have been weaned can provide support and encouragement to those trying to wean from the ventilator. Ventilator Support Group meets each Thursday when we and is conducted in a group setting or individually.

Last year the Patient Experience department created a Peer Mentoring program that brings past patients back to talk to current patients.

Community Health Priority Need #4: Need for post-discharge support systems for individuals with brain and spinal cord injuries and pulmonary diseases following hospitalization.

Through its comprehensive discharge process, Gaylord Hospital provides post-discharge client and family planning guidance and education about resources and options available to help individuals with a catastrophic injury or illness better address the psychosocial, educational, career and medical issues that may arise during the first year after their injury or illness.

2016 Update: Gaylord provides to all patients and their care givers information pertinent to their medical and psychosocial needs. We collaborate with community providers and agencies to assist patients following hospitalization. During 2015-2016, Gaylord:

- Re-envisioned the portable health profile. This is a document that captures the patients' medicines and helps them when they go to their own general practitioner or specialist or are even hospitalized again. The tool was created in three forms: business card size record to go in one's wallet or purse; a CD or printout in a two pocket folder.
- Created and implemented a Stroke Tune-up Clinic. This is a checkup with clinical staff (MD, PT, OT and ST) who can measure function and recommend programming to prevent functional decline.
- Created an Acquired Brain Injury family support group. This group is held on the unit with family members and meets weekly. It is a multi-modal program to help family learn to about brain injury and the challenges and needs their loved one will have.

COMMUNITY NEEDS ASSESSMENT

Rationale:
In March 2010, the U.S. Congress passed the Patient Protection and Affordable Care Act that included new requirements for private not-for-profit hospitals. For tax years beginning March 2012, each hospital must:

- Conduct a Community Needs Assessment once every three years, including public health and community input. The Community Needs Assessment is a systematic process to identify and analyze community health needs and prioritize these needs.
- Develop action plans to address community needs by adopting an implementation strategy which must be approved by the Board of Directors.
- Report the process and plan to the community and on IRS Form 990.

Research:
Gaylord conducted several phases of primary research for assessing community need. The research used both electronic (Survey Monkey) and written survey methodologies. Information gathered at this stage of the assessment process was intended to describe the health needs of the communities served by the Hospital. Research also included data of health needs and prevalence nationally and in the community we serve in Connecticut. (See Appendix A for sample Surveys)

Methodology for Obtaining Feedback:
Feedback was gathered from patients and community stakeholders to better understand the strategies they currently use to maintain their health, their experiences with accessing health care services and barriers to care, and their perceptions of gaps in care and community resources. Surveys were sent to the following:

- Referral Source (written) representing Discharge Planners from referring hospitals
- Sports Association Participants (online) representing disabled athletes and veterans
- Brain Injury Association of Connecticut (online) which is an advocacy group for brain injured persons
- United Spinal (online) which is an advocacy group for spinal cord injured persons
- Wallingford Dept. of Health (written) representing the immediate, local community

Findings
A total of 31 completed surveys were received in response to the Gaylord Community Health Needs Assessment. Survey respondents were asked to identify any barriers that exist in the community and at Gaylord Hospital in accessing the care needed to maintain health; to identify areas of unmet need or services that are not currently available; how well Gaylord serves the needs of individuals with spinal cord injury, brain injury, and pulmonary diseases and to identify key improvements to provide better health care to the communities it serves.

- Barriers in the community (ordered from most to fewest mentions):
  - Cost of care/Insurance doesn't cover cost (14)
  - Physicians that understand my special needs (11)
  - Lack of care coordination (11)
  - Unaware of services (10)
  - Resources needed are not located in the local area (10)
  - Transportation (10)
  - Physical limitations (10)
  - Lack of insurance (7)
  - Lack of support/patient advocacy (7)
- Follow-up comments:
  - Lack of coordinated care or plans for care (3)
  - Patients are unaware of brain injury outpatient services in the area
  - Need more qualified employees
  - Need personal assistance with driving and reminders
  - Have to travel to access services
  - VA doesn't have adequate facilities
- Greatest unmet needs
  - Lack of non-medical transportation (2)
  - Patient advocacy/support (3)
  - Home care, assistance with daily tasks (meals, bills, scheduling appointments, utilities) (2)
  - Lack of safe, affordable housing resources (specific example of ABI Waiver communities) (3)
  - Misunderstanding patient rights/accommodations
  - Lack of understanding in the community
  - Brain injury expertise (specific example of PCS) (2)
  - Substance abuse treatment with brain injury treatment
  - Care coordination
  - Information for families
  - People don't know that it is easy to get involved in sports program
  - Not enough free community events
  - Not enough programming after hours for people who work
  - No sports instruction
  - Some services do not accept Medicare
- Key improvements required
  - More public awareness/education about brain injuries
  - Follow-up with patients to help them navigate daily tasks - community support, in-home services (2)
  - Coordinated care and recovery plan (3)
  - More accessible public transportation (2)
  - Housing assistance
  - Case management
  - Medical professionals with training in brain injury
  - More locations around CT

- Better communication
- Community re-entry program
- Mindfulness, yoga

Responses to the survey highlighted a few main issues with health care access in the region served by Gaylord, specifically pertaining to brain injuries. The most commonly cited barrier to accessing healthcare was the **cost of care**, although that didn't come up frequently in the short-form responses (one respondent said that Medicare should be accepted more frequently.) Barriers to care in the community that came out through all the questions were **physicians that didn't understand the patient's needs**, **lack of care coordination**, and **lack of outpatient/home care services** (which wasn't in the original list of barriers, but was mentioned in the rest of the questions.)

Multiple responses mentioned that they didn't feel like physicians and hospital employees understood the particularities of their condition ranging from **recognizing symptoms of related conditions** (like post-concussion syndrome) to **not providing ancillary services** that could support the patient's recovery outside of the hospital. For example, one respondent said that they wanted more assistance with finding housing when they were ineligible for Acquired Brain Injury waivers. They also wanted nursing homes to have more experience with brain injuries.

Care coordination was a major issue that was brought up by multiple respondents. While the respondents didn't provide many specific examples of problems with care coordination due to the nature of the survey (further detail could be gathered from focus groups), many respondents mentioned this issue and also wanted a **recovery plan** that would guide their treatment. This may relate to another barrier: **lack of support and patient advocacy**. One respondent mentioned that a case manager would be a useful addition.

Reported dissatisfaction with the care that survey respondents receive extends to outpatient care. **During the transition period from inpatient to outpatient care**, patients would like **more support** in the form of community re-entry trips, for example, and many people requested improved in-home care. This could come in the form of an assistant to drive, prepare meals, and handle the logistics of paying bills and scheduling appointments. Even some type of follow-up from the hospital would help.

Methodology of How Priorities were Selected:
The following process was used to focus the health priorities:

a. Impact: Does this affect or exacerbate quality of life and health-related issues?
b. Magnitude: How many people are affected? Does the problem lead to death, disability, impairment, quality of life?

c. Feasibility: Can we make a difference? What is the ability of Gaylord Specialty Healthcare to impact the issue given available resources?

Goals Selected:

Gaylord examined the community needs of our population (spinal cord injured, brain injured, stroke, pulmonary disease) with health data from the federal government and Connecticut (below) for the service area. The hospital then reviewed its existing programs and outreach vehicles, its human and financial resources, and the potential for community partnerships. From this examination and review, Gaylord decided to focus on three main areas. They are:

- **COPD**
- **Stroke**
- **Wellness**

Please see Appendix B for a list of resources potentially available to address the significant health needs identified.

Data Supporting Goals Selected:

Below is data in the US and CT regarding the frequency of occurrence and comorbidities associated with illness.

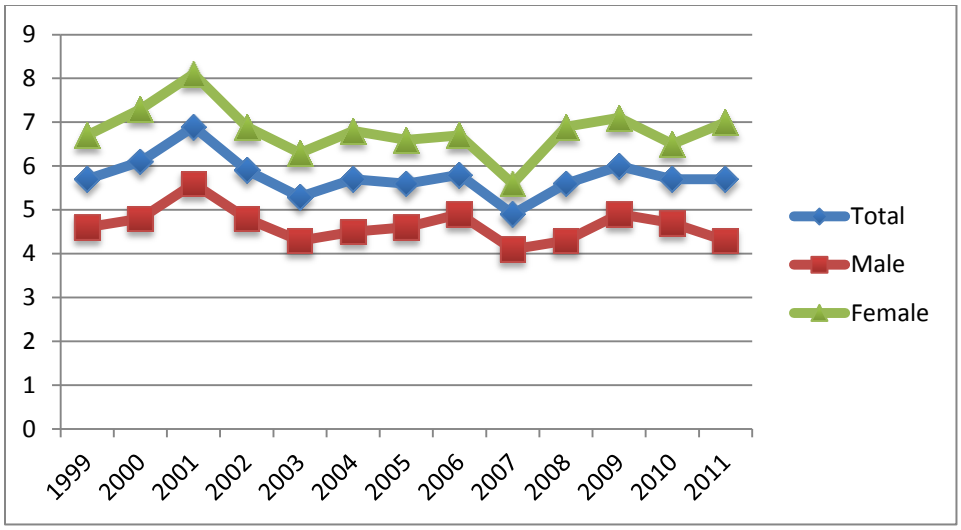
General trends

1. COPD

Prevalence (United States)

By Gender — Source: National Health Interview Survey, 1999-2011 via "COPD Surveillance—United States, 1999-2011" *[Estimated Age-adjusted Annual Prevalence of Self-Reported Physician-Diagnosed COPD (Lifetime Emphysema or Chronic Bronchitis During the Preceding 12 Months) Among Adults Aged ≥ 25 Years]*

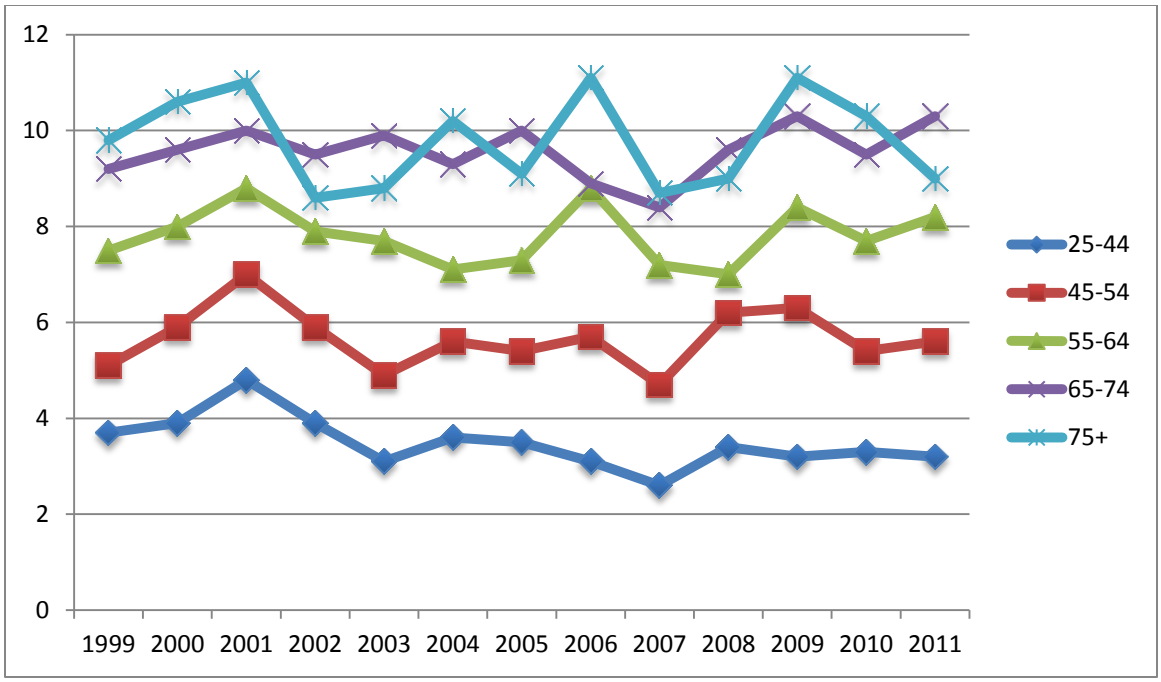
Year	Total	Male	Female
1999	5.7	4.6	6.7
2000	6.1	4.8	7.3
2001	6.9	5.6	8.1
2002	5.9	4.8	6.9
2003	5.3	4.3	6.3
2004	5.7	4.5	6.8
2005	5.6	4.6	6.6
2006	5.8	4.9	6.7
2007	4.9	4.1	5.6
2008	5.6	4.3	6.9
2009	6.0	4.9	7.1
2010	5.7	4.7	6.5
2011	5.7	4.3	7.0



Trend: COPD prevalence decreased slightly between 1999 and 2011 overall, and among individual gender groups.

By Age — Source: National Health Interview Survey, 1999-2011 via "COPD Surveillance—United States, 1999-2011" *[Estimated Annual Prevalence of Self-Reported Physician-Diagnosed COPD (Lifetime Emphysema or Chronic Bronchitis During the Preceding 12 Months) Among Adults Aged ≥ 25 Years]*

Year	25-44	45-54	55-64	65-74	75+
1999	3.7	5.1	7.5	9.2	9.8
2000	3.9	5.9	8.0	9.6	10.6
2001	4.8	7.0	8.8	10.0	11.0
2002	3.9	5.9	7.9	9.5	8.6
2003	3.1	4.9	7.7	9.9	8.8
2004	3.6	5.6	7.1	9.3	10.2
2005	3.5	5.4	7.3	10.0	9.1
2006	3.1	5.7	8.8	8.9	11.1
2007	2.6	4.7	7.2	8.4	8.7
2008	3.4	6.2	7.0	9.6	9.0
2009	3.2	6.3	8.4	10.3	11.1
2010	3.3	5.4	7.7	9.5	10.3
2011	3.2	5.6	8.2	10.3	9.0



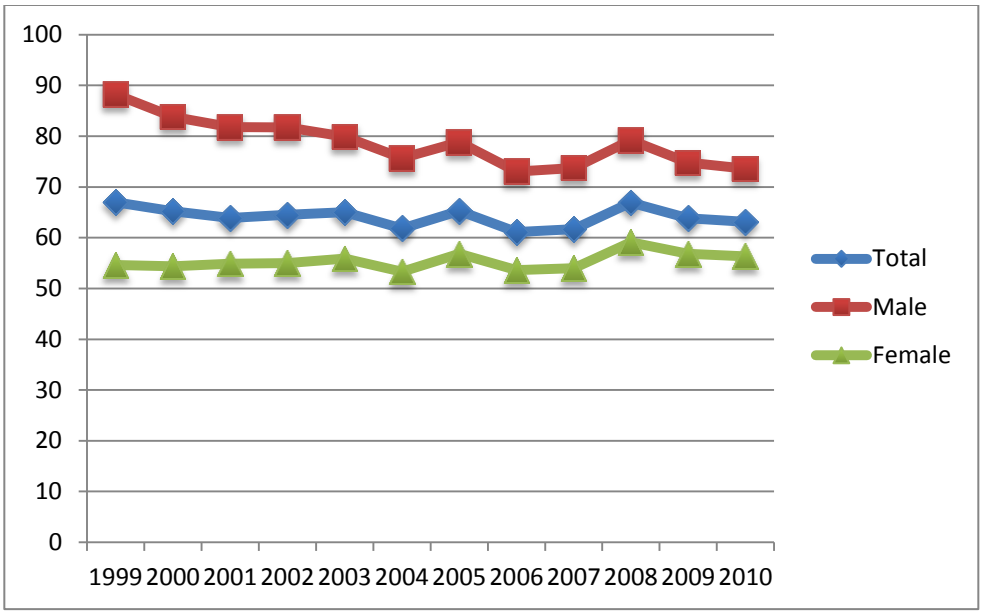
Trend: COPD prevalence increases as age increases. It has decreased somewhat among people 25-44 years, but remained constant among other groups.

Mortality (United States)

Note: Different sources gave different measures of mortality; three are listed below. Although the numbers don't match, the trends are similar.

By Gender — Source: Mortality Component of the National Vital Statistics System, 1999-2010 via "COPD Surveillance—United States, 1999-2011" *[Annual Age-adjusted Rates for Deaths With COPD as the Underlying Cause Of Death Among Adults Aged ≥ 25 Years, Annual rate per 100,000 US population. COPD includes ICD-10 codes J40–J44 from the WHO.]*

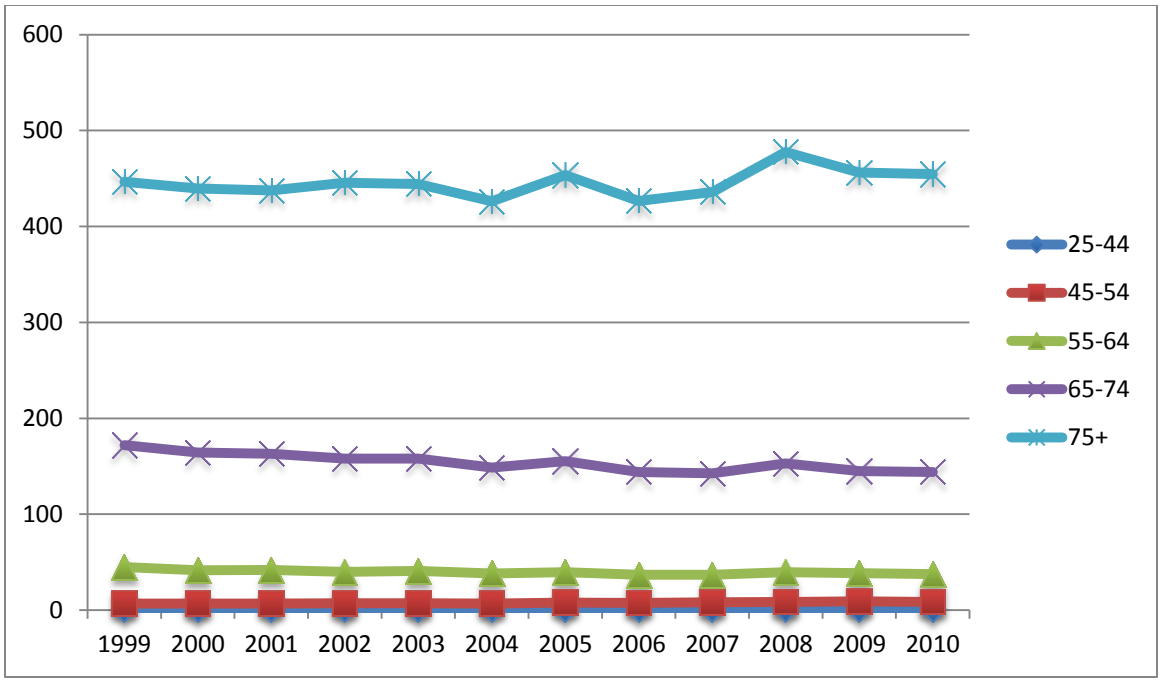
Year	Total	Male	Female
1999	67.0	88.2	54.6
2000	65.2	83.8	54.4
2001	63.9	81.8	54.9
2002	64.5	81.7	55.0
2003	65.0	79.9	55.9
2004	61.8	75.7	53.3
2005	65.3	78.8	56.8
2006	61.1	73.0	53.6
2007	61.7	73.7	54.0
2008	66.9	79.2	59.1
2009	63.8	74.8	56.8
2010	63.1	73.6	56.3



Trend: COPD mortality decreased slightly between 1999 and 2010 overall, but there was a large decrease in the mortality among men (and a slight increase among women).

By Age — Source: Mortality Component of the National Vital Statistics System, 1999-2010 via "COPD Surveillance—United States, 1999-2011" *[Annual Rates for Deaths With COPD as the Underlying Cause Of Death Among Adults Aged ≥ 25 Years, Annual rate per 100,000 US population. COPD includes ICD-10 codes J40–J44 from the WHO.]*

Year	25-44	45-54	55-64	65-74	75+
1999	0.6	6.8	44.8	172.1	446.6
2000	0.6	6.9	41.7	164.5	439.7
2001	0.7	6.8	42.0	162.9	437.5
2002	0.7	7.1	40.0	157.9	445.6
2003	0.7	7.1	40.9	158.1	444.2
2004	0.7	7.0	38.2	148.6	426.2
2005	0.7	7.9	39.7	155.2	453.7
2006	0.6	7.7	37.0	143.9	426.6
2007	0.6	8.2	37.0	142.6	435.8
2008	0.7	8.7	39.6	153.1	477.7
2009	0.6	9.1	38.5	144.9	456.4
2010	0.6	8.6	37.5	143.9	454.5



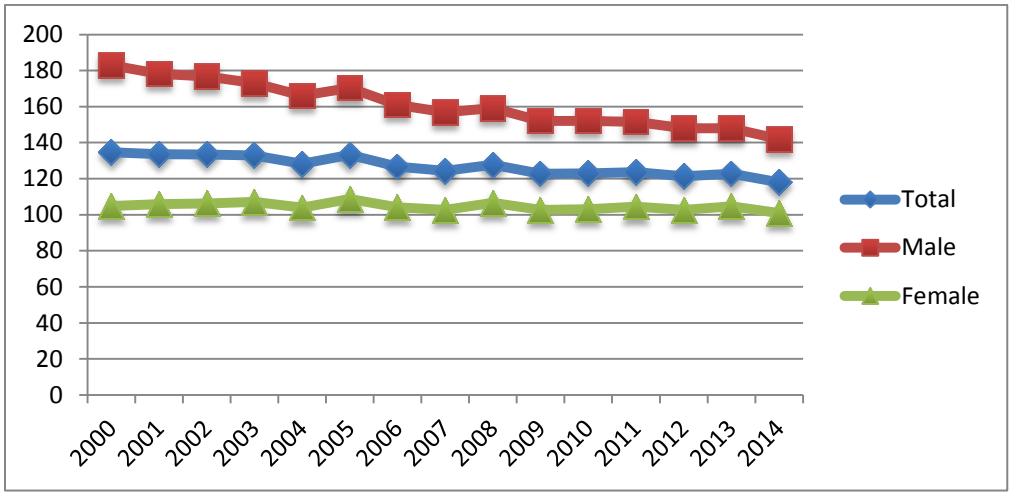
Trend: COPD prevalence increases with age. It is very low in the 25-44 year group, and very high among 75+ people. Within each age group, it has remained roughly constant, with slight increases in 45-54 and 75+, and slight decreases in 55-64 and 65-74.

The CDC statistics use a broader definition of a COPD death (underlying and contributing causes of death).

By Gender — Source: NCHS, National Vital Statistics System mortality data, 2000–2014. via "COPD-related Mortality by Sex and Race Among Adults Aged 25 and Over: United States, 2000–2014" *[age-adjusted rates for COPD-related deaths for adults aged 25 and over, COPD-related deaths were identified as those with COPD (ICD–10 code J40–J44) reported anywhere on the death certificate (i.e., as an underlying or a contributing cause of death)]*

Year	Total	Male	Female
2000	134.6	183.0	104.9
2001	133.6	178.1	105.9
2002	133.4	176.8	106.3
2003	132.9	173.1	107.2
2004	128.2	166.1	104.0
2005	133.2	170.4	108.8
2006	126.7	161.0	104.1
2007	124.4	156.9	102.7
2008	127.7	159.1	106.6

2009	122.8	152.1	102.8
2010	123.0	152.0	103.1
2011	123.7	151.5	104.5
2012	121.4	148.0	102.8
2013	122.7	148.0	104.7
2014	118.0	141.9	100.9

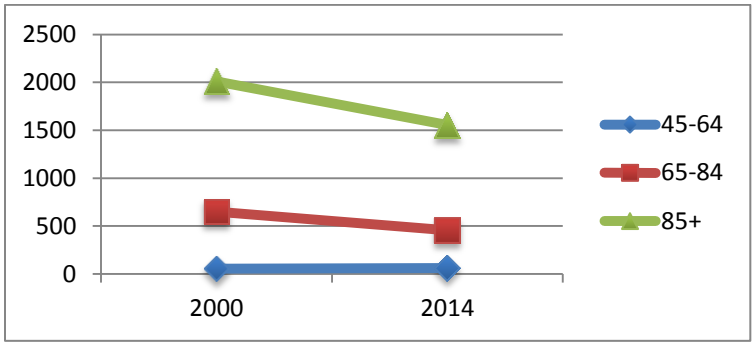


Trend: COPD mortality decreased somewhat between 2000 and 2014 overall, but there was a large decrease in the mortality among men (and some decrease among women).

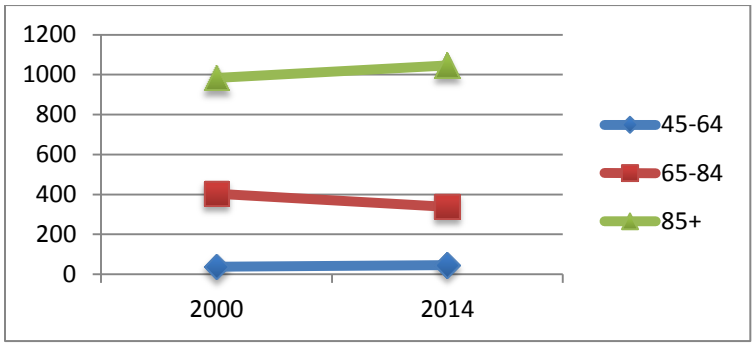
By Age — Source: NCHS, National Vital Statistics System mortality data, 2000–2014. via "COPD-related Mortality by Sex and Race Among Adults Aged 25 and Over: United States, 2000–2014" *[age-adjusted rates for COPD-related deaths for adults aged 25 and over, COPD-related deaths were identified as those with COPD (ICD–10 code J40–J44) reported anywhere on the death certificate (i.e., as an underlying or a contributing cause of death)]*

	Male			***Female***		
Year	**45-64**	**65-84**	**85+**	**45-64**	**65-84**	**85+**
2000	54.9	649.3	2008.4	37.3	403.3	984.1
2014	61.9	456.3	1556.5	46.4	338.2	1045.9

Male



Female

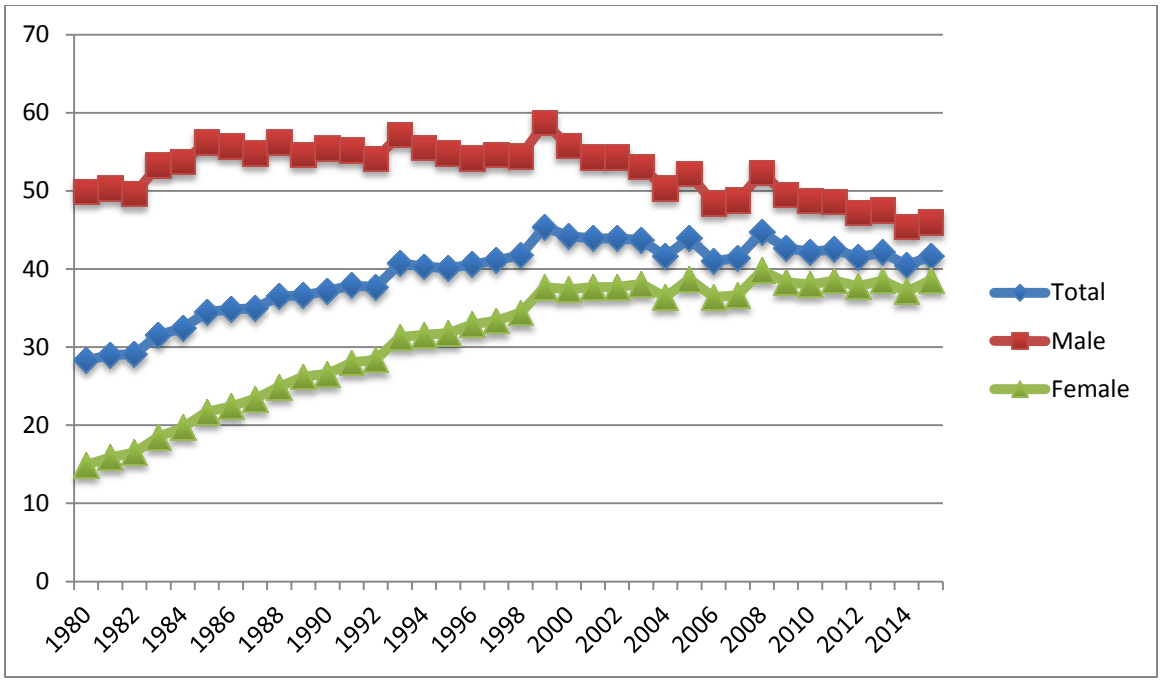


Trend: COPD mortality rates are much higher in older age groups. In both women and men, it has increased in the 45-64 group and decreased in the 65-84 group between 2000 and 2014. Among people older than 85 years, the mortality rate decreased for men but increased for women.

The 2016 Health, United States file has the most years of data, but use the "chronic lower respiratory disease" designation and don't have age-specific data.

By Gender — Source: NCHS, National Vital Statistics System via Health, United States (CDC, 2016) *[Age-adjusted death rates for Chronic lower respiratory diseases]*

Year	Total	Male	Female
1980	28.3	49.9	14.9
1981	29.0	50.3	15.9
1982	29.1	49.6	16.5
1983	31.6	53.3	18.5
1984	32.4	53.7	19.7
1985	34.5	56.2	21.7
1986	34.8	55.7	22.4
1987	35.0	54.8	23.4
1988	36.5	56.2	24.9
1989	36.6	54.6	26.2
1990	37.2	55.4	26.6
1991	37.9	55.2	28.0
1992	37.7	54.1	28.4
1993	40.7	57.2	31.3
1994	40.3	55.5	31.6
1995	40.1	54.8	31.8
1996	40.6	54.2	32.9
1997	41.1	54.6	33.4
1998	41.8	54.4	34.4
1999	45.4	58.7	37.7
2000	44.2	55.8	37.4
2001	43.9	54.3	37.7
2002	43.9	54.3	37.7
2003	43.7	53.1	38.1
2004	41.6	50.3	36.4
2005	43.9	52.2	38.7
2006	41.0	48.4	36.4
2007	41.4	48.8	36.6
2008	44.7	52.3	39.8
2009	42.7	49.5	38.3
2010	42.2	48.7	38.0
2011	42.5	48.6	38.5
2012	41.5	47.2	37.8
2013	42.1	47.5	38.5
2014	40.5	45.4	37.1
2015	41.6	46.0	38.6



Trend: Since 1980, COPD mortality has increased, with the bulk of the increase happening between 1980 and 2000. Since 2000, there has actually been a slight decrease. Male mortality has remained consistently high, with a notable decrease since 2000, and women's mortality increased rapidly from 1980 to 2000, and has only increased slightly since then.

Prevalence (Connecticut)

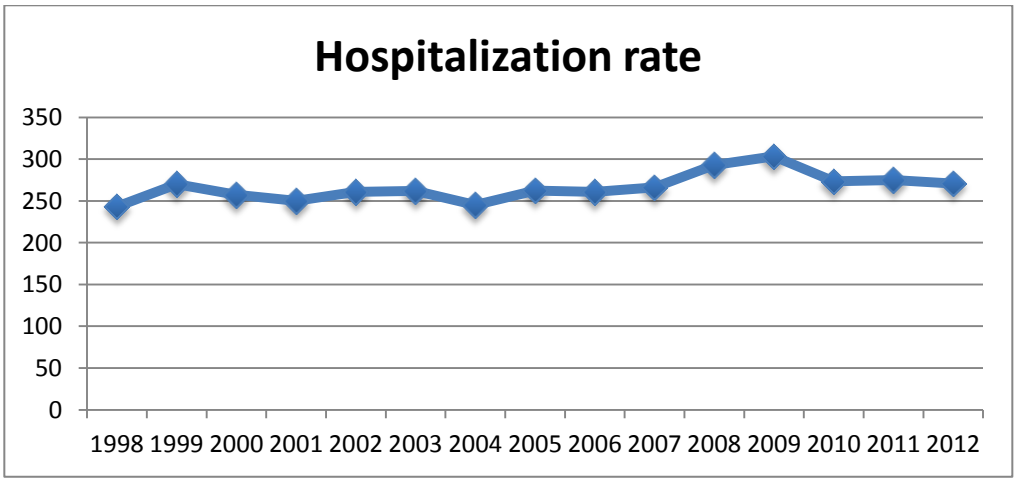
Source: Behavioral Risk Factor Surveillance System

Year	Prevalence	Age-adj. prevalence
2012	5.5%	5.0
2013	5.9%	5.4
2014	5.1%	4.6
2015	5.1%	4.5

Trend: In this interval, prevalence remained roughly constant. It is also slightly less than the nationwide prevalence.

Source: DPH Hospitalization Reports via Office of Legislative Research Report *[COPD Hospitalization rates per 100,000 residents]*

Year	Hospitalization rate
1998	243.3
1999	270.2
2000	257.2
2001	250.1
2002	260.8
2003	261.9
2004	245.1
2005	262.5
2006	260.8
2007	266.0
2008	293.0
2009	303.5
2010	273.3
2011	274.9
2012	270.8

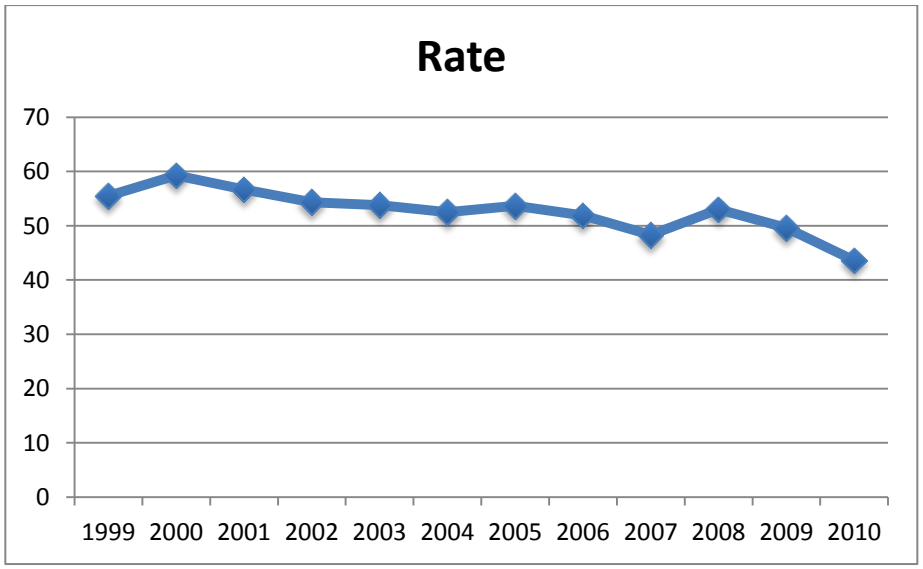


Trend: COPD hospitalization rate has increased slightly between 1998 and 2012.

Mortality (Connecticut)

Source: Mortality Component of the National Vital Statistics System, 1999-2010 via "COPD Surveillance—United States, 1999-2011" *[Annual Age-adjusted Rates for Deaths With COPD as the Underlying Cause Of Death Among Adults Aged ≥ 25 Years, Annual rate per 100,000 US population. COPD includes ICD-10 codes J40–J44 from the WHO.]*

Year	Rate
1999	55.5
2000	59.3
2001	56.7
2002	54.3
2003	53.8
2004	52.5
2005	53.7
2006	51.9
2007	48.3
2008	53.0
2009	49.6
2010	43.6



Trend: The COPD mortality rate in Connecticut has decreased between 1999 and 2010. It is also lower than the nationwide rate.

Implications

- Side effects of COPD include difficulty with physical activity, so it could result in other **health complications, especially among the elderly population** where it is most common (and **increased hospitalizations**, as seen in Connecticut, would create **financial stress**).
- Limited mobility also **limits social engagement**, contributing to a decline in mental health. This may compound upon **the social isolation that is already prevalent among the elderly population** that is suffering from COPD at the highest rates.
- The slight decrease in COPD among the working age population may be positive because **COPD can contribute to an inability to maintain a job**.
- The increase in COPD mortality among women over the last 30 years could be traced to **women's increased exposure to environmental pollutants and other respiratory hazards like smoking** (as discussed in Ma et al., 2014). It's unclear what could be leading to the decreasing prevalence and mortality among men.

General trends

2. Stroke

Prevalence (United States)

By Age — Source: Behavioral Risk Factor Surveillance System via Prevalence of Stroke — United States, 2006–2010 *[Age-adjusted prevalence* of stroke among noninstitutionalized adults aged ≥18 years]*

Year	18-44	45-64	65+
2006	0.7%	2.9%	8.4%
2007	0.7%	2.8%	8.4%
2008	0.7%	2.8%	8.4%
2009	0.6%	2.7%	7.9%
2010	0.7%	2.9%	8.3%

Trend: Stroke prevalence has remained somewhat constant between 2006 and 2010, but additional data from 1990-2006 may show more variation. A study showed that hospitalization rates have decreased among older people (65+) but increased among younger people (45-64).

By Gender and Age — Source: National Health and Nutrition Examination Survey via American Heart Association *[Prevalence of stroke per 100]*

Year	Sex	20-34	35-44	45-54	55-64	65-74	75+
1999-2002	Male	0.4	1.1	1.2	3.1	6.6	12.0
	Female	0.3	0.8	2.1	3.0	63	11.5

Year		20-39	40-59	60-79	80+
2003-2006	Male	0.3	1.0	7.4	15.4
	Female	0.6	2.7	7.5	12.6
2007-2010	Male	0.4	2.1	6.2	13.9
	Female	0.6	2.1	6.9	13.8
2009-2012	Male	0.2	1.9	6.1	15.8
	Female	0.7	2.2	5.2	14.0
2011-2014	Male	0.3	1.6	6.5	13.8
	Female	0.6	2.4	6.1	14.9

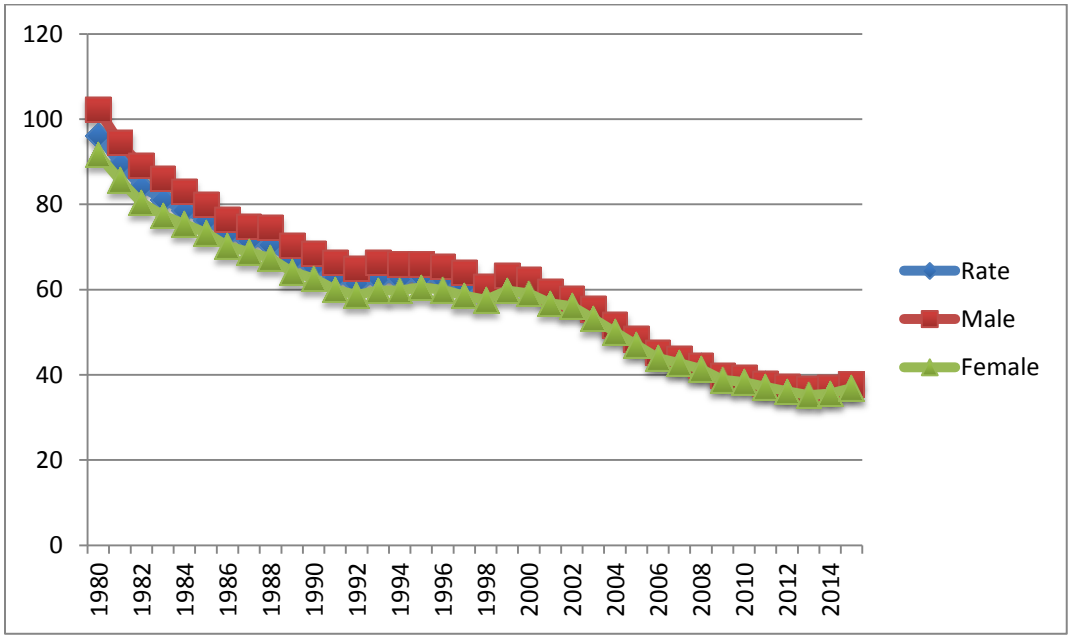
Trend: Strokes are becoming more prevalent in women and less prevalent in men.

Mortality (United States)

By Gender — Source: NCHS, National Vital Statistics System via Health, United States (CDC, 2016) *[Age-adjusted deaths per 100,000 resident population]*

Year	Rate	Male	Female
1975	123.5		
1976	117.4		
1977	110.4		
1978	103.7		
1979	97.3		
1980	96.2	102.2	91.7
1981	89.5	94.4	85.7
1982	84.2	89.0	80.4
1983	81.2	86.0	77.4
1984	78.7	82.9	75.4
1985	76.4	79.9	73.3
1986	73.1	76.4	70.2
1987	71.6	74.8	68.8
1988	70.6	74.5	67.4
1989	66.9	70.2	64.1
1990	65.3	68.5	62.6
1991	62.9	66.4	60.0
1992	61.5	64.9	58.7
1993	62.7	66.3	59.8
1994	62.6	65.9	59.8
1995	63.1	65.9	60.5
1996	62.5	65.3	59.9
1997	61.1	63.9	58.6
1998	59.3	60.7	57.6
1999	61.6	63.2	59.8
2000	60.9	62.4	59.1
2001	58.4	59.5	56.8
2002	57.2	57.9	56.1
2003	54.6	55.4	53.2
2004	51.2	51.7	50.1
2005	48.0	48.4	47.0
2006	44.8	45.2	43.9
2007	43.5	43.7	42.7
2008	42.1	42.2	41.4
2009	39.6	39.9	38.8
2010	39.1	39.3	38.3
2011	37.9	37.9	37.2
2012	36.9	37.1	36.1
2013	36.2	36.7	35.2

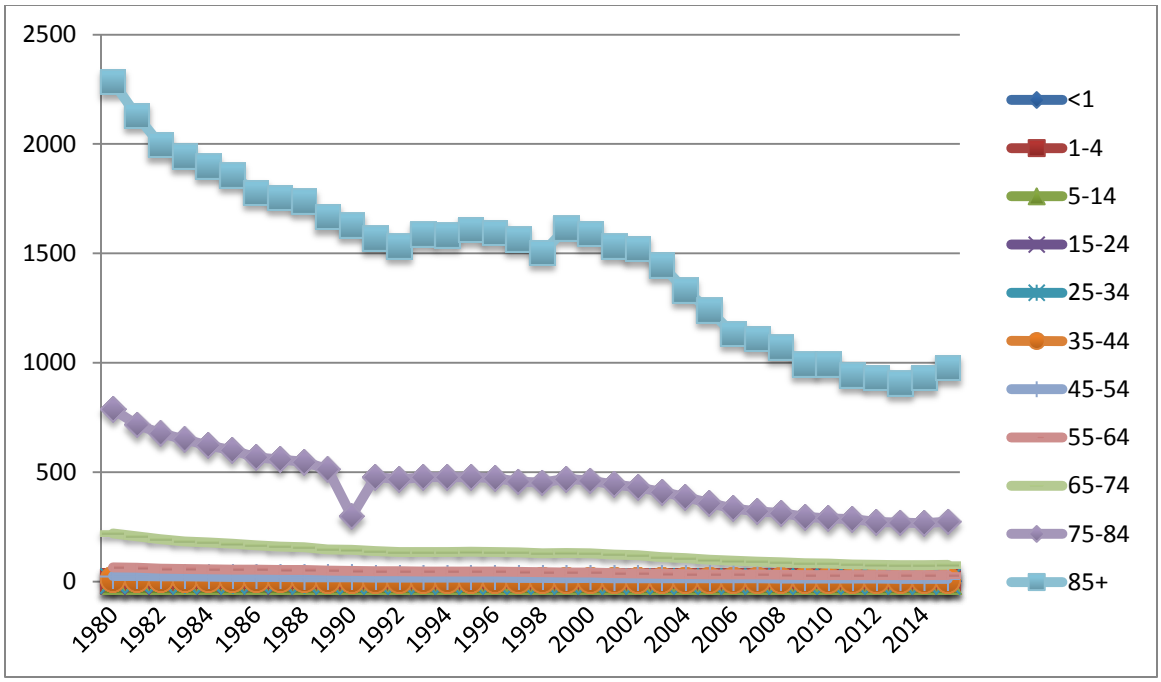
2014	36.5	36.9	35.6
2015	37.6	37.8	36.9



Trend: Deaths from strokes have decreased consistently since 1980. The trends have been similar among men and women, with men having slightly higher rates of death.

By Age — Source: NCHS, National Vital Statistics System via Health, United States (CDC, 2016) *[Age-adjusted deaths per 100,000 resident population]*

Year	<1	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
1980	4.4	0.5	0.3	1.0	2.6	8.5	25.2	65.1	219.0	786.9	2283.7
1981	3.7	0.3	0.3	0.9	2.6	8.4	24.8	62.9	206.1	716.1	2129.1
1982	3.6	0.3	0.3	0.7	2.4	7.7	23.6	59.0	193.3	677.2	1995.3
1983	3.9	0.4	0.3	0.8	2.2	7.3	22.8	57.8	182.9	649.0	1944.2
1984	3.1	0.4	0.3	0.8	2.3	7.5	22.7	56.1	177.8	621.2	1897.9
1985	3.6	0.3	0.2	0.8	2.2	7.2	21.2	54.7	172.4	600.1	1858.5
1986	2.9	0.3	0.2	0.7	2.3	7.1	20.5	53.5	165.8	568.1	1778.0
1987	3.4	0.4	0.2	0.6	2.3	7.0	20.2	52.7	159.1	556.9	1754.0
1988	4.0	0.4	0.2	0.7	2.2	6.9	19.3	52.0	156.9	547.2	1738.0
1989	3.3	0.3	0.2	0.6	2.1	6.5	18.6	49.5	147.0	514.0	1666.8
1990	3.8	0.3	0.2	0.6	2.2	6.4	18.7	47.9	144.2	298.0	1628.9
1991	4.0	0.4	0.2	0.6	1.9	6.4	18.3	46.2	139.3	477.7	1567.7
1992	4.2	0.3	0.2	0.5	1.8	6.5	17.4	46.2	134.9	467.4	1533.3
1993	5.5	0.2	0.2	0.6	1.9	6.1	17.5	45.7	135.2	476.3	1587.7
1994	5.1	0.3	0.2	0.5	1.9	6.5	17.7	45.2	134.9	476.8	1581.2
1995	5.9	0.4	0.2	0.5	1.7	6.5	17.4	45.6	136.2	477.1	1607.2
1996	6.2	0.3	0.2	0.5	1.7	6.2	17.6	44.8	134.2	472.1	1592.8
1997	7.0	0.4	0.2	0.5	1.6	6.3	16.7	43.7	133.3	456.8	1564.8
1998	7.9	0.4	0.2	0.5	1.6	5.9	16.2	41.9	128.5	451.9	1502.5
1999	2.7	0.3	0.2	0.5	1.4	5.7	15.2	40.6	130.8	469.8	1614.8
2000	3.3	0.3	0.2	0.5	1.5	5.8	16.0	41.0	128.6	461.3	1589.2
2001	2.7	0.4	0.2	0.5	1.5	5.5	15.0	38.3	122.9	443.3	1532.0
2002	3.0	0.3	0.2	0.4	1.4	5.4	15.1	37.1	119.6	430.0	1520.1
2003	2.5	0.3	0.2	0.5	1.5	5.6	15.0	35.5	111.9	409.8	1446.0
2004	3.2	0.3	0.2	0.5	1.4	5.4	14.8	34.0	106.6	385.6	1331.9
2005	3.1	0.4	0.2	0.5	1.4	5.2	15.0	32.7	99.8	358.4	1239.7
2006	3.5	0.3	0.2	0.5	1.3	5.1	14.6	32.9	94.9	333.9	1131.7
2007	3.2	0.3	0.2	0.5	1.3	5.0	14.5	31.7	91.4	320.8	1110.7
2008	3.4	0.4	0.2	0.4	1.3	4.8	13.7	30.6	87.3	313.3	1071.0
2009	3.7	0.3	0.2	0.4	1.3	4.6	13.7	29.7	82.8	294.9	992.2
2010	3.3	0.3	0.2	0.4	1.3	4.6	13.1	29.3	81.7	288.3	993.8
2011	3.4	0.3	0.2	0.4	1.3	4.2	12.8	29.4	78.2	285.4	943.7
2012	2.6	0.3	0.2	0.4	1.3	4.3	12.8	28.7	75.7	272.2	931.2
2013	2.7	0.2	0.2	0.3	1.2	4.2	12.4	28.9	74.2	268.9	906.0
2014	2.4	0.2	0.2	0.4	1.3	4.3	12.3	29.3	74.5	265.7	929.7
2015	2.2	0.3	0.2	0.4	1.3	4.4	12.3	29.6	75.5	273.0	975.8



Trend: Stroke-related deaths are much more common among older people (75+). Rates have decreased in almost all populations since 1980, significantly so among older populations.

Prevalence (Connecticut)

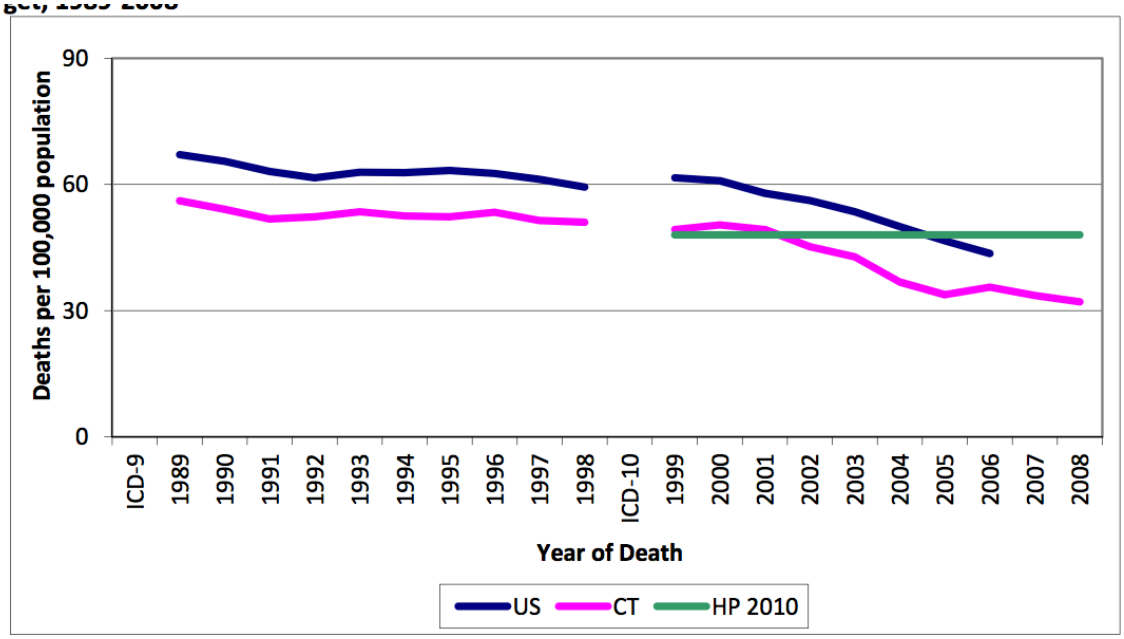
Source: DPH BRFSS via The Burden of Cardiovascular Disease in Connecticut

2011-2013: 2.1%

Trend: Connecticut has a very low prevalence of strokes (one of the lowest in the country in 2010).

Mortality (Connecticut)

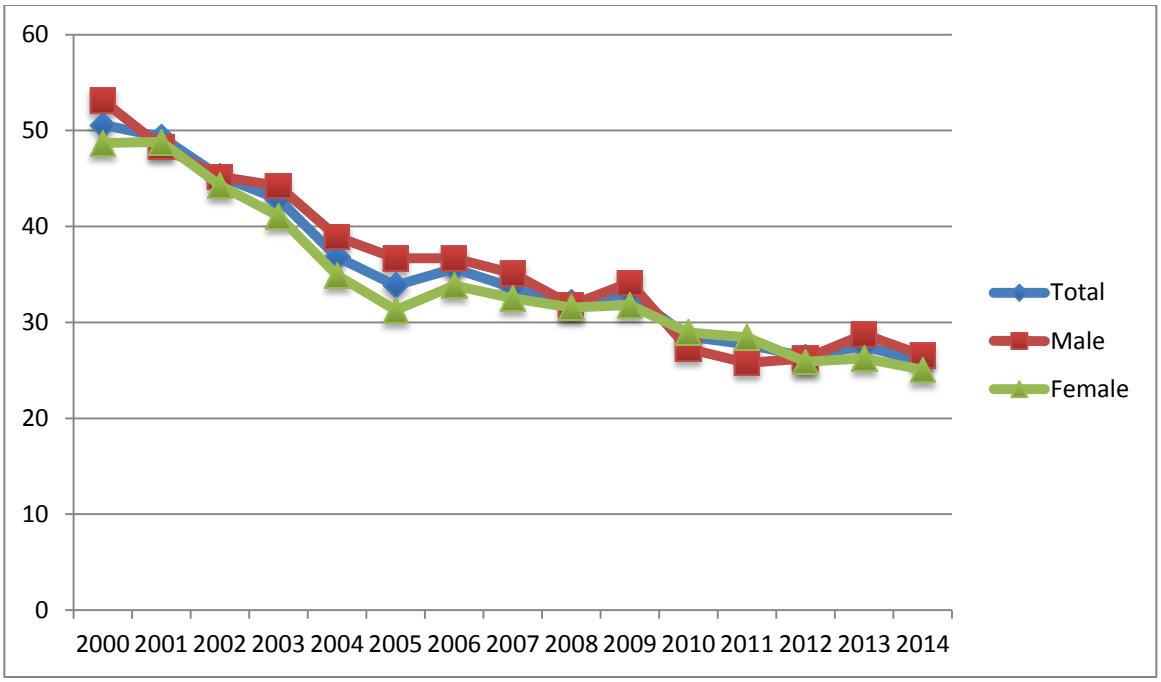
Source: DPH Vital Statistics Mortality Files via The Burden of Cardiovascular Disease in Connecticut *[Age-adjusted mortality rates for Stroke per 100,000]*



Sources: Connecticut Department of Public Health, Vital Statistics Mortality Files, 2010. Centers for Disease Control and Prevention, 2010. Note: Rates are adjusted to the 2000 US standard population. Classification includes deaths with ICD-9 codes: 430-438 (1989 to 1998); ICD-10 codes: I60-69 (1999 to 2008).

By Gender — Source: DPH Mortality Statistics *[age-adjusted mortality rate (AAMR) per 100,000 population]*

Year	Total	Male	Female
2000	50.59	53.13	48.70
2001	49.34	48.28	48.83
2002	45.21	45.18	44.30
2003	42.85	44.23	41.10
2004	36.83	38.92	34.90
2005	33.84	36.70	31.27
2006	35.62	36.68	33.85
2007	33.60	35.10	32.53
2008	32.13	31.82	31.54
2009	33.01	34.16	31.80
2010	28.51	27.26	28.93
2011	27.70	25.79	28.44
2012	26.42	26.23	25.92
2013	27.55	28.73	26.25
2014	25.82	26.58	25.06



Trend: Stroke-related deaths are less common in Connecticut than in the United States. The rate has been decreasing since 2000, and is roughly the same among women and men. One study showed that although more women die of strokes than men in Connecticut, the age-adjusted mortality rates are comparable.

Implications

- The **decreasing trends in stroke-related deaths are a good thing**, but are **not being accompanied by similar trends in prevalence**. Strokes damage brain tissue, so even if a patient survives, they can have **impaired movement and cognition**, which can **interfere with their ability to work and live independently**. **Occupational therapy** can help, but is an **added financial obligation**.
- Strokes happen predominantly to **older people** and can **compound existing health issues.**
- It's unclear why the **rate of strokes among women** (especially older women) is **increasing**.
- The **prevalence among younger adults (45-64 yrs old) is increasing**, and it's been suggested that it is because of **increasing obesity** (and the accompanying issues of high blood pressure, diabetes, etc.)
- **Connecticut's stroke prevalence and mortality rates are lower** than the nationwide rates, and seem to be **decreasing between across genders**, unlike the nationwide trend.

Comorbidities - COPD

The comorbidities for COPD include: [1,2]

- **Cardiovascular disease**: As a lung disorder, COPD can lead to problems in the heart, a nearby organ. In particular, there is an increase in the blood pressure in the lungs' arteries, which can result in pulmonary heart disease. Additionally, the COPD patients have reduced mobility which results in declining cardiac function. COPD can also be accompanied by hypertension and cerebrovascular disease (strokes).
- **Diabetes**: Although these conditions affect different organs, diabetes and COPD are both inflammation-related diseases, which might explain why they occur concurrently. Medications to treat COPD can interfere with blood sugar regulation.
- **Lung cancer**: This is a significant comorbidity that results in 7-10% of COPD deaths, along with increased hospitalization. Smoking can cause both lung cancer and COPD, but also, airway obstruction in COPD can cause lung cancer.
- **Lung infection**: Some of the risk factors for COPD can also cause lung infections, such as smoking and lung irritants. Additionally, when people have COPD, they are unable to breathe fully, so they can't get irritants out of their lungs.
- **Osteoporosis**: COPD also shares risk factors with osteoporosis, such as smoking and vitamin D deficiency. They also both tend to occur in older adults. This is particularly true in women with COPD. When COPD patients remain on bed rest, it can cause musculoskeletal damage, and the steroidal medications can also cause osteoporosis.
- **Psychological disorders**: Depression and anxiety can occur in patients with COPD. This may also be an effect of smoking, which can cause COPD.
- **Pneumonia**: A significant portion of people with pneumonia also have COPD, and pneumonia can make the symptoms of COPD worse and increase the medical attention required to manage them.
- **Anemia**: The inflammation associated with COPD can affect blood cell formation and cause an iron imbalance in red blood cells.

Comorbidities - Stroke

The comorbidities for strokes, or cerebrovascular disease, include:[3,4]

- **Cardiovascular diseases**: People who have a stroke are likely to also experience other heart-related problems, such as hyptertension and coronary heart disease.
- **Diabetes**: Strokes occur often in people with diabetes due to increased blood glucose, so diabetes might increase the risk of having a stroke (possibly not a comorbidity then). They also share risk factors like high blood pressure and high cholesterol.

[1] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2645334/
[2] http://www.lungchicago.org/understanding-copd-comorbidities/
[3] https://www.medicaljournals.se/jrm/content/abstract/10.2340/16501977-0269
[4] https://www.strokeassociation.org/idc/groups/stroke-public/@wcm/@hcm/documents/downloadable/ucm_309717.pdf

- **Falls**: After a person has a stroke, damage to certain parts of the brain could lead to numbness, paralysis, difficulty balancing, muscle weakness, or vision problems that could make them more likely to fall.
- **Loss of memory and cognition**: Strokes can cause nerve cell loss, leading to confusion, memory loss, and difficulty with decision-making. They can also cause aphasia (inability to speak, read, or write).
- **Psychological disorders**: The brain damage that results from a stroke can lead to changes in emotions and personality, like depression. This can also be exacerbated by the stress associated with the medical incident.
- **Seizures**: After a stroke, there can be abnormal electrical activity in the brain, which leads to a seizure.

Managing comorbidities

- **Diet and lifestyle**: Many comorbidities can be managed at once through changes in diet (control salt and glucose), *stopping smoking* (a risk factor for almost all the diseases above), more physical activity (if possible), and weight loss (a study, but there are many)
- **Early treatment**: Early treatment can keep a condition from getting to the point where it interferes with the patient's ability to interact with others. For example, with hearing loss, cognitive problems can be avoided if the patient is treated before the problem progresses to the point where it socially isolates them.[8]
- **Choosing medication carefully**: Many comorbidities result from side effects of other conditions (ex: hearing loss from arthritis medication, osteoporosis from COPD). Choosing alternative medications could help. (Many studies exist, since there is a wide variety of available drugs, but here is one.)
- **Therapy targeted toward the comorbidity**: This main seem straightforward, but some of the comorbidities can be directly addressed: therapy for psychological disorders/depression, treatment for sleep apnea.

General trends

3. Diabetes – data included because diabetes is a comorbidity for both COPD and Stroke.

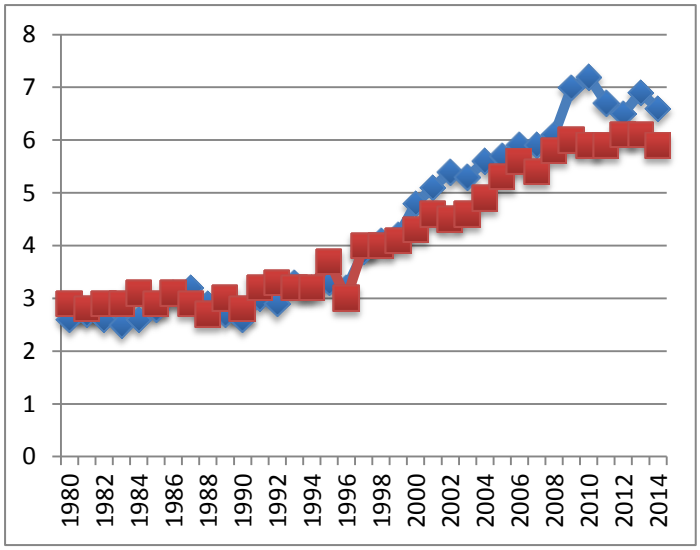
Prevalence (United States)

By Gender — Source: National Health Interview Survey via CDC Diabetes Public Health Source *[Rates of Diagnosed Diabetes per 100 Civilian, Non-Institutionalized Population]* (More data combining gender and age is also available)

Note: This is only diagnosed cases, so it is lower than the actual prevalence.

Year	Male	Female
	Rate	Rate
1980	2.6	2.9
1981	2.7	2.8
1982	2.6	2.9
1983	2.5	2.9
1984	2.6	3.1
1985	2.8	2.9
1986	3.1	3.1
1987	3.2	2.9
1988	2.9	2.7
1989	2.7	3.0
1990	2.6	2.8
1991	3.0	3.2
1992	2.9	3.3
1993	3.3	3.2

1994	3.2	3.2
1995	3.3	3.7
1996	3.2	3.0
1997	3.9	4.0
1998	4.1	4.0
1999	4.2	4.1
2000	4.8	4.3
2001	5.1	4.6
2002	5.4	4.5
2003	5.3	4.6
2004	5.6	4.9
2005	5.7	5.3
2006	5.9	5.6
2007	5.9	5.4
2008	6.1	5.8
2009	7.0	6.0
2010	7.2	5.9
2011	6.7	5.9
2012	6.5	6.1
2013	6.9	6.1
2014	6.6	5.9

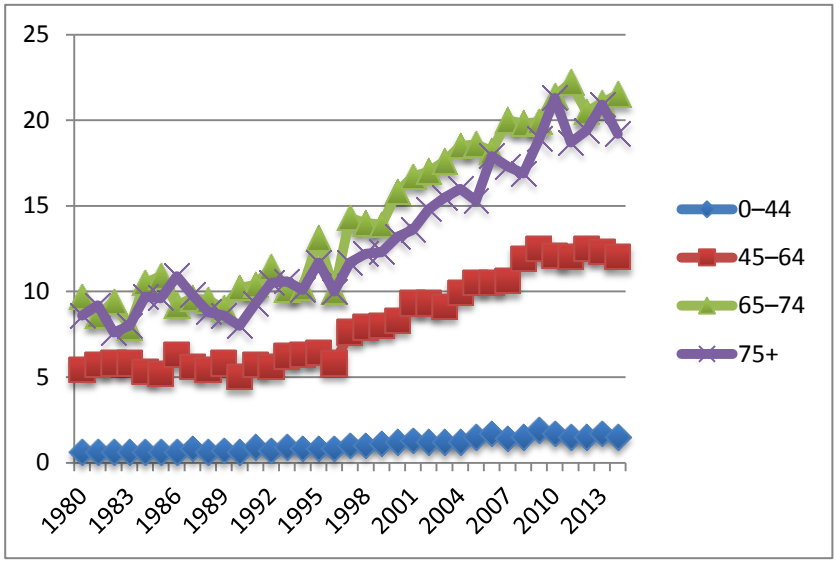


Trend: **Diabetes prevalence has increased consistently since 1980.**

By Age — Source: National Health Interview Survey via CDC Diabetes Public Health Source *[Rates of Diagnosed Diabetes per 100 Civilian, Non-Institutionalized Population]*

	Age			
	0–44	**45–64**	**65–74**	**75+**
Year	**Rate**	**Rate**	**Rate**	**Rate**
1980	0.6	5.4	9.7	8.6
1981	0.6	5.7	8.6	9.2
1982	0.6	5.8	9.4	7.6
1983	0.6	5.8	7.9	8.0
1984	0.6	5.3	10.5	9.7
1985	0.6	5.2	10.9	9.6
1986	0.6	6.3	9.2	10.9
1987	0.8	5.6	9.6	9.8
1988	0.6	5.4	9.5	8.8
1989	0.7	5.8	9.0	8.6
1990	0.6	5.0	10.2	8.0
1991	0.9	5.7	10.4	9.3
1992	0.7	5.6	11.4	10.5
1993	0.9	6.2	10.1	10.6
1994	0.8	6.3	10.2	10.1
1995	0.8	6.4	13.1	11.7
1996	0.8	5.8	10.0	10.0

1997	1.0	7.6	14.3	11.7
1998	1.0	7.9	14.0	12.2
1999	1.1	8.0	13.9	12.3
2000	1.2	8.3	15.8	13.2
2001	1.3	9.3	16.7	13.6
2002	1.2	9.3	17.0	14.8
2003	1.2	9.1	17.6	15.5
2004	1.2	9.9	18.5	16.0
2005	1.5	10.5	18.6	15.3
2006	1.7	10.5	18.2	17.9
2007	1.4	10.6	20.0	17.3
2008	1.5	11.9	19.8	16.9
2009	1.9	12.5	19.9	18.9
2010	1.7	12.1	21.4	21.3
2011	1.5	12.0	22.2	18.7
2012	1.5	12.5	20.5	19.4
2013	1.7	12.3	21.0	20.9
2014	1.5	12.0	21.5	19.2

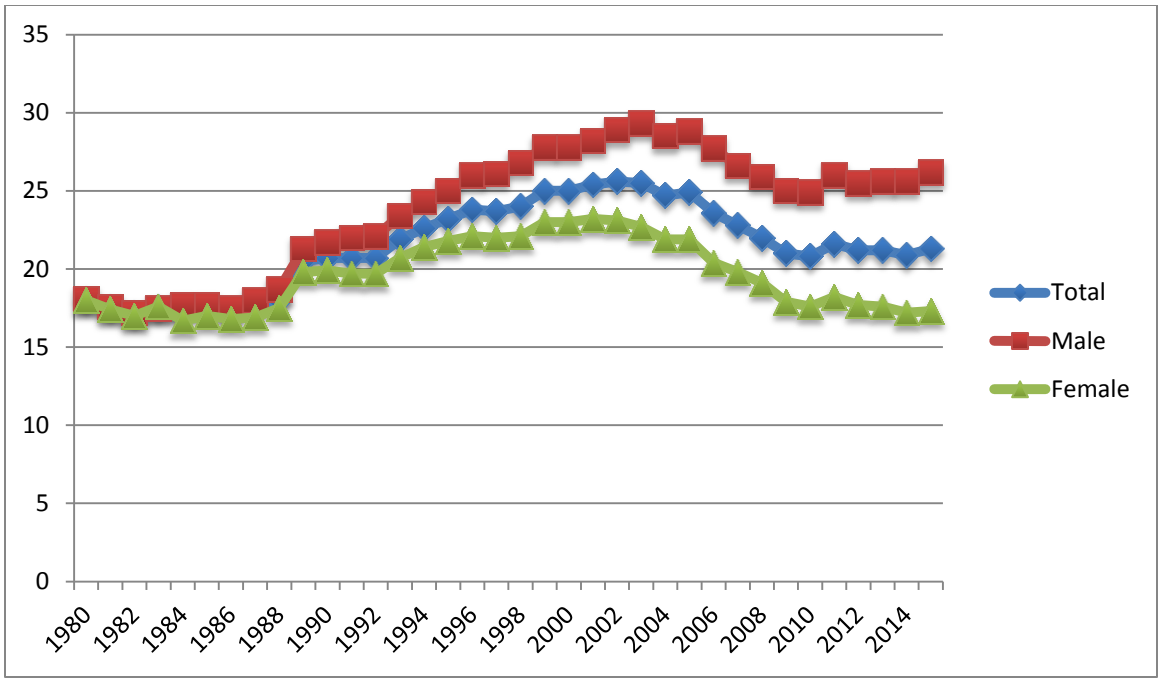


Trend: **Diabetes prevalence has increased consistently since 1980, more so in older populations (especially 65+ years).**

Mortality (United States)

By Gender — Source: NCHS National Vital Statistics System via Health, US *[Age-adjusted death rates for Diabetes Mellitus]*

Year	Total	Male	Female
1980	18.1	18.1	18.0
1981	17.6	17.6	17.4
1982	17.2	17.2	17.0
1983	17.6	17.5	17.6
1984	17.2	17.7	16.7
1985	17.4	17.7	17.0
1986	17.2	17.5	16.8
1987	17.4	18.0	16.9
1988	18.0	18.7	17.5
1989	20.5	21.3	19.8
1990	20.7	21.7	19.9
1991	20.7	22.0	19.7
1992	20.7	22.1	19.7
1993	21.9	23.4	20.7
1994	22.6	24.3	21.4
1995	23.2	25.0	21.8
1996	23.8	26.0	22.1
1997	23.7	26.1	22.0
1998	24.0	26.8	22.1
1999	25.0	27.8	23.0
2000	25.0	27.8	23.0
2001	25.4	28.2	23.2
2002	25.6	28.9	23.1
2003	25.5	29.3	22.7
2004	24.7	28.5	21.9
2005	24.9	28.8	21.9
2006	23.6	27.7	20.4
2007	22.8	26.6	19.8
2008	22.0	25.9	19.1
2009	21.0	25.0	17.9
2010	20.8	24.9	17.6
2011	21.6	26.0	18.2
2012	21.2	25.5	17.7
2013	21.2	25.6	17.6
2014	20.9	25.6	17.2
2015	21.3	26.2	17.3

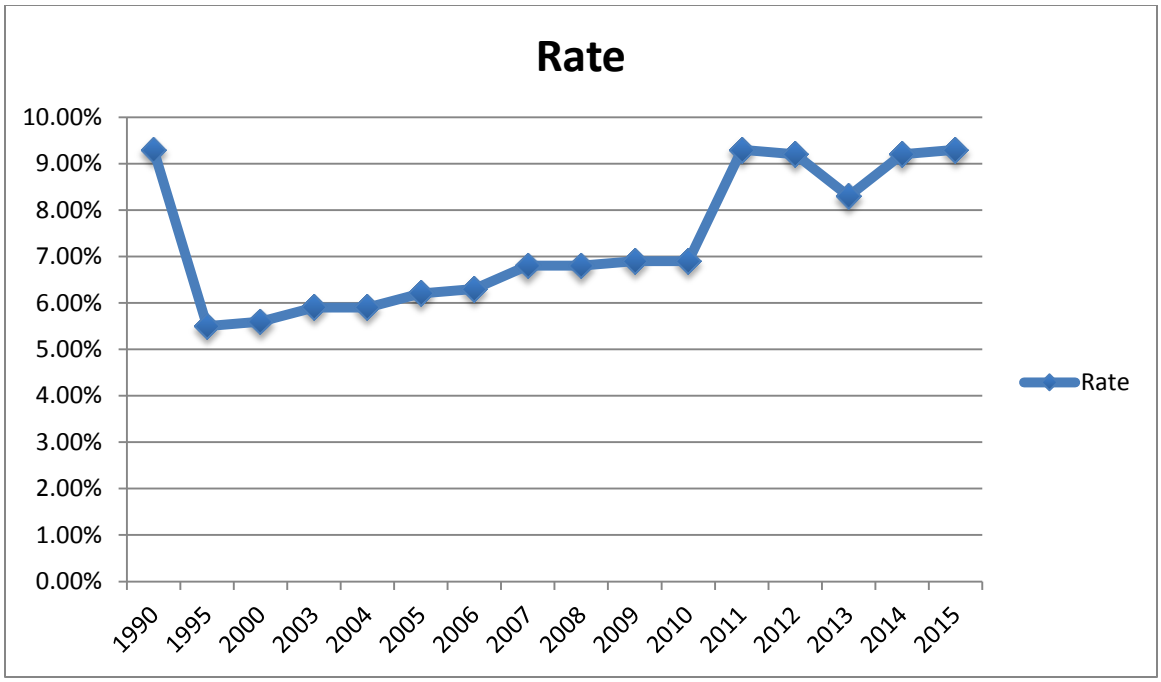


Trend: **Diabetes mortality increased from 1980 to 2002, but declined after that and is currently at a plateau. The disparity between men and women appears to be widening, with increased mortality in men.**

Prevalence (Connecticut)

Source: The State of Obesity

Year	Rate
1990	9.3%
1995	5.5%
2000	5.6%
2003	5.9%
2004	5.9%
2005	6.2%
2006	6.3%
2007	6.8%
2008	6.8%
2009	6.9%
2010	6.9%
2011	9.3%
2012	9.2%
2013	8.3%
2014	9.2%
2015	9.3%

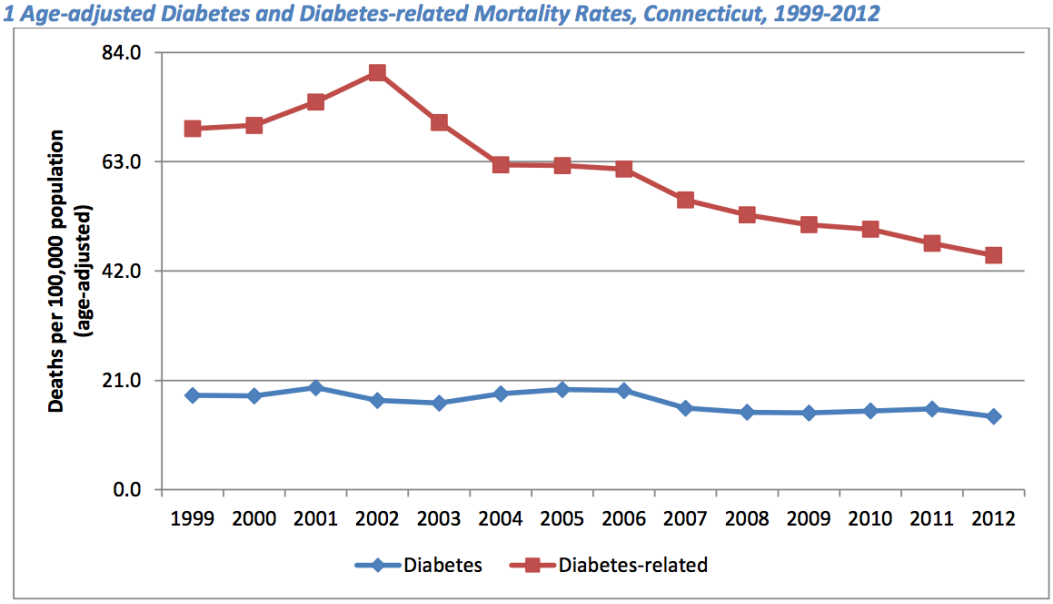


Trend: **The prevalence of diabetes has been increasing fairly consistently in Connecticut.**

Mortality (Connecticut)

Source: CT DPH Vital Records Mortality Files via [Connecticut Diabetes Statistics Report, 2016]

Figure 1 Age-adjusted Diabetes and Diabetes-related Mortality Rates, Connecticut, 1999-2012



Data Source: CT DPH, Vital Records Mortality Files, 1999-2012 data.

Trend: Mortality due to diabetes has been decreasing since 1999. Mortality due to diabetes-related causes has decreased more significantly

Implications

- Diabetes **prevalence has been increasing**, likely accompanying **parallel increases in obesity, high blood pressure, and heart disease.**
- Although the prevalence has been increasing, the **mortality is decreasing**, even though the most marked increase in prevalence is among older populations. This indicates that **more people are living with diabetes**, which may indicate that there is an **increased need for diabetes monitoring and treatment supplies (and affordable ones**).
- Connecticut's diabetes prevalence and mortality rates are on par with the nationwide rates.
- The **amplified decrease in diabetes-related deaths** shows that decreasing the prevalence of diabetes could have a **broader impact on overall health**.
- It's unclear why the **difference in diabetes incidence between men and women is widening.**
- We expect that the prevalence would be higher in older populations, but the increasing prevalence over time shows that **new lifestyle choices may be contributing to increased development of diabetes in middle aged and older adults.**

Interventions

a. Adaptive sports programs
Summary: Adaptive sports can benefit people with disabilities both emotionally and physically as they go through their regular lives. Participating in sports improves physical fitness (maintains activity level and teaches alternative ways to be healthy), provides skills that help with daily tasks (improved mobility, control of wheelchair/other aids), builds self-esteem, and creates social networks (avoiding isolation).
    - **Cooper RA. (2012) Impact of Adaptive Sports and Recreation on People with Disabilities (presentation). Link.**
      This presentation generally covers the issues at hand, such as the potential for **improving physical health (ex: cardiovascular fitness), maintaining a healthy lifestyle despite the decrease in activity level after disability, finding a social support network, and increasing confidence.** More citations are on the last slide.
    - **Martin J. (2011) Disability Youth Sport Participation: Health benefits, injuries, and psychological effects. *Sport Participation*. Link.**
      This was a review of the research on disabled youth participating in sports. It does not focus on adaptive sports, but most of the studies that it covers did involve programs specifically designed for children with disabilities. Some of the discussion focuses on the **physical benefits (improving muscle strength and cardiovascular fitness)**, but it also touches on the social aspects. For example, children with physical disabilities **preferred exercise in a group setting because**

it was more social and more motivating. Some studies found that there were **psychosocial benefits**, such as social engagement and support, which sometimes resulted in improved self-esteem. But **results in this area were mixed**.

- **Lankhorst, et al. (2015) Health in Adapted Youth Sports Study (HAYS): health effects of sports participation in children and adolescents with a chronic disease or physical disability. *Springerplus, 4*(796). Link.**
  This would have been the most relevant study, but it was only the protocol not the results. Might be **worth following for results**.
- **Hutzler Y, et al. (1993) Psychological benefits of sports for disabled people: a review. *Scand J Med Sci Sports, 3*. Link.**
  This review focuses on the effect that sports have on disabled people's psychological state. Specifically, it suggests that sports empower people to **feel competent and able**, which can **build self-esteem** and encourage them to **take control** and **be more active** .
- **Côté-Leclerc F, et al. (2017) How does playing adapted sports affect quality of life of people with mobility limitations? Results from a mixed-method sequential explanatory study. *Health and Quality of Life Outcomes*. Link.**
  This study was more recent but had similar results as the one above. They studied people who used wheelchairs and found that when they got involved in adaptive sports programs, their quality of life improved and they had better **self-esteem, increased social engagement/interpersonal relationships, and improved physical health.** With physical health, specifically, some people saw improvements, but others had more **injuries** that affected their daily life.

b. Workplace wellness programs

Summary: Not all workplace wellness programs are effective, but if they are well-designed, they can encourage employee participation, lifestyle changes, and reduce risk factors for diseases (and increase employee productivity, a win for the company.) The best programs encourage larger changes in workplace culture, and make healthy behavior more accessible. Programs should also target patients' specific lifestyle-related health risks, such as smoking and diet, and use a combination of education and carefully-planned incentives.

- **Mattke S, et al. (2013) Workplace Wellness Programs Study: Final Report. Link.**
  This report, commissioned by the DOL, is a very thorough look **(lots of good graphs and data!)** at the characteristics of workplace wellness programs, their effects on employees, and the pros and cons of incentives (which were one of the more controversial topics that arose in other studies). They frame the goal of these programs in terms of access to employees: workplace wellness programs can influence employees' behaviors at a time when they are **at risk for many health problems but early enough that lifestyle changes can make a difference**. Programs can manage both risk of disease and existing diseases. They found that it was a **challenge to get employees to participate consistently**, particularly when it involved an ongoing commitment (like changing habits), but when they did, the **outcomes were positive**.

- **Institute for Health and Productivity Studies. (2015) From Evidence to Practice: Workplace Wellness that Works. Link.**
  This report reviews characteristics of effective workplace wellness programs. It's very extensive and has **lots of citations** to other related studies.
- **Freundlich N. (2014) Do Workplace Wellness Programs Work? Yes, But it Depends… Link. (Inspired by findings of a study: Goetzel, et al. (2014) Do Workplace Health Promotion (Wellness) Programs Work? *JOEM, 56*(9). Link.)**
  For a workplace wellness program to be effective, it must **change the company's culture rather than just offering incentives for healthier behaviors**. This can include giving employees access to **time/resources to exercise, healthier food** in the cafeterias or vending machines**, stress reduction techniques** (yoga, walking trails).
- **Task Force on Community Preventive Services. (2010) Recommendations for Worksite-Based Interventions to Improve Workers' Health. *Am J Prev Med, 38*(2 Suppl). Link.**
  This report highlights the opportunities innate in workplace wellness programs: they reach a large population at reliable intervals, there is the opportunity for incentives, and the workplace provides a large social network for reinforcement.
- **Miller RM, et al. (2011) Effectiveness of a Workplace Wellness Program for Maintaining Health and Promoting Healthy Behaviors. *JOEM, 53*(7). Link.**
  This study looked at the effects of a workplace wellness program. This particular program involved **monetary incentives for good health behaviors, physical examinations, health education, and fitness classes**. They found that it was **very successful**, specifically with issues of weight, blood pressure, cholesterol, triglycerides, and glucose, along with lifestyle changes like increased activity and improved coping mechanisms for stress.
- **Soler RE, et al. (2010) A systematic review of selected interventions for worksite health promotion. The assessment of health risks with feedback. *Am J Prev Med, 38*(2 Suppl). Link.**
  The task force found that **"assessment of health risks with feedback" was an important addition to workplace health programs**. This involved assessing personal health habits/risk factors and using them to estimate risks of negative health consequences, with advice for how to improve these behaviors to avoid future sickness or death. This method could specifically help address smoking, seatbelt use, fat intake, blood pressure, and cholesterol levels.

c. COPD support groups/classes

Summary: Participating in COPD support groups or classes can help mitigate the emotional distress associated with the disease. It provides patients with a community of peers for advice and support, which can improve the patients' own health outcomes by giving them new strategies and encouragement.

- **Halding A, et al. (2010) 'Belonging'. 'Patients' experiences of social relationships during pulmonary rehabilitation. *Disabil Rehabil, 32*(15). Link.**

This study found that the social relationships and peer support at pulmonary rehabilitation made patients **feel like they belonged**, and like there were **others that were going through similar challenges who could empathize and offer advice**.

- **Brien SB, et al. (2016) Patient coping strategies in COPD across disease severity and quality of life: a qualitative study. *NPJ Primary Care Respiratory Medicine, 26.* Link.**
  This study wasn't specifically about COPD support groups, but it did identify a **need for better coping strategies and emotional support among COPD patients**, who found that their medical care wasn't enough to mitigate the full range of effects of the disease.
- **Marino P, et al. (2008) Impact of social support and self-efficacy on functioning in depressed older adults with chronic obstructive pulmonary disease. *Int J Chron Obstruct Pulmon Dis, 3*(4). Link.**
  This study also didn't focus on support groups, but it did find that feelings of **social support contributed to better management of COPD**. The authors hypothesize that feelings of **acceptance** and **control** come out of social support.

d. On-site PT for athletes with disabilities
Summary: Physical therapists (particularly ones who are specially trained in working with people who have disabilities) can teach disabled athletes important skills to safely participate in their sport.

- **Johnson BF, et al. (2004) Sports for Athletes with Physical Disabilities: Injuries and Medical Issues. Link.**
  This is a sports training manual that touches upon the benefits of having disability-specialized physical therapists for sporting events. It **doesn't mandate having on-site PT, but recommends it**. There are also suggestions for ways that a trained physical therapist can specifically help a disabled athlete: for example, they can **teach them how to safely fall in a wheelchair**.

COMMUNITY HEALTH NEEDS IMPLEMENTATION PLAN

Due to limited resources and the extraordinary cost of helping individuals with disabilities, Gaylord's implementation strategy and plan is focused on leveraging its existing programs, services, partnerships and resources to assist the target populations.

Goal #1: Pulmonary/COPD: Address the growing epidemic of COPD through community partnerships, education, support and programming.

Strategies for implementation:

- **Educate** the Community about COPD
    - Partner with the Wallingford Department of Health and Masonicare in a project called *Healthy Wallingford 2020* to focus on COPD.
        - Create educational flyers and distribute to the public at Celebrate Wallingford Festival in October 2017.
        - Educate the community about pulmonary issues and services to help them. This includes presentations at senior centers and local YMCAs that include peak flow screening as well as providing information on support groups and smoking cessation classes.
        - Develop a video series on Gaylord pulmonary education class that would be uploaded to YouTube so that the community could have access to these classes at no cost and improve their health area
        - On the inpatient side, Gaylord's care management department follows up pulmonary discharge 3 to 5 days later with a phone call to validate adherence and understanding of the patient's discharge plan and to ascertain if there are any issues. Issues are then referred back to the appropriate clinical liaison.

        Anticipated Impact:
            - Greater awareness in the community about COPD overall.
            - Increased knowledge of services and support systems available to people with COPD.
            - Increased quality of life post discharge.
            - Will conduct one community presentation on COPD and survey post to determine if those in attendance report increased knowledge of COPD resources.

- Expand **Services** for COPD
    - Expand hours in the Gaylord outpatient Pulmonary Rehab program to offer more classes to the community.

- Expand Gaylord's outpatient Pulmonary Rehab class offerings and footprint to accommodate the increased number of community members who need services.

  Anticipated Impact:

  - Increased ability to provide education to more people because of expanded space.
  - Increased number of patients who can benefit from Pulmonary Rehab because of more open appointments. Previous to expansion we were able to accommodate 18 patients in classes per week. Expansion should allow for 24 patients.
  - Increased health and quality of life for those with COPD who have attended Gaylord Pulmonary Rehab program. Evidenced through pre- and post- CRQ survey which measures quality of life for those with COPD.

- Expand **Support** Groups
  - Expand Gaylord pulmonary support group called Better Breathers.
  - Expanding Gaylord's COPD support group to a larger geographic area.

  Anticipated Impact:

  - Greater awareness in the community about COPD overall.
  - Increased opportunities for people to self-manage their disease and support one another through the Better Breathers support program. Program information shared with community resource organizations in Cheshire, Wallingford, Meriden, and North Haven. Re-registered with the American Lung Association as a listed certified Better Breathers support group.
  - Creating a larger support system for people with COPD who can have the opportunity to share their journey and health challenges.

Goal #2: Stroke: Improve inpatient direct care and educate patients and providers about the continuum of care.

Strategies for implementation:

- **Delivery of Care**
  - Reorganize Gaylord's patient care units to allow stroke patients to be cohorted on one unit which would reflect clinical best practices.
  - Create a plan for investigating and investing in technology that will assist the patient in their therapy sessions. (An example is BITS.) Increase the number of people accessing BITS and other technology by 10%.

- Expand telemetry into more patient care areas so that clinicians can more closely monitor cardiac function, utilize referring hospital protocols and insure the best outcomes for stroke patients. Expand telemetry to one additional patient care unit.
- Educate patients and families about all the resources available to them to insure the best outcome. Track CVA education post test scores and increase from baseline.
- Collaborate with Yale Neurology to improve clinical synergies in one of their areas (i.e. MS Clinic) to help improve patient outcomes.

Anticipated Impact:

- More coordinated continuum of care for stroke patients
- Increased level of expertise and evidence-based practice in the care and outcomes of this growing patient population
- Create synergies and collaboration among clinicians for the benefit of the patient from the acute care hospital setting through the outpatient services.

- **Education of patients and providers**
  - Host the community providers group monthly at Gaylord Hospital. The community providers group is comprised of home health agencies including skilled nursing facility and durable medical equipment providers that cover the state of Connecticut and provide services post discharge.
  - Hold and educational session at Gaylord for members of ACMA to learn more about CVA.
  - Educate referral sources on the continuum of care from acute care to LTACH to IRU to community to outpatient to tune-up clinic and then long-term follow-up by Gaylord hospital physicians
  - Educate community on CVA prevention/treatment including sharing the Gaylord CVA manual by placing it on the website as a free resource.
  - Host monthly support group.
  - Grow Peer Mentor program; expand inpatient coverage and introduce into outpatient program.
  - Expand marketing of Gaylord's CVA Tune-Up Clinic to serve persons post care and help them maintain optimum health.
  - Hold two CEU events
  - Expand Peer Support program to include Traurig House
  - Update the CVA educational manual with the most up-to-date resources and education by fiscal 2018 year end.

Anticipated Impact:

- Expand the awareness, education and support for patients, providers and referral sources through multiple avenues.
- Newly affected stroke patients will have peers in the community to help guide their recovery journey.

Goal #3: Wellness: Being proactive in getting the screenings and/or therapy needed can improve one's quality of life and lessen personal healthcare costs down the road. Gaylord seeks to educate patients and community members about clinical services that will allow them to maintain or increase function and improve quality of life. Focus will be on Physical Therapy and involvement in adaptive sports.

Strategies for implementation:

- **Screenings and Education**
  - Develop a schedule so that Gaylord Physical Therapy Orthopedics and Sports Medicine program can partner with more community events and activities such as races, walks and runs.
    - At these events our Physical Therapists would seek to educate participants on proper stretching, form and do on the spot injury screenings and speak to injury prevention.
    - Increase awareness of direct access to Physical Therapy and cost savings to the consumer.
  - Partner with local senior centers and YMCAs to offer falls/balance screenings.
  - Offer community lectures on healthy aging and issues they may encounter such as dysphagia.
  - Market Gaylord's community programs such as Aquasize and PREP (Post Rehab Exercise Program) which take place in both Wallingford and North Haven.
  - Expand education for teens regarding concussion prevention and expand frequency of our risk avoidance program ThinkFirst in the local school system.

    Anticipated Impact:

    - Decrease incidence of risky behavior by teens because of the ThinkFirst education.
    - Increase the knowledge within the community of the availability of effective, evidence-based treatment for orthopedic conditions.
    - Increase demand from patients for the PREP program

- **Sports Association expansion**
  - Expand the Gaylord Sports Association so that a larger geographic area is aware of the recreation and adaptive sport programs available to them.

- Develop a marketing plan to advertise adaptive sport offerings
- Partner with other adaptive sport providers in the area.
- Offer one (1) new program a year
- Increase focus on coach growth and development through funding and encouraging training opportunities.

Anticipated Impact:

- Increase the number of individuals with a disability served by Gaylord Sports Association by 10%.
- 70% of individuals who participate in the Sports Association will report increase physical benefits, social opportunities, and skill enhancement through the annual survey.

Appendix A

COMMUNITY HEALTH NEEDS ASSEESSMENT SURVEY – Advocacy Organizations

In March 2010, the U.S. Congress passed the Patient Protection and Affordable Care Act, that requires not-for-profit hospitals to conduct a Community Needs Assessment once every three years. To meet the new requirements, we must obtain community input. Because of the unique level of service provided by Gaylord Hospital, we define our community to include patients and past patients requiring post-acute level inpatient care for Spinal Cord Injury, Traumatic Brain Injury, Stoke, and Pulmonary/Ventilator Weaning.

We hope you will take a few moments to complete this brief survey. Your responses will be confidential and will help us to better identify the needs of the communities we serve. Thank you in advance.

1. *Please indicate what barriers exist, if any, in the community or at Gaylord for the population you advocate for? Check all that apply.*

Transportation	
Cost of Care/Insurance doesn't cover services	
Lack of Insurance	
Availability/accessibility of physicians who understand my special needs	
Physical limitations	
Services and resources not located locally	
Unaware of services	
Lack of care coordination among providers	
Lack of support/Patient Advocacy	
Other (Please specify)	

2. *What would you say are the greatest unmet needs of the communities for whom you represent?*

3. *What key improvements are needed in the community or from Gaylord to provide better healthcare for your constituency?*

4. *Other Comments?*

Please return your survey to: Gaylord Hospital, Department of Public Relations, 50 Gaylord Farm Road, Wallingford, CT 06492

COMMUNITY HEALTH NEEDS ASSEESSMENT SURVEY - Athletes

In March 2010, the U.S. Congress passed the Patient Protection and Affordable Care Act that requires not-for-profit hospitals to conduct a Community Needs Assessment once every three years. To meet the new requirements, we must obtain community input. Because of the unique level of service provided by Gaylord Hospital, we define our community to include patients and past patients requiring post-acute level inpatient care for Spinal Cord Injury, Traumatic Brain Injury, Stoke, and Pulmonary/Ventilator Weaning.

We hope you will take a few moments to complete this brief survey. Your responses will be confidential and will help us to better identify the needs of the communities we serve. Thank you in advance.

1. *Please indicate what barriers exist, if any, in accessing care you need to maintain your health? Check all that apply.*

Transportation	
Cost of Care/Insurance doesn't cover services	
Lack of Insurance	
Availability/accessibility of physicians who understand my special needs	
Physical limitations	
Services and resources not located locally	
Unaware of services	
Lack of care coordination among providers	
Lack of support/Patient Advocacy	
Other (Please specify)	

2. *What would you say are the greatest unmet needs of the communities for whom Gaylord provides services?*

3. *What are one or two key improvements that you feel are needed for Gaylord to provide better healthcare for our communities?*

4. *Other Comments?*

Please return your survey to: Gaylord Hospital, Department of Public Relations, 50 Gaylord Farm Road, Wallingford, CT 06492

COMMUNITY HEALTH NEEDS ASSEESSMENT SURVEY – Referral Sources

In March 2010, the U.S. Congress passed the Patient Protection and Affordable Care Act that requires not-for-profit hospitals to conduct a Community Needs Assessment once every three years. To meet the new requirements, we must obtain community input. Because of the unique level of service provided by Gaylord Hospital, we define our community to include referring hospitals.

We hope you will take a few moments to complete this brief survey. Your responses will be confidential and will help us to better identify the needs of the communities we serve. Thank you in advance.

1. *Please indicate what barriers exist, if any, in the community or at Gaylord for the population you refer to Gaylord? Check all that apply.*

Transportation	
Cost of Care/Insurance doesn't cover services	
Lack of Insurance	
Availability/accessibility of physicians who understand my special needs	
Physical limitations	
Services and resources not located locally	
Unaware of services	
Lack of care coordination among providers	
Lack of support/Patient Advocacy	
Other (Please specify)	

2. *What would you say are the greatest unmet needs of the communities for whom you represent?*

3. *What key improvements are needed in the community or from Gaylord to provide better healthcare for your constituency?*

4. *Other Comments?*

Please return your survey to: Gaylord Hospital, Department of Public Relations, 50 Gaylord Farm Road, Wallingford, CT 06492

Appendix B

Resources

The Internet contains a vast number of health-related resources. The list below is a starting point for users who are unfamiliar with websites or other resources intended for both the consumer and the health professional.

Brain Injury
American Brain Tumor Association - https://www.abta.org
Brain Injury Association of America - https://www.biausa.org
Brain Injury Association of Connecticut - http://www.biact.org
National Resource Center for Traumatic Brain Injury - http://www.tbinrc.com
Traumatic Brain Injury - http://tbi.org

Disabled Athlete
Adaptive Athletes - http://usadaptive.net/resources-for-adaptive-athletes
National Organization on Disability - https://www.nod.org

Pulmonary
American Association of Cardiovascular and Pulmonary Rehabilitation - https://www.aacvpr.org/Resources/Resources-for-Patients/Pulmonary-Rehab-Patient-Resources

Stroke
National Institute of Neurological Disorders and Stroke - https://www.ninds.nih.gov
National Stroke Association - http://www.stroke.org

Spinal Cord Injury
National Spinal Cord Injury Association - https://unitedspinal.org
National Spinal Cord Injury Association – Connecticut Chapter - http://www.sciact.org
Spinal Cord Injury Information Network - http://www.uab.edu/medicine/sci

Local Support Groups:

Acquired Brain Injury Patients Family & Caregiver Support Group at Gaylord Hospital
Open to all family and caregivers of current inpatients or recent Gaylord patients with an ABI.
Call Dorene Scolnic, LCSW, CCTSW for schedule (203) 679-3506.

Amputee Success Group at Gaylord Hospital
1st Thursday of every month from 5:00 p.m. - 6:00 p.m. Luscomb Inpatient Gym
Open to the Community. For more information Amputee Support Group (203) 741-3424.

Better Breathers at Gaylord Hospital
1st Thursday of every month from 1:00 p.m. - 2:00 p.m.
Cullen Board Room in Chauncey Conference Center
Open to the Community
For more information Helen Young, BS, RRT-NPS, RPFT or Lou Levine, BS, RRT-NPS, RPFT at (203) 741-3351.

Community Stroke Support Group
1st Thursday of every month from 3:30 p.m. - 4:30 p.m.
Jackson Ground Floor Atrium at Gaylord Hospital
For more information (203) 284-2875, intended for patients, families and peers.

Spinal Cord Injury Support Group
4th Monday of the month at 5:00 p.m. in the Luscomb gym at Gaylord Hospital
For more information, (203) 284-2875.