New Hampshire Disability and Public Health Needs Assessment
Acknowledgements

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Throughout the life of the project, we look forward to engage with many partners and allies as DPH strives to build on the foundations that have been laid in NH, so that we may see ever greater gains in health, inclusion, and quality of life for NH persons with disabilities.
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Introduction

The New Hampshire Disability and Public Health project (DPH) is a collaboration between the New Hampshire Division of Public Health Services and the Institute on Disability at the University of New Hampshire. The overarching goal of the collaboration is to promote and maximize health, prevent chronic disease, improve emergency preparedness, and increase the quality of life among people with disabilities. Specific program goals include: 1) Enhancing disability and public health program infrastructure and capacity; 2) Improving state level surveillance and monitoring; 3) Increased awareness of health-related disability policy initiatives; 4) Increasing health promotion opportunities for people with disabilities; 5) Improved access to health care for people with disabilities; 6) Improved emergency preparedness among people with disabilities; and 7) Effectively monitoring and evaluating program activities. The DPH is guided by the New Hampshire Disability Community Planning Group, which provides input on strategic and sustainability planning, methods for achieving program goals, objectives, and activities, and methods for leveraging resources and partnerships within the state.

In order to ensure that project activities target areas of greatest need in pursuit of the overarching goals, a needs assessment utilizing a variety of existing national and state-level data was conducted. Results of the needs assessment, presented in this report, serve multiple purposes, including the following:

- Present current prevalence rates of disability in NH by age group and disability type;
- Inform partners, stakeholders, people with disabilities and their families regarding core indicators of health of people with disabilities in NH;
- Establish baseline data for the DPH project to measure its progress over time toward the goal of maximizing the health of people with disabilities;
- Provide information about gaps in the available data and allow for strategic planning about the creation of new or expanded surveys; and
- Permit consideration of existing data sources that might be targeted to promote inclusion of disability screeners / identifiers.

The data analyzed for this needs assessment cover all age groups and come from several sources, including the United States Census, the Behavioral Risk Factor Surveillance System (BRFSS), the National Survey of Children with Special Health Care Needs (CSHCN), the Department of Education, and more. A benefit to utilizing multiple sources is, of course, more information. By stitching together data snapshots of people from different age groups captured through a variety of protocols, we can take a broader and more comprehensive view of people with disabilities in NH. At the same time, each source of data uses a unique definition of disability, data collection method, or set of criteria for including individuals into one group or another. So long as this caveat is understood, the inclusion of multiple sources is worthwhile for the breadth of findings it permits. In all cases throughout this assessment, statistics are accompanied by the sources of their origin.
Prevalence of Disability in NH

Prevalence rates are one available metric that help to determine levels of need and demonstrate the importance of including a disability perspective in public health programming and services within the state. Prevalence of disability means the percentage of the population with a disability at any given time. Information concerning the prevalence of disability in NH comes from data produced by the US Census, the BRFSS, CSHCN, and IDEA.

In NH, 21.6% of adults 18 and older experience a disability,¹ and this figure rises to 25.1% among civilian veterans of military service² (see Figures 1 and 2). According to the US Census, 11.2% of the state population (all ages) experiences a disability, which is slightly lower than the national average of 11.9%.¹ The next sections look more closely at disability prevalence among different age strata, specifically children and youth, transition age youth, adults of working age, and older adults.

Figure 1. Prevalence of disability among NH adults

![Figure 1](image1)

Figure 2. Prevalence of disability among NH civilian veterans

![Figure 2](image2)
According to the US Census, 6.8% of NH children under the age of 18 experience some type of disability. The US Census American Community Survey asks questions related to six types of disability:

- An individual is reported to have a hearing difficulty if s/he is deaf or has serious difficulty hearing;
- A vision difficulty is reported if an individual is blind or has serious difficulty seeing, even when using glasses;
- A cognitive difficulty is identified when an individual reports having difficulty remembering, concentrating, or making decisions as a result of a physical, mental, or emotional problem;
- Individuals who have serious difficulty walking or going up stairs are reported as having an ambulatory difficulty;
- A self-care difficulty is reported if an individual has difficulty bathing or dressing; and
- An independent living difficulty is identified when an individual reports difficulty functioning alone in the community (e.g., doctor visits, grocery shopping) because of a physical, mental, or emotional problem.

The prevalence of the six categories of disability among NH children and youth is shown in Figure 3, and is as follows: cognitive (82.9%), hearing (14.2%), self-care (12.7%), ambulatory (6.9%), vision (4.6%), and independent living (n/a – 0%). Please note that totals exceed 100% due to the experience of multiple disabilities by some individuals.

![Figure 3. Prevalence (%) of disability by type, below age 18](image-url)
The prevalence of children ages birth through two years who receive early intervention services under the Individuals with Disabilities Education Act (IDEA) Part C is 4.5% of the state population, which is higher than the US average of 2.8% of the population (see Figure 4).\(^3\) NH children ages 3 to 5 who are served under IDEA Part B represent 7.1% of the population, and those ages 6 to 21 comprise 9.6% of the state population (Figure 4).\(^4\) Prevalence rates for the different age groups are organized by gender and presented in Figure 5.\(^3\,^4\)

**Figure 4. Children served under IDEA, NH compared to US, % of population**

![Graph showing prevalence rates for different age groups in NH compared to US](image1)

**Figure 5. Children served under IDEA, % of NH population, by gender**

![Graph showing prevalence rates for different age groups and gender in NH](image2)
Among NH children of different age groups, the most frequently occurring types of disability that are served under IDEA are depicted alongside the national prevalence in Figures 6 and 7. For children ages three to five, speech or language impairment is most common (3.3%), followed by developmental delays (2.6%) and autism (0.5%). For children and youth ages 6 to 21, the most common type of disability served under IDEA is specific learning disabilities (4.0%), followed by other health impairments (1.8%) and speech or language impairment (1.4%).

Figure 6. Most frequent disability types, ages 3 to 5, % of population

Figure 7. Most frequent disability types, ages 6 to 21, % of population
A 2011 statewide census of students ages 3 to 21, conducted by the NH Department of Education,\textsuperscript{5} indicated that more than 29,000 reported a disability and received special education services. The most frequently occurring types of disability among students are shown in Figure 8 and include specific learning disabilities (36.5%), speech or language impairments (17.3%), other health impairments (17.2%), developmental delay (8.8%), emotional disturbance (7.7%), and autism (6.6%).

Figure 8. Most frequent disability types (%), NH students ages 3 to 21 with disabilities

The National Survey of Children with Special Health Care Needs (CSHCN) delineates four categories of need among minors, as shown in Figure 9. Among NH children ages 0 to 17, 20.9% have functional limitations, 38.7% have a condition that is managed with prescription medication alone; 16.1% have need for greater-than-routine use of health, mental health, or other services; and an additional 24.3% require more than routine services and prescription medication.\textsuperscript{6}

Figure 9. Type of Special Health Care Needs (%) among NH residents ages 0 to 17

\textsuperscript{5}NH Department of Education.


According to the CSHCN, the prevalence of special health care needs is higher among youth who are older. Figure 10 shows overall prevalence (19%) and rates among three age groups: 0-5 years (11.8%), 6-11 years (18.6%), and 12-17 years (25.3%). The amount of difficulty carrying out activities of daily living offers one estimate of degree of disability or ill health. Figure 11 shows the ratio of NH youth whose activities of daily living are consistently and often severely affected (21.5%), moderately affected (42.5%), and not at all affected (36%) by their health care needs.

Figure 10. Prevalence of special health care needs among youth, NH compared to US

![Bar chart showing prevalence of special health care needs among youth, NH compared to US]

Figure 11. NH minors (%) with Special Health Care Needs whose activities of daily living are affected

![Pie chart showing ratio of NH minors (%) with Special Health Care Needs whose activities of daily living are affected]
Transition age youth

Transition age youth are defined by the Interagency Working Group on Youth Programs as individuals between the ages of 16 and 24, and they note that programs supporting the transition to adulthood of youth with disabilities constitutes a particular challenge.\(^\text{7}\) In 2010, the NH sample of transition age youth respondents to the BRFSS (defined here as ages 18-24 because the BRFSS is not administered to minors) comprised 136 respondents, 2.3% of the total surveyed in NH.\(^\text{2}\) The data are weighted to better represent the actual experiences of the population, but given the small sample size, statistics presented for this group are best viewed as rough estimates. Confidence intervals for all BRFSS statistics cited for this age group are available in Appendix A.

Using the weighted BRFSS sample, 9% of NH’s population is between 18 and 24 years old, and 9.8% of persons in this age group experience disability. These figures are similar to the national average: 10% of the US population is between 18 and 24 years old, and, nationally, 11% of persons in this age group experience a disability.\(^\text{2}\)

Figure 12. Percent of youth ages 18-24 who experience disability, NH compared to US


**Working age adults**

In this document, the term working age refers to adults (from 18 years) who have not reached the age of retirement, defined by the US Social Security Administration as 65. The choice of terminology is not intended to imply that adults over the age of 65 cannot or do not remain active in the workforce.

Among NH adults of working age (18 to 64 years), 20.6% experience a disability. Type of disability, according to the six categories defined by the American Community Survey is shown in Figure 13. Working age adults in NH are most likely to have either a mobility limitation (47.6%) or a cognitive impairment (45.7%). Just over one third (34.4%) experience challenges with independent living, and about one quarter (24.1%) are deaf or have a hearing impairment. Self-care limitations affect 17.1%, and 13.1% are blind or visually impaired. The sum of the six categories of disability yields more than 100% (total = 182%), indicating that individuals may experience more than one type of disability. Currently, the data available do not allow a more detailed description of multiple conditions or challenges.

![Figure 13. Prevalence (%) of disability by type among NH adults of working age](image)

As adults age, the prevalence of disability increases, as evidenced in the sections of this report that present information about individuals who are 65 and older. Even within the working age population, differences may be found. For example, 13.1% of adults ages 18 to 44 experience disability, and this figure jumps to 25.5% among those who are ages 45 to 64.²
Older adults

NH adults ages 65 and older experience the greatest prevalence of disability compared to other age groups. Among older adults, 35.4% report having a disability. Figure 14 shows percentages by disability type, according to the six categories of the US Census American Community Survey. Older adults are most likely (59.2%) to report mobility limitations, followed by hearing impairment (48.5%). Independent living is a challenge for 35.8%. Cognitive challenges affect 22.6% of older adults in NH; disability interferes with self-care in 18.5%, and 16.9% experience visual impairment.

Figure 14. Prevalence (%) of disability by type among NH older adults
Access to Health Care

Compared to the general population, people who experience disability often face disparities concerning key indicators of health. *Healthy People 2020* defines health disparities as health differences that are based on social, economic, and/or environmental disadvantage. For example, individuals with mental health issues and/or cognitive, sensory, or physical disability often fare statistically significantly worse than the general population on variables such as the social determinants of health, participation in health promotion activities and behaviors, and access to health care.

*Healthy People 2020* has identified access to quality health services, including routine medical care and medical insurance, as a key factor in health status and health improvement. Access to health care is essential for both preventive and routine care, as well as for instances of acute need. The next sections consider variables related to health care access, such as insurance status, unmet health care needs, and routine oral and physical check-ups, among different age groups of the NH population.

**Children and youth**

Among children with special health care needs in NH, and their families, access to health care is slightly better than the national averages but still an area in need of improvement. Figure 15 summarizes three indicators of access to health care among NH youth. Just over six percent (6.3%) do not have a primary care provider and rely on the emergency department for their health services. More than one-third (33.8%) do not have adequate public and/or private health insurance to pay for needed care, and 23.6% of families pay $1000 or more out of pocket annually for their child’s medical expenses.

**Figure 15. Access to health care among Children with Special Health Care Needs**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>NH</th>
<th>US</th>
</tr>
</thead>
<tbody>
<tr>
<td>No primary care provider</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td>≥ $1000 out-of-pocket annually for child’s medical</td>
<td>24</td>
<td>22</td>
</tr>
<tr>
<td>Inadequate health insurance</td>
<td>34</td>
<td>39</td>
</tr>
</tbody>
</table>
As illustrated in Figure 16, unmet needs for specific health care services are experienced by 18.3% of NH families of children with special health care needs; 14% report difficulty getting referrals when referrals are needed. Finally, more than half (51%) do not receive the services that are necessary to assure appropriate transitions to adult health care, independent living, and employment.\(^6\)

**Figure 16. Lack of services among Children with Special Health Care Needs**

<table>
<thead>
<tr>
<th></th>
<th>Unmet health care needs</th>
<th>Lacking needed referrals</th>
<th>Inadequate services to effectively transition to adulthood</th>
</tr>
</thead>
<tbody>
<tr>
<td>NH</td>
<td>18</td>
<td>14</td>
<td>51</td>
</tr>
<tr>
<td>US</td>
<td>24</td>
<td>23</td>
<td>60</td>
</tr>
</tbody>
</table>

**Transition age youth**

The National Health Transition Center explains that “Health care transition refers to the time when a young adult moves from pediatric to adult health care”.\(^10\) Changes in providers often accompany changes to billing procedures and a young person’s increased independence and self-awareness in managing their health care needs. Although change can bring opportunities for new successes and rewards, it can also lead to significant gaps in access to proper and necessary health care.

The CSHCN (2009/10) shows that half (51%) of transition age youth do not receive the services that would successfully assist them to transition effectively to adult systems of care.\(^6\) Weighted data from the NH BRFSS for this age group should be interpreted with caution due to small sample size, but it provides a useful estimate of disparities experienced by transition age youth (see Figures 17 and 18).
In NH, more than two-thirds (68.4%) of young people with disabilities between the ages of 18 and 24 do not have adequate health insurance, and nearly half (47.9%) do not have a primary care doctor. Most (68.6%) also indicated they could not see a physician when they needed to because of cost (delayed care). 

Figure 17. Access to health care among NH youth of transition age

![Bar chart showing access to health care among NH youth of transition age](https://example.com/bar-chart.png)

Figure 18 shows that more than three-quarters (77.1%) of transition age youth with disabilities in NH report not receiving a physical check-up in the previous twelve months, and 60.7% had not been to the dentist or received any oral health care in the same period of time.

Figure 18. Rates of routine physical and dental care among NH youth of transition age

![Bar chart showing rates of routine physical and dental care among NH youth of transition age](https://example.com/bar-chart2.png)
Working age adults

Working age adults with disabilities in NH experience greater barriers accessing health care than same-age adults without disabilities. Disparities are greatest relative to oral health and the cost of needed medical care (see Figures 19 and 20). People with disabilities are slightly more likely to have a primary care provider (9.8%, compared to 11.9% without disabilities). However, more than a quarter of adults with disabilities (26.1%) experienced delays in receipt of care because they could not afford to see a doctor when needed at least once in the previous 12 months. Fewer than one tenth (9.5%) of people without disabilities reported the same. This may be related to the fact that more people with disabilities (16.1%) are without health insurance in NH than people without disabilities (12.8%).

Figure 19. Access to health care among NH adults of working age

Figure 20 shows that whereas 21.2% of adults without disabilities had received no dental care in the previous year, the figure jumps to 35.3% among adults with disabilities. Working age NH adults are marginally more likely to have had a physical check-up within the previous 12 months (although 32.4% of people with disabilities did not have a check-up in the last year, compared to 33.1% of people without disabilities).2

Figure 20. Rates of routine physical and dental care among NH adults of working age
Older adults

Fewer than 2% of older adults in NH report that they do not have any kind of health insurance (1.4% among older adults with disabilities; 1.3% among older adults without disabilities). Older adults with disabilities are about as likely as their peers without disabilities to indicate that they have a primary care provider: 3% of people with disabilities say they do not have a primary care provider, compared to 3.2% of people without disabilities. The cost of accessing care is slightly more challenging for older adults with disabilities (5% said they could not see a doctor when needed in the previous year due to cost) than for older adults without (3.3% reported the same). ² See Figure 21 for a summary.

Figure 21. Access to health care among NH older adults

Older adults with disabilities were a bit more likely to have had a physical check-up within the previous 12 months (11% with disabilities had not had a check-up, compared to 13% without disabilities). Greater disparities exist relative to oral health care among this age group. Figure 22 shows that nearly a third of older adults with disabilities (31.6%) had not received dental care in the previous 12 months, compared to about a quarter (23.8%) of older adults without disabilities.²

Figure 22. Rates of routine physical and dental care among NH older adults
Determinants of Health

Multiple factors contribute to the health of an individual, and studying specific determinants of health can help to clarify what makes some people healthy and others less so. Healthy People 2020 recommends considering the personal, social, economic, and environmental influences on health status. To this end, the next sections present data related to both social conditions (e.g., income, education, and employment) and individual behaviors.

Individual behaviors, such as diet, physical exercise, and tobacco use, can have a direct impact on health outcomes. Assessing the needs of NH residents with disabilities relative to these variables can help to focus and prioritize the delivery of certain health promotion campaigns and patient activation strategies.

Children and youth

Families of children with special health care needs in NH are more likely than other families to be poor. One third (32.7%) of families of children with special health care needs earn below 200% of the Federal Poverty Level (FPL), compared to 24.5% of other families (see Figure 23). The proportion of families who fall below the FPL is 11.2% for those with special health care needs, compared to 8.4% for those without children with special health care needs. An additional 21.5% of families of children with special health care needs exist at or within 199% of the FPL, compared to 16.1% of families without such children.

Figure 23. Social determinants of health among NH families of Children with Special Health Care Needs

FPL = Federal Poverty Level
Children ages 6 to 17 with special health care needs, compared to other children of the same age group, were slightly less likely to exercise in the past seven days (8.6% compared to 7.8% of children without special health care needs). Similarly, children ages 10 to 17 with special health care needs were much more likely to have a Body Mass Index (BMI) categorizing them as obese (17.3% compared to 11.1%). Also, children ages 0 to 17 with special health care needs were more likely to be exposed to smoking at home (30.6% had at least one smoker in the household, compared to 25.8% of households without a child with special health care needs). A summary appears in Figure 24.

Parents reported their children’s overall health status, and among children ages 0 to 17, 7.1% of those with special health care needs were reported as having “fair” or “poor” health, compared to less than 1% (0.7%) of those without special health care needs. School absences were also disproportionately reported by children with special health care needs. Among children of school age (ages 6 to 17), 13.1% of children with special health care needs missed more than 11 school days in one year due to illness or injury. Only 3% of children without special health care needs missed as much school for health reasons. These statistics are shown in Figure 25.
Transition age youth

In NH, transition age youth with disabilities face disparities compared to same age peers without disabilities in each of the three social determinants of health considered in the present needs assessment (see Figure 26). One-third of young adults (ages 18 to 24) with disabilities report annual income below $25,000, while just under 23% of young adults without disabilities report the same. More youth with disabilities (10.8%) have not pursued education beyond high school than those without disabilities (6.8%).

Regarding employment, weighted 2010 BRFSS data are shown in Figure 26 and suggest that among transition age youth in NH, employment for wages is slightly more common among people of the age group with disabilities (59.8%) than without (51.3%). This is encouraging, as it does not follow the same pattern found for employment among adults of working age and older adults. To assure the accuracy of this trend (since the sample size was very small), future surveillance (using BRFSS or other available sources) is warranted.

Turning to individual determinants of health and healthy behaviors, data in Figure 27 show that transition age youth with disabilities in NH were less likely than their same age peers to have exercised in the past 30 days: 21.3% of those with disabilities said they had not exercised during that time frame, while 15.4% of those without disabilities had not done so. Regarding body weight and Body Mass Index (BMI), even greater disparities were evidenced. Just over one tenth (11.2%) of youth without disabilities were characterized as obese, compared to 63.6% of those with disabilities. Smoking was less common among transition age youth with disabilities: 39.1% reported being current smokers, compared to 68.5% of youth without disabilities.
Finally, more people with disabilities in this age group (11.5%) than without (2.1%) rated their overall health to be either “fair” or “poor.” Transition age youth with disabilities reported more unhealthy days in the previous month (30 days) than those without disabilities, including the number of days on which their physical health was not good (9.1 for youth with disabilities, compared to 4.5 without) and the number of days their mental health was not good (8.6 for youth with disabilities, compared to 9.0 without). Figure 28 depicts these findings.

Figure 28. Self-reported physical and mental health among NH youth of transition age
Working age adults

Substantial disparities exist between NH adults of working age with and without disabilities relative to individual determinants of health. Figure 29 shows that adults with disabilities are much more likely than those without disabilities to have annual income less than $25,000 (30.3% compared to 10.3%) and are more likely to lack education beyond a high school diploma (7.7% compared to 3.1%). People with disabilities are also considerably less likely to hold employment for wages (43.7% compared to 68.5%).

Figure 29. Social determinants of health among NH adults of working age

Adults with disabilities also tend to exercise less and are more likely to be obese. Among those with disabilities, 31.9% had not exercised in the previous 30 days (compared to 15% of those without disabilities), and 40.6% of adults with disabilities are obese (compared to 21.8%). The prevalence of tobacco smoking is also higher among working age adults with disabilities: 48.3% currently smoke, compared to 39.8% without disabilities. See Figure 30.

Figure 30. Exercise, obesity, and smoking among NH adults of working age
Self-reported “fair” or “poor” health was much more likely among working age adults with disabilities (34.4%) than without (3.9%), and those with disabilities reported more physically and mentally unhealthy days (see Figure 31). People with disabilities characterized their health as “not good” almost half of the time when asked about the previous 30 days. They experienced 14.5 days of poor physical health (compared to 7.7 days for people without disabilities) and 14.1 days of poor mental health (compared to 5.2 days for people without disabilities).

Figure 31. Self-reported physical and mental health among NH adults of working age

Figure 32 shows that working age adults with disabilities are twice as likely to experience injury from falls than adults without disabilities (35.1%, compared to 16.2%).

Figure 32. Injury resulting from falls among NH adults of working age
**Older adults**

More than half (54.1%) of older adults in NH with disabilities have an annual income of less than $25,000 (compared to 28.9% of older adults without disabilities). This age group tends to be well educated (89.7% of people with disabilities report at least some college, compared to 94.4% of people without disabilities). Although many adults over 65 years of age leave the workforce, others continue to hold jobs. More older adults without disabilities (12.5%) were employed for wages at the time of the BRFSS survey than older adults without disabilities (6.8%), as shown in Figure 33.²

Older adults with disabilities fare less well regarding individual determinants of health than older adults without disabilities in NH (see Figure 34). About 20% of older adults without disabilities said they had not exercised in the previous 30 days, but this number more than doubles to 44% among older adults with disabilities. Likewise, rates of obesity are higher among individuals with disabilities (30% compared to 18.8%). Also, older adults with disabilities are slightly more likely to be current smokers (14.8%) than those without disabilities (11.5%).²
Like people with disabilities among other age groups, older adults experiencing disabilities were much more likely (44.2%) to report their overall health as “fair” or “poor” than those without disabilities (8.2%). In the previous 30 days, older adults experienced more physically unhealthy days (16.7, compared to 9.1 days for people without disabilities) and more mentally unhealthy days (13.7, compared to 7.8 days for people without disabilities). Figure 35 summarizes these disparities.

Figure 35. Self-reported physical and mental health among NH older adults

Figure 36 shows that older adults with disabilities are three times more likely to experience injury from falls than older adults without disabilities (33.3%, compared to 10.4%).

Figure 36. Injury resulting from falls among NH older adults
Health Care Utilization

Evidence-based clinical preventive screenings are an important element in detection and prevention of illness and poor health among all members of the population. Nationally, disparities have often been found between provision of clinical preventive screenings to people with and without disabilities. The next sections consider NH residents with and without disabilities and the likelihood that recommended screenings are being accessed by the different age groups.

The available data for health care utilization among NH residents are not comprehensive. Although health data are monitored by many sources within the state, disability identifiers are not always present. In order to improve capacity to monitor the public health of people with disabilities in NH, screening for the presence of disability needs to occur at more points of service and administrative sources (see Conclusion & Recommendations, p. 38).

Children and youth

Although general immunization rates for NH children are not available at this time for comparison of disability with non-disability groups, data does exist for tetanus boosters, meningitis vaccines, and, for teen girls, human papilloma virus (HPV) shots (see Figure 37). NH children with and without disabilities had received tetanus boosters since turning 11 and had been vaccinated against meningitis at about the same rates (tetanus or Tdap: 9.4% with disabilities, compared to 10.3% without; meningitis: 61.2% with disabilities, compared to 61.3% without). Girls between the ages of 12 and 17 with disabilities, however, were much less likely (60.2%) to have been immunized against the sexually transmitted infection, HPV, than girls of the same age without disabilities (80.5%).

Figure 37. Rates of tetanus, meningitis, and HPV vaccinations among NH children

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Disability
No disability
**Transition age youth**

Among NH youth of transition age, those with disabilities appeared slightly less likely to have been tested for HIV (19%, compared to 20.8% among youth without disabilities) and slightly less likely to have been screened for diabetes with high blood sugar testing (21.6%, compared to 24.5% of those without disabilities). The greatest disparity was evidenced regarding the number of young women of transition age who had received a pap test at any time during the past three years. Young women with disabilities said “yes” only one third of the time (33.3%) while 54.9% of young women without disabilities said “yes.” See Figure 38.

**Figure 38. Clinical preventive screening rates among NH youth of transition age**

![](chart.png)

**Working age adults**

Several questions about recommended clinical preventive screenings are asked to working age adults as part of the BRFSS survey, and disparities in rates of utilization among adults with and without disabilities were found in some but not all categories (see Figure 39 for a summary). Women were less likely than men to have received indicated gender-specific screenings, which suggests that women's health initiatives could work to improve their inclusion of people with disabilities in NH.

Women between the ages of 18 and 64 were less likely to have received a pap test in the previous three years if they had a disability (83.2%) than if they did not have (87.2%). They were similarly less likely to have had a mammogram. Women over the age of 40 with disabilities said they had received a mammogram in the previous two years 78% of the time, compared to 80% of the time for women without disabilities. Among women ages 50 to 64, the rates increased slightly for those with and without disabilities, but women with disabilities still showed lower rates: roughly 82% of women with disabilities had received a mammogram in the previous two years, compared to roughly 85% of women without disabilities.
Men over the age of 40 were asked whether they had received a Prostate-Specific Antigen (PSA) test in the previous two years, and men with disabilities were slightly more likely to respond affirmatively (48.3% compared to 45.7% of men without disabilities).

Both genders over the age of 50 were asked whether they had ever had a sigmoidoscopy or a colonoscopy. Again, people with disabilities were more likely to say they had received the screening (74.4%) than people without (70.7%).

Figure 39. Rates of routine cancer screenings among NH adults of working age

![Figure 39. Rates of routine cancer screenings among NH adults of working age](image)

Figure 40 shows that NH adults of working age with disabilities were also more likely than their peers without disabilities to have had an HIV test (38.9% compared to 34.6% among people without disabilities) and to have been screened for high blood sugar (64% compared to 51.1% among people without disabilities).²

Figure 40. Screening rates for HIV and high blood sugar (diabetes) among NH adults of working age

![Figure 40. Screening rates for HIV and high blood sugar (diabetes) among NH adults of working age](image)
Older adults

Disparities in utilization of clinical preventive screenings persist among older adults with and without disabilities in NH. For issues of women's health, the gaps are greater among this age group than among adults of working age. As depicted in Figure 41, whereas 68% of older women without disabilities reported a pap test in the previous three years, only 60% of women 65 and older with disabilities reported the same. Similarly, fewer women with disabilities had received a mammogram in the previous two years (76.8% compared to 85.2% of women without disabilities).²

Males of this age were also a bit less likely than their same age peers to have a PSA test in the previous two years. Older adult men with disabilities had the test 73.5% of the time, while older adult men without disabilities reported having the test 77.7% of the time.²

Older adults with and without disabilities in NH underwent colonoscopy or sigmoidoscopy at similar rates: 80% of older adults with disabilities had the test, while nearly 81% of older adults without disabilities did the same.²

Figure 41. Rates of routine cancer screenings among NH older adults
Older adults with disabilities were more likely than those without disabilities to receive other clinical preventive care measures in NH. Figure 42 shows the data. Flu shots were given to 76.2% of older adults with disabilities, compared to 68.5% of older adults without. Similarly, pneumonia vaccines were given to almost 78% of older adults with disabilities, compared to about 68% of those without disabilities. Finally, high blood sugar tests were received by 73.9% of older adults with disabilities and by only 68.3% of older adults without disabilities.2

Figure 42. Other clinical preventive care among NH older adults

![Bar chart showing the percentages of older adults with and without disabilities who received flu shots, pneumonia vaccines, and high blood sugar tests.](chart.png)
Health Outcomes

Health outcomes are influenced by the presence and interaction of multiple variables, including individual factors like genetics and behavior, and systems factors like access to clean, safe environments, and access to quality, culturally sensitive health care.\textsuperscript{13}

Heart disease and stroke are among the leading causes of death among adults in the US.\textsuperscript{14} Disparities in these and other health outcomes (i.e., asthma and diabetes) are the focus of the next section of this report. Disproportionately high rates of chronic disease among people with disabilities suggest significant inequities regarding both quality of life and life expectancy.

Children and youth

Child health outcomes among the general NH population are monitored, and several data sources are available. However, as with the health care utilization variables, these outcomes are not yet able to be analyzed by disability status. Prevalence of injury and asthma were among the only conditions that could be considered from a disability perspective, and that information is summarized in Figure 43.

Children ages 0 to 5 in NH with special health care needs are more likely to need medical attention due to injury (22.8%) than children without special health care needs (10.8%). Asthma, on the other hand, affects more children without special health care needs (among ages 0 to 17, the prevalence is 95.2%) than children with special health care needs (61.8%).\textsuperscript{11}

Figure 43. Prevalence of injury and asthma among NH children ages 0 to 5
Transition age youth

Similar to children under the age of 18, young adults of transition age with disabilities are less likely to have asthma (38.5%, compared to 61.5% of transition age youth without disabilities). However, more youth between 18 and 24 years of age have diabetes or pre-diabetes if they also have disabilities (14.4%) than if they do not (2.7%). See Figure 44.

Figure 44. Prevalence of asthma and diabetes among NH youth of transition age

Working age adults

Much of the data to this point in the needs assessment has demonstrated disparities regarding access to health care and determinants of health between working age adults with and without disabilities in NH. It follows, then, that disparities are also present when considering health outcomes among those populations. People with disabilities are substantially more likely than people without disabilities to suffer heart disease, stroke, asthma, and diabetes. The rates are detailed in Figure 45.
NH adults of working age with disabilities are seven times more likely to suffer heart disease (7.4%, compared to 1.1%) and about four times more likely to suffer stroke (2.6%, compared to 0.6%) than adults without disabilities. Compared to same age peers without disabilities, they more often have asthma (23.7%, compared to 13.7%) and are about three times more likely to have diabetes or pre-diabetes (16.1%, compared to 5.7%). The latter figure does not include diabetes connected to pregnancy.  

Figure 45. Health outcomes among NH adults of working age

![Health outcomes among NH adults of working age](image)

**Older adults**

Although the prevalence of certain health outcomes increases for the general population as adults age, disparities persist, and older adults with disabilities experience higher rates of all four health outcome variables considered. Older adults with disabilities in NH exhibit about double the rates of older adults without disabilities relative to both heart disease (20.2%, compared to 11.7%) and stroke (11.7%, compared to 5.5%). They are also more likely to have asthma (17.3%, compared to 9%) and diabetes (28.4%, compared to 17%).  

Figure 46. Health outcomes among NH older adults

![Health outcomes among NH older adults](image)

See Figure 46.
Emergency Preparedness

In 2007, NH data from the BRFSS included the optional module regarding general household preparedness for emergencies. A comparison of the responses of NH residents with and without disabilities showed some similarities and also some significant differences. In general, people with disabilities report they are about as well (or poorly) prepared as the rest of the population to handle a large-scale disaster or emergency; that is, a little more than half of the respondents say they are “somewhat” prepared, while one quarter say they are “well prepared,” and the remainder admit being “not prepared at all.”

Just under half of people (with and without disabilities) do not keep a 3-day supply of water on hand, but more than 80% do maintain a 3-day supply of non-perishable foods. Despite the fact that people with disabilities are more likely to report the use of prescription medications, they are also more likely to have a 3-day supply of needed medications on hand (less than 8% do not have a 3-day supply, compared to about 10% of people without disabilities).

Compared to NH residents without disabilities, individuals with disabilities are more likely to have an evacuation plan in place. Figure 47 shows that about a quarter (25%) of adults between the ages of 18 and 64 report having a plan. The number is lower among their peers of transition age (15.5%) and working age (17.8%). Older adults with and without disabilities are more likely than the other age groups to have an emergency plan, and there is virtually no disparity relative to disability status (28.4% with disability, 28% of those without disability).

Figure 47. Proportion of NH adults who report having an emergency evacuation plan
Regarding the eventuality of a mandatory evacuation, more people with disabilities (just under 10%) said that they would not evacuate if public authorities announced a need to leave the community (compared to 6% of people without disabilities). Respondents were asked to give the main reason they might not evacuate if told it were necessary. The six main reasons given are shown in Figure 48. Reasons given by people with disabilities included (in descending order) concerns about pets, lack of trust in public officials, concerns about property, family safety, personal safety, and lack of transportation. It is important to note that although these six reasons were most often cited, nearly half of the responses were categorized as “other.”

**Figure 48. Main reasons NH residents might not evacuate their homes in an emergency**

![Bar Chart](chart.png)

* Not including 45.5% whose answers were categorized as “other”
** Not including 54.5% whose answers were categorized as “other”

When asked how they would communicate with relatives and friends in a large-scale emergency, people with disabilities were more likely to say they would use a land-line home telephone (27% compared to 16% of people without a disability) and less likely to say they would a cell phone (65% compared to 79%). NH residents with and without disabilities reported that they would be most likely to rely on radios to get information from authorities (58% and 60%, respectively), followed by television (23% and 21%, respectively); however, people without disabilities were slightly more likely (5%) than people with disabilities (3%) to say they would turn to the internet for such communications.
Conclusion & Recommendations

Based on the findings and results reported in this needs assessment, the NH Disability and Public Health project recommends the following actions be undertaken to address disparities in health and health care experienced by NH residents with disabilities:

- Continue surveillance of health indicators and determinants of health, access to health care, health care utilization, and health outcomes for NH residents with and without disabilities. To this end, include disability identifiers and screeners more broadly on administrative forms and other state data sources, so that health disparities can be more successfully identified, monitored, and addressed.

- Identify or generate sources for data regarding health care utilization and clinical preventive screenings for children, youth, and transition age youth. These data are currently lacking because disability identifiers have not always been included for this population. The prevalence of children, youth, and transition age youth with disabilities in NH suggests the importance of including disability screeners on sources of health data for this age group.

- Analyze data by county or by NH Public Health Region in order to generate more locally-based information on health disparities among NH people with disabilities. Generate and use local profiles to inform health promotion campaigns and prioritize disability awareness trainings.

- Develop a strategic plan for NH to address the health disparities experienced by people with disabilities. Infuse a disability perspective into current public health promotion campaigns and activities in order for improvements to have a population-wide impact.

- Ensure opportunities for people with disabilities to access and participate in public health promotion activities and wellness initiatives. Assessments and training about cultural awareness and physical accessibility are two examples of strategies that can help to improve levels of inclusion.

- When health programs and services are available, accessible, and appropriate for people with disabilities, ensure that communication and messaging travel through channels and in formats that will reach all targeted audiences.

The Disability and Public Health project is committed to pursue these and other goals to maximize the health and overall quality of life for people with disabilities in NH. The project may offer technical assistance to other organizations that can help to advance these goals, and we welcome opportunities for future collaboration that will enable NH to reduce statewide health disparities and promote wellness for all.
References


## Appendix A

Confidence Intervals for BRFSS data regarding Transition Age Youth (ages 18-24)

<table>
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<tr>
<th>Figure</th>
<th>Page</th>
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- [ ] Advocate or Family member of person(s) with disability

THE DISABILITY AND PUBLIC HEALTH NEEDS ASSESSMENT...

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