Olmstead Plan: Baseline Data for Current Care

Health Care Research and Quality

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For more information contact:

Minnesota Department of Human Services
Health Care Research and Quality
P.O. Box 64986
St. Paul, MN 55164-2648
651-431-2648

Executive Summary

On January 28, 2013, Governor Mark Dayton issued an executive order establishing an Olmstead Sub-Cabinet to develop and implement a comprehensive Minnesota Olmstead Plan. The main purpose of the Olmstead Plan is to move the state forward, towards greater integration and inclusion for people with disabilities.

In accordance with objective 2G under the Healthcare and Healthy Living section of the Olmstead Plan[1], the Health Care Research and Quality (HRQ) Division within the Minnesota Department of Human Services has established baseline data for current care of people with disabilities. Specifically, baseline data for health care service use are being reported for medical, dental, chiropractic, and mental health care, for persons with and without disabilities enrolled in Minnesota's Medical Assistance (MA) program. The source of the data in this report is Minnesota Health Care Programs paid claims data, which does not include Medicare claims data.

HRQ selected several measures of health care utilization from the Healthcare Effectiveness Data and Information Set (HEDIS). HEDIS is a tool used by more than 90 percent of America's health plans to measure performance on important dimensions of care and service. HRQ also created measures for chiropractic care and certified peer support services.

Specific measures were chosen for three age groups: children aged 0-20, adults aged 21-64, and seniors aged 65 and older. For each measure examined, the rate of service use by MA enrollees with disabilities was compared with the rate of service use by MA enrollees without disabilities.

The findings are summarized below:

- Across all age groups, 48.3% percent of all comparisons (14 out of 29 comparisons) showed significantly *greater* service use among persons with disabilities than persons without disabilities.
  - For children, this percentage was 45.5% (5 out of 11 comparisons).
  - For adults under 65, this percentage was 63.6% (7 out of 11 comparisons).
  - For seniors 65 and older, this percentage was 28.6% (2 out of 7 comparisons).

- Across all age groups, 20.7% percent of all comparisons (6 out of 29) showed significantly *less* service use among persons with disabilities than persons without disabilities.
  - For children, this percentage was 27.3% (3 out of 11 comparisons).
  - For adults under 65, this percentage was 9.1% (1 out of 11 comparisons).
  - For seniors 65 and older, this percentage was 28.6% (2 out of 7 comparisons).

- Across all age groups, 31.0% percent of all comparisons (9 out of 29 comparisons) had non-significant differences in service use between the disabled and non-disabled populations.
  - For children, this percentage was 27.3% (3 out of 11 comparisons).
  - For adults under 65, this percentage was 27.3% (3 out of 11 comparisons).
  - For seniors 65 and older, this percentage was 42.9% (3 out of 7 comparisons).

[1] The approved version of the Olmstead Plan as of November 2013 can be seen at the following location: Olmstead Plan

In general, MA enrollees with disabilities used health care services at rates equal to or higher than MA enrollees without disabilities. This trend was more apparent among adults under 65, than among children and seniors over 65.

Introduction

On January 28, 2013, Governor Mark Dayton issued an executive order establishing an Olmstead Sub-Cabinet to develop and implement a comprehensive Minnesota Olmstead Plan. The main purpose of the Olmstead Plan is to move the state forward, towards greater integration and inclusion for people with disabilities.

This report presents baseline data for current health care of people with disabilities, in accordance with Objective 2G under the Healthcare and Healthy Living section of the Olmstead Plan. The Health Care Research and Quality (HRQ) Division of the Department of Human Services selected utilization measures of four different types of health care: medical, dental, chiropractic, and mental health. These measures are reported for persons enrolled in the Medical Assistance (MA) program. Rates of health care service use by MA enrollees with disabilities, or who are very likely to have disabilities, are compared with rates of service use by MA enrollees without disabilities.

Overview of Population

The population in this report includes all individuals who were enrolled in the MA program for at least one month during Calendar Year 2013. Individuals were placed into one of three age groups, according to their age as of December 31, 2013. Individuals aged 0-20 were classified as children. Individuals aged 21-64 were classified as adults. Finally, individuals 65 and older were classified as seniors.

MA enrollees were categorized by disability status, with each individual classified as either having a disability, or not having a disability. The classification of an individual by disability status was performed based on the eligibility type associated with MA enrollment, and the score the individual received on an algorithm used by DHS to identify persons who are highly likely to have a disability.

Additionally, the definition for disability included additional components for the children and seniors. Specifically, children were classified as having a disability if they had a paid Minnesota Health Care Programs claim during Calendar Year 2013 with one or several specified diagnosis codes or billing codes indicating a disabling condition or functional limitations. Seniors aged 65 and older were classified as having a disability based on scores on an assessment of their ability to carry out activities of daily living. Details of all three age-specific disability definitions can be found in Appendices A- C.

Overview of Utilization Measures

This report includes 17 measures of health care service use selected by HRQ based on their relevance to the domains of care specified in the Olmstead Plan. Fifteen measures in this report were developed by the National Committee for Quality Assurance (NCQA) and are known as Healthcare Effectiveness Data and Information Set (HEDIS) measures. HEDIS is a national set of standardized performance measures originally designed for the managed care industry. HEDIS is a tool used by more than 90 percent of America's health plans to measure performance on important dimensions of care and service.

For more information on methods and technical specification of HEDIS measures, see the link below[2] from the National Committee for Quality Assurance (NCQA). Importantly, HEDIS is considered the gold standard in health care performance measurement. The 15 HEDIS measures included in this report are as follows:

[2] These materials can be seen at the following location: Measuring quality. Improving health care

- Adults Access to Preventive/Ambulatory Health Services (AAP)
- Comprehensive Diabetes Care (CDC)
- Colorectal Cancer Screening (COL)
- Cholesterol Management for Patients With Cardiovascular Conditions (CMC)
- Breast Cancer Screening (BCS)
- Annual Dental Visit (ADV)
- Well-Child Visits in the First 15 Months of Life (W15)
- Well-Child Visits in the Third, Fourth, Fifth and Sixth Years of Life (W34)
- Adolescent Well-Care Visits (AWC)
- Children and Adolescents' Access to Primary Care Practitioners (CAP)
- Childhood Immunization Status (CIS)
- Human Papillomavirus Vaccine for Female Adolescents (HPV)
- Appropriate Treatment for Children With Upper Respiratory Infection (URI)
- Follow-Up After Hospitalization for Mental Illness: 7-Days (FUH-7 Days)
- Follow-Up After Hospitalization for Mental Illness: 30-Days (FUH-30 Days)

There were a number of factors that led HRQ to choose these particular HEDIS measures for certain age groups in this report. First, while there are many HEDIS measures, DHS currently only reports on a subset of 26 of these measures. DHS does not report on any of the hybrid HEDIS measures, which require resources for medical chart review. Second, many HEDIS measures are age-specific, and are not appropriate to report for all age groups. For example, the HEDIS measure "Childhood Immunization Status" references only children who are two years of age, and is not reported for adults or seniors. Similarly, the HEDIS measure "Colorectal Cancer Screening" is only reported for individuals who are between 50 and 75 years of age.

Finally, HRQ chose to focus on measures of the use of preventive, primary care, and screening services. These measures are consistent with the Olmstead Plan goals to support overall good health of people with disabilities, and to increase the health of people with disabilities so that the rates of chronic diseases such as heart disease and diabetes are comparable to the rates of those people without disabilities.

One domain of care that is explicitly mentioned in the Olmstead Plan, chiropractic care, did not have an associated HEDIS measure. Consequently, HRQ developed a measure for the use of chiropractic care that measures how many persons received an evaluation or a manipulation from a chiropractor over the course of a calendar year.

This report also includes a measure of the utilization of Certified Peer Support Services for mental health that was developed by HRQ, and is reported for adults under 65. A full description of Certified Peer Support Services can be found on the DHS website[3]. The number of MA enrollees receiving Certified Peer Support Services during Calendar Year 2013 was extremely small. However, individuals with disabilities were much more likely to receive these services than individuals without disabilities (see Figure 10).

[3] Certified Peer Support Services

Limitations

This report contains limitations that should be noted with respect to the interpretation of the report. Importantly, the source of the data in this report is Minnesota Health Care Programs paid claims data, which does not include Medicare claims data. Therefore, for persons who are dually enrolled in both MA and Medicare, use of health care services that are covered by Medicare may be underreported. This underreporting is expected to impact the rates reported for persons with disabilities in this report, but not the rates for persons without disabilities.

It should also be noted that this report addresses issues involving service use, which is not directly correlated with healthcare access. Therefore, conclusions about differences in healthcare access cannot be obtained from observation of differences in service use.

For More Information

For additional information, please contact Virginia Zawistowski at virginia.zawistowski@state.mn.us or Karen Schirle at karen.schirle@state.mn.us.

Table 1. Health care service use measures for children aged 0-20, Calendar Year 2013

Measure	Service use rates		Number of persons in numerator		Number of persons in denominator	
	Disability	Non-Disability	Disability	Non-Disability	Disability	Non-Disability
Well-Child Visits in the First 15 Months of Life	55.0%	57.0%	400	7,073	727	12,418
Well-Child Visits in the Third, Fourth, Fifth and Sixth Years of Life†	56.5%	60.1%	3,505	20,266	6,206	33,703
Adolescent Well-Care Visits	33.9%	32.9%	4,967	16,281	14,668	49,558
Children and Adolescents' Access to Primary Care Practitioners*	93.7%	89.9%	26,008	101,579	27,751	112,976
Childhood Immunization Status: Combination 3*	73.2%	66.0%	542	6,215	740	9,411
Human Papillomavirus Vaccine for Female Adolescents	17.3%	18.7%	125	680	722	3,638
Appropriate Treatment for Children With Upper Respiratory Infection†	88.2%	91.0%	3,620	24,383	4,105	26,799
Annual Chiropractic Evaluation*	3.2%	2.6%	1,653	9,964	52,138	386,828
Annual Dental Visit†	50.7%	54.9%	16,360	72,372	32,272	131,786

Measure	Service use rates		Number of persons in numerator		Number of persons in denominator	
	Disability	Non-Disability	Disability	Non-Disability	Disability	Non-Disability
Follow-Up After Hospitalization for Mental Illness: 7 days*	27.5%	19.3%	455	293	1,654	1,521
Follow-Up After Hospitalization for Mental Illness: 30 days*	50.8%	36.6%	841	557	1,654	1,521

Note 1: * denotes there was a significant difference between the two populations at α = .01, with greater service use by persons with disabilities.

Note 2: † denotes there was a significant difference between the two populations at α = .01, with greater service use by persons without disabilities.

Table 2. Health care service use measures for adults aged 21-64, Calendar Year 2013

Measure	Service use rates		Number of persons in numerator		Number of persons in denominator	
	Disability	Non-Disability	Disability	Non-Disability	Disability	Non-Disability
Cervical Cancer Screening†	52.0%	68.5%	21,393	27,245	41,115	39,797
Adults' Access to Preventive/Ambulatory Health Services*	95.0%	87.3%	87,656	63,623	92,317	72,846
Cholesterol Management for Patients with Cardiovascular Conditions	76.6%	81.1%	1,589	340	2,075	419
Breast Cancer Screening	61.4%	58.8%	7,041	1,579	11,468	2,687
Comprehensive Diabetes Care	75.4%	74.2%	13,529	3,839	17,953	5,172
Colorectal Cancer Screening*	54.9%	41.1%	13,030	3,188	23,737	7,749
Annual Dental Visit*	48.2%	40.6%	44,461	29,605	92,317	72,846
Annual Chiropractic Evaluation*	8.9%	7.7%	12,458	21,605	139,732	282,324
Follow-Up After Hospitalization for Mental Illness: 7-Day*	23.3%	15.3%	1,986	250	8,511	1,639
Follow-Up After Hospitalization for Mental Illness: 30-Day*	48.5%	29.6%	4,124	485	8,511	1,639
Certified Peer Services*	0.24%	0.01%	342	30	139,732	282,324

Note 1: * denotes there was a significant difference between the two populations at $\alpha = .01$, with greater service use by persons with disabilities.

Note 2: † denotes there was a significant difference between the two populations at $\alpha = .01$, with greater service use by persons without disabilities.

Table 3. Health care services use measures for seniors aged 65 and older, Calendar Year 2013

Measure	Service use rates		Number of persons in numerator		Number of persons in denominator	
	Disability	Non-Disability	Disability	Non-Disability	Disability	Non-Disability
Adults' Access to Preventive/Ambulatory Health Services*	95.4%	91.9%	28,643	14,547	30,036	15,833
Cholesterol Management for Patients with Cardiovascular Conditions	76.2%	79.5%	921	431	1,209	542
Breast Cancer Screening†	52.2%	55.3%	2,626	1,536	5,035	2,777
Comprehensive Diabetes Care†	76.6%	80.2%	3,797	1,752	4,956	2,185
Colorectal Cancer Screening*	52.0%	48.6%	4,717	2,900	9,069	5,968
Annual Dental Visit	35.2%	34.1%	10,587	5,403	30,036	15,833
Annual Chiropractic Evaluation	4.3%	4.5%	1,872	1,087	43,435	24,332
Follow-Up After Hospitalization (FUH) for Mental Illness: 7 days	21.3%		66		309	
Follow-Up After Hospitalization (FUH) for Mental Illness: 30 days	41.1%		127		309	

Note 1: * denotes there was a significant difference between the two populations at $\alpha = .01$, with greater service use by persons with disabilities.

Note 2: † denotes there was a significant difference between the two populations at $\alpha = .01$, with greater service use by persons without disabilities.

Note 3: Percentages and significance testing was not conducted for FUH for the non-disabled population due to an extremely small sample.

Adults' Access to Preventive/Ambulatory Health Services

Medical Care Measure: Calendar Year 2013

Adults' Access to Preventive/Ambulatory Health Services (AAP) measures the percentage of individuals who had an ambulatory or preventive care visit.

Individuals included in the denominator of the AAP measure met the following criteria:

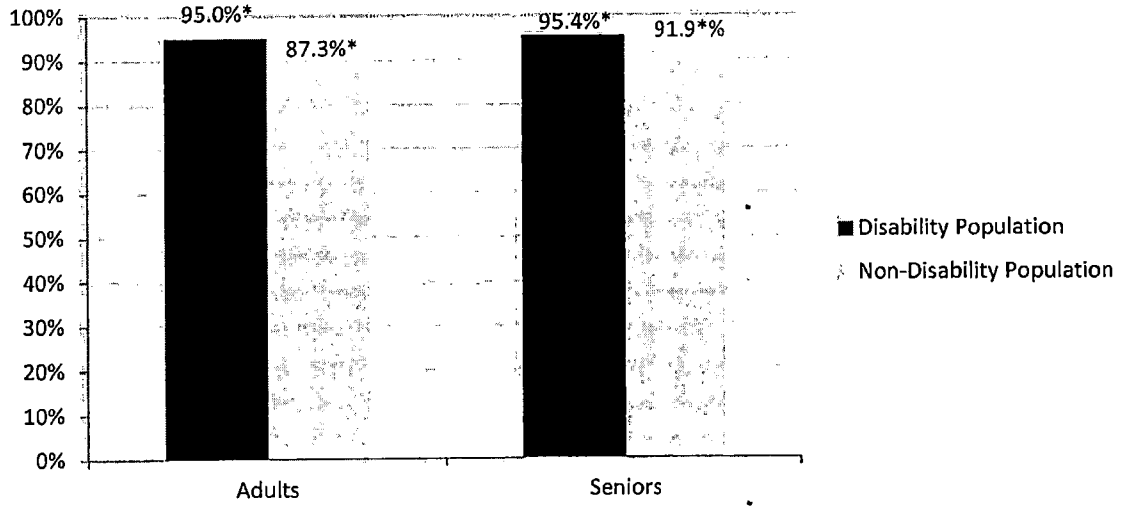
- Individuals age 21-64 (adults) or 65 and older (seniors) as of December 31, 2013.
- Continuously enrolled during the measurement year 2013. Medicaid beneficiaries may not have more than a single month gap in enrollment.

In the calendar year 2013, within the population of seniors, approximately 95 percent of persons with disabilities received an ambulatory or preventive care visit. By contrast, approximately 92 percent of persons without disabilities received such a visit. This difference was statistically significant.

In the calendar year 2013, within the population of adults under age 65, approximately 95 percent of persons with disabilities received an ambulatory or preventive care visit. By contrast, approximately 87 percent of persons without disabilities received such a visit. This difference was also statistically significant.

Figure 1 below shows a graph comparing the rate of Adults' Access to Preventive/Ambulatory Health Services by age group and disability status.

Figure 1: Utilization Rates for Adults' Access to Preventive/Ambulatory Health Services by Age Group and Disability Status



Data Source: Administrative Claims Data provided to DHS by Providers and MCOs.

Note 1. * denotes that there was a significant difference between the two populations within age category at α =.01.

Cholesterol Management for Patients with Cardiovascular Conditions

Medical Care Measure: Calendar Year 2013

Cholesterol Management for Patients With Cardiovascular Conditions (CMC) measures the percentage of individuals who were discharged alive for acute myocardial infarction (AMI, heart attack), coronary artery bypass graft (CABG) or percutaneous coronary interventions (PCI) in the year prior to the measurement year, or who had a diagnosis of ischemic vascular disease (IVD) during the measurement year and the year prior to the measurement year, who had each of the following during the measurement year:

- LDL-C screening.
- LDL-C control (<100 mg/dL).

Individuals included in the denominator of the CMC measure met the following criteria:

- Individuals age 21-64 (adults) or 65-75 (seniors) as of December 31, 2013.
- Continuously enrolled during the measurement year 2013 and the year prior. Medicaid beneficiaries may not have more than a single month gap in enrollment.
- Possessed at least one of the following:

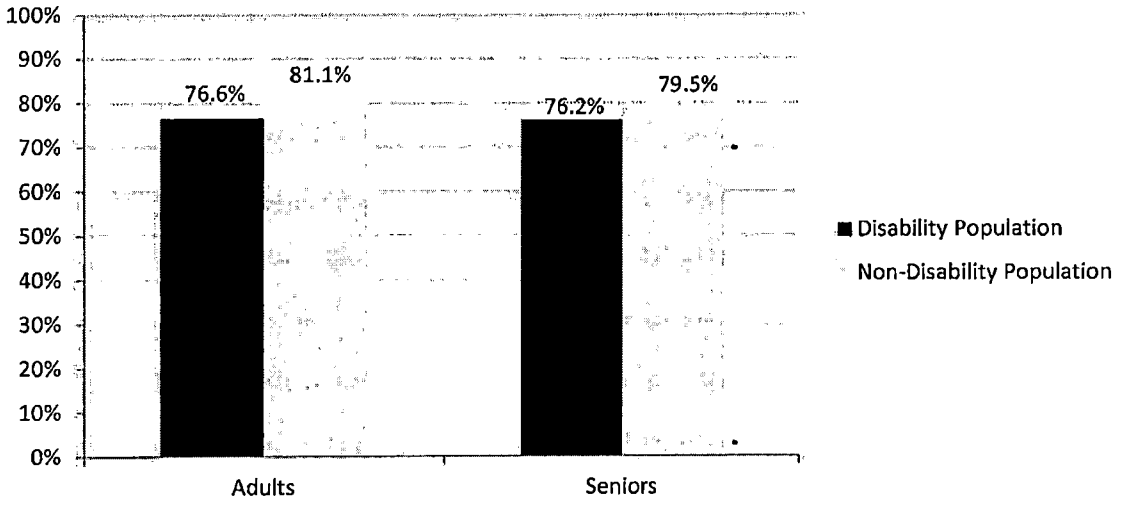
1. Discharged alive from an acute inpatient setting with an AMI.
2. Discharged alive from an acute inpatient setting with a CABG.
3. Members who had PCI in any setting.

In the calendar year 2013, within the population of seniors, approximately 76 percent of persons with disabilities received adequate cholesterol management. By contrast, approximately 80 percent of persons without disabilities received adequate cholesterol management. This difference was not statistically significant.

In the calendar year 2013 within the population of adults under 65, approximately 77 percent of persons with disabilities received adequate cholesterol management. By contrast, approximately 81 percent of persons without disabilities received adequate cholesterol management. This difference was also not statistically significant.

Figure 2 below shows a graph comparing the rate of Cholesterol Management for Patients with Cardiovascular Conditions by age group and disability status.

Figure 2: Utilization Rates for Cholesterol Management for Patients with Cardiovascular Conditions by Age Group and Disability Status



Data Source: Administrative Claims Data provided to DHS by Providers and MCOs.

Breast Cancer Screening

Medical Care Measure: Calendar Year 2013

Breast Cancer Screening (BCS) measures the percentage of women who had a mammogram to screen for breast cancer during the measurement year.

Individuals included in the denominator of the BCS measure met the following criteria:

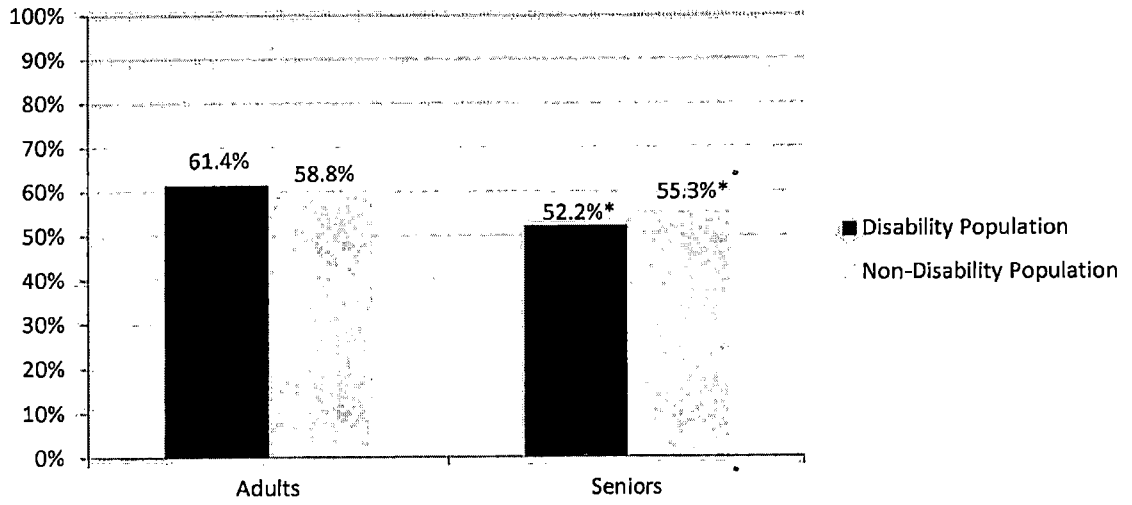
- Women age 21-64 (adults) or 65-74 (seniors) as of December 31, 2013.
- Continuously enrolled October 1 two years prior to the measurement year through December 31 of the measurement year. Medicaid beneficiaries may not have more than a single month gap in enrollment.

In the calendar year 2013, within the population of seniors, approximately 52 percent of women with disabilities received a breast cancer screening. By contrast, approximately 55 percent of women without disabilities received a breast cancer screening. This difference was statistically significant.

In the calendar year 2013 within the population of adults under 65, approximately 61 percent of women with disabilities received a breast cancer screening. By contrast, approximately 59 percent of women without disabilities received a breast cancer screening. This difference was not statistically significant.

Figure 3 below shows a graph comparing the rate of Breast Cancer Screening by age group and disability status.

Figure 3: Utilization Rates for Breast Cancer Screening by Age Group and Disability Status



Data Source: Administrative Claims Data provided to DHS by Providers and MCOs.

Note 1. * denotes that there was a significant difference between the two populations within age category at α =.01.

Cervical Cancer Screening

Medical Care Measure: Calendar Year 2013

The Cervical Cancer Screening (CCS) measure the percentage of women who were screened for cervical cancer. Both of the following meet the criteria for such a screening:

- Women age 21-64 who had cervical cytology performed every 3 years.
- Women age 30-64 who had cervical cytology/human papillomavirus (HPV) co-testing performed every five years.

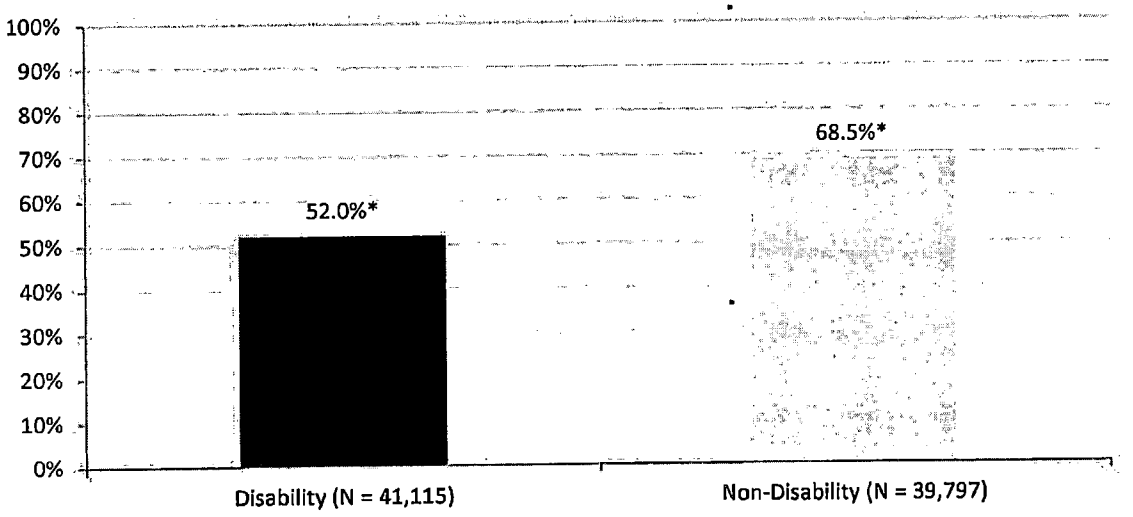
Individuals marked for inclusion in the denominator of the CCS measure met the following criteria:

- Women age 21-64 as of December 31, 2013.
- Continuously enrolled during the measurement year 2013. Medicaid beneficiaries may not have more than a single month gap in enrollment.

Within the calendar year 2013, approximately 52 percent of women with disabilities received a cervical cancer screening. By contrast, approximately 69 percent of women without disabilities received such a screening. This difference was statistically significant and the only adult measure where the persons with disabilities had significantly less representation than the non-persons with disabilities.

Figure 4 below shows a graph comparing the rate of Cervical Cancer Screening by disability status.

Figure 4: Utilization Rates for Cervical Cancer Screening by Disability Status



Data Source: Administrative Claims Data provided to DHS by Providers and MCOs.

Note 1. * denotes that there was a significant difference between the two populations within age category at $\alpha = .01$.

Comprehensive Diabetes Care

Medical Care Measure: Calendar Year 2013

Comprehensive Diabetes Care (CDC) measures the percentage of individuals with diabetes (type 1 and type 2) who had each of the following:

- Hemoglobin A1c (HbA1c) testing

Individuals included in the denominator of the CDC measure met the following criteria:

- Individuals age 21-64 (adults) or 65-75 (seniors) as of December 31, 2013.
- Continuously enrolled during the measurement year 2013. Medicaid beneficiaries may not have more than a single month gap in enrollment.

Individuals who were identified as having diabetes with at least one of the following methods:

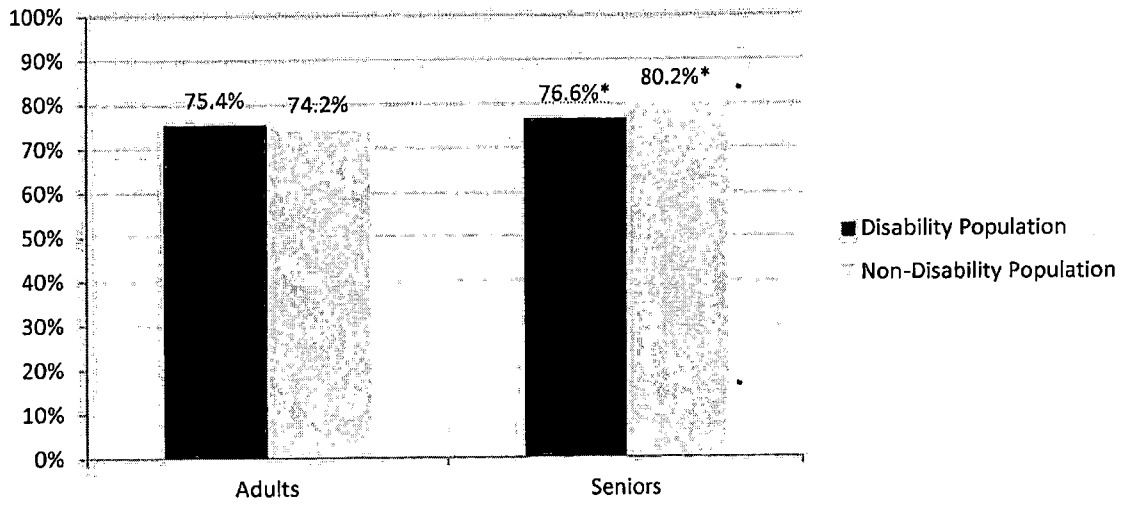
1. Possessed two or more outpatient or observation visits, or nonacute encounters on different dates of service with a diagnosis of diabetes.
2. At least one acute inpatient encounter with a diagnosis of diabetes.
3. At least one ED visit with a diagnosis of diabetes.
4. The individual was dispensed insulin or hypoglycemics/ antihyperglycemics on an ambulatory basis during the measurement year or the year prior to the measurement year.

In the calendar year 2013, within the population of seniors, approximately 77 percent of persons with disabilities received comprehensive diabetic care. By contrast, approximately 80 percent of persons without disabilities received comprehensive diabetic care. This difference was statistically significant.

In the calendar year 2013, within the population of adults under 65, approximately 75 percent of persons with disabilities received comprehensive diabetic care. By contrast, approximately 74 percent of persons without disabilities received comprehensive diabetic care. This difference was not statistically significant.

Figure 5 below shows a graph comparing the rate of Comprehensive Diabetes Care by age group and disability status.

Figure 5: Utilization Rates for Comprehensive Diabetes Care by Age Group and Disability Status



Data Source: Administrative Claims Data provided to DHS by Providers and MCOs.

Note 1. * denotes that there was a significant difference between the two populations within age category at $\alpha = .01$.

Colorectal Cancer Screening

Medical Care Measure: Calendar Year 2013

The Colorectal Cancer Screening (COL) measure gives the percentage of individuals who received one or more screenings for colorectal cancer. Any of the following meet the criteria for such a screening:

- Fecal occult blood test during the measurement year.
- Flexible sigmoidoscopy during the measurement year or the four years prior to the measurement year.
- Colonoscopy during the measurement year or the nine years prior to the measurement year.

Individuals included in the denominator of the COL measure met the following criteria:

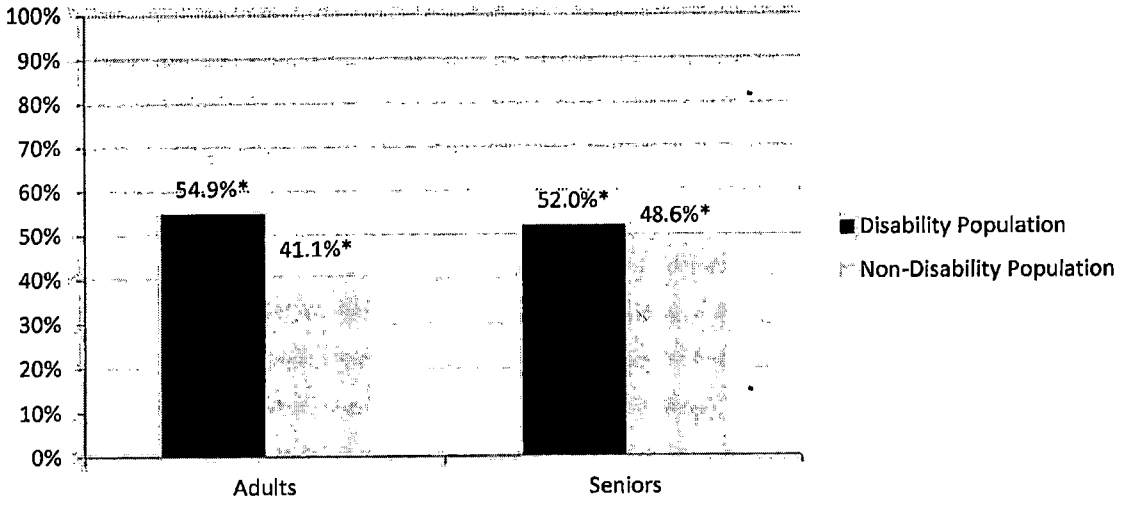
- Individuals age 21-64 (adults) or 65-75 (seniors) as of December 31, 2013.
- Continuously enrolled during the measurement year 2013 and the year prior. Medicaid beneficiaries may not have more than a single month gap in enrollment.

In the calendar year 2013 within the senior population, approximately 52 percent of persons with disabilities received a colorectal cancer screening. By contrast, approximately 49 percent of persons without disabilities received such a screening. This difference was statistically significant.

In the calendar year 2013 within the adult population, approximately 55 percent of persons with disabilities received a colorectal cancer screening. By contrast, approximately 41 percent of persons without disabilities received such a screening. This difference was statistically significant.

Figure 6 below shows a graph comparing the rate of Colorectal Cancer Screening by age group and disability status.

Figure 6: Utilization Rates for Colorectal Cancer Screening by Age Group and Disability Status



Data Source: Administrative Claims Data provided to DHS by Providers and MCOs.

Note 1. * denotes that there was a significant difference between the two populations within age category at $\alpha = .01$.

Annual Dental Visit

Dental Care Measure: Calendar Year 2013

Annual Dental Visit (ADV) measures the percentage of individuals who had at least one dental visit during the measurement year.

Individuals included in the denominator of the ADV measure met the following criteria:

- Individuals age 0-20 (children), 21-64 (adults), or 65 and older (seniors) as of December 31, 2013.
- Continuously enrolled during the measurement year 2013. Medicaid beneficiaries may not have more than a single month gap in enrollment.

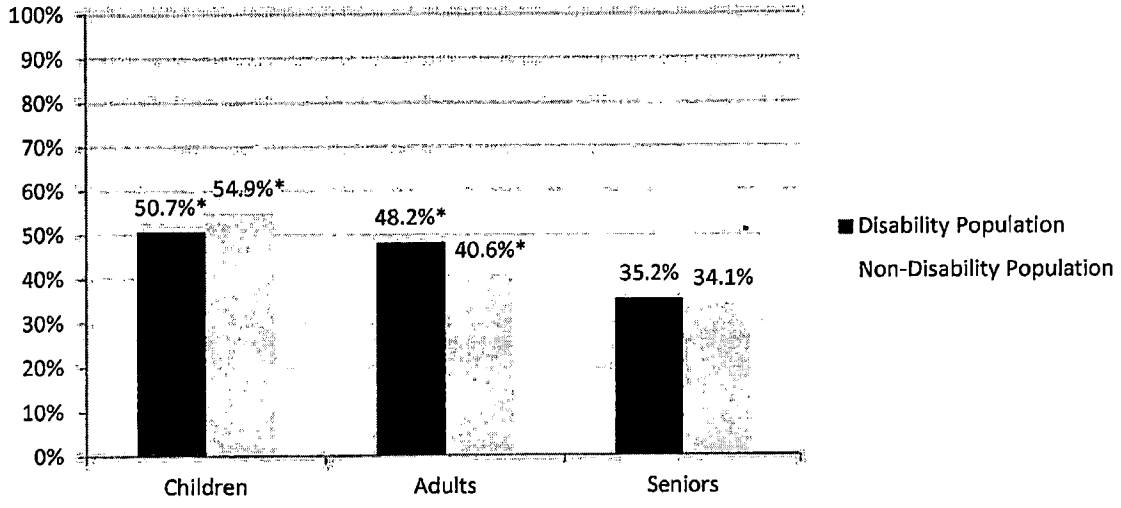
In the calendar year 2013, within the senior population approximately 35 percent of persons with disabilities received a dental visit. By contrast, approximately 34 percent of persons without disabilities received such a screening. This difference was not statistically significant.

In the calendar year 2013, within the adult population approximately 48 percent of persons with disabilities received a dental visit. By contrast, approximately 41 percent of persons without disabilities received such a screening. This difference was statistically significant.

In the calendar year 2013, within the child population approximately 51 percent of persons with disabilities received a dental visit. By contrast, approximately 55 percent of persons without disabilities received such a screening. This difference was statistically significant.

Figure 7 below shows a graph comparing the rate of Annual Dental Visit by age group and disability status.

Figure 7: Utilization Rates for Annual Dental Visit by Age Group and Disability Status



Data Source: Administrative Claims Data provided to DHS by Providers and MCOs.

Note 1. * denotes that there was a significant difference between the two populations within age category at $\alpha = .01$.

Annual Chiropractic Evaluation

Chiropractic Care Measure: Calendar Year 2013

Annual Chiropractic Evaluation (ACE) measures the percentage of individuals who had at least one chiropractic-related evaluation during the measurement year.

Individuals included in the denominator of the ACE measure met the following criteria:

- Individuals age 0-20 (children), 21-64 (adults), or 65 and older (seniors) as of December 31, 2013.
- Enrolled in Medical Assistance for at least one month during the calendar year 2013.
- Was associated with a procedure code that was in turn associated with evaluation services from a chiropractor or chiropractic manipulation during the measurement year 2013.

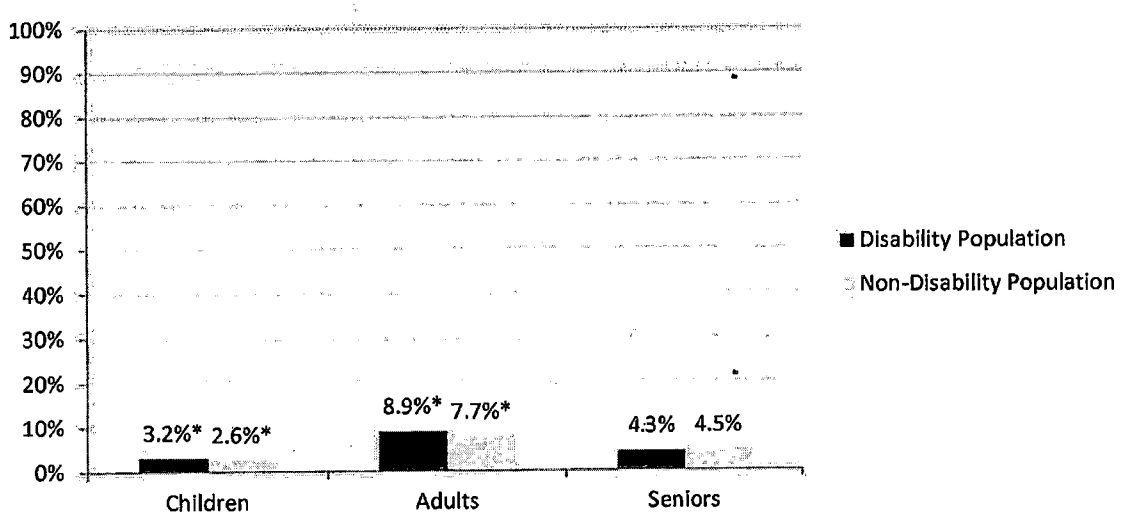
In the calendar year 2013, within the senior population, approximately 4.5 percent of persons with disabilities received a chiropractic evaluation. By contrast, approximately 4.3 percent of persons without disabilities received such an evaluation. This difference was not statistically significant.

In the calendar year 2013, within the adult population, approximately 8.9 percent of persons with disabilities received a chiropractic evaluation. By contrast, approximately 7.7 percent of persons without disabilities received a chiropractic evaluation. This difference was statistically significant.

In the calendar year 2013, within the child population, approximately 3.2 percent of persons with disabilities received a chiropractic evaluation. By contrast, approximately 2.6 percent of persons without disabilities received a chiropractic evaluation. This difference was statistically significant.

Figure 8 below shows a graph comparing the rate of Annual Chiropractic Evaluation by age group and disability status.

Figure 8: Utilization Rates for Annual Chiropractic Evaluation by Age Group and Disability Status



Data Source: Administrative Claims Data provided to DHS by Providers and MCOs.

Note 1. * denotes that there was a significant difference between the two populations within age category at $\alpha = .01$.

Follow-Up After Hospitalization for Mental Illness

Mental Health Care Measure: Calendar Year 2013

Follow-Up After Hospitalization for Mental Illness (FUH) measures the percentage of individuals who were hospitalized for treatment of selected mental illness diagnoses and who had an outpatient visit, an intensive outpatient encounter or partial hospitalization with a mental health practitioner. Two rates are reported:

- The percentage of discharges for which the member received follow-up within 7 days of discharge.
- The percentage of discharges for which the member received follow-up within 30 days of discharge.

Individuals included in the denominator of the FUH measure met the following criteria:

- Individuals age 0-20 (children), 21-64 (adults), or 65 and older (seniors) as of December 31, 2013.
- Continuously enrolled during from the date of discharge through 30 days after discharge.
- Discharged alive from an acute inpatient setting (including acute care psychiatric facilities) with a principal diagnosis of mental illness on or between January 1 and December 1 of the measurement year.

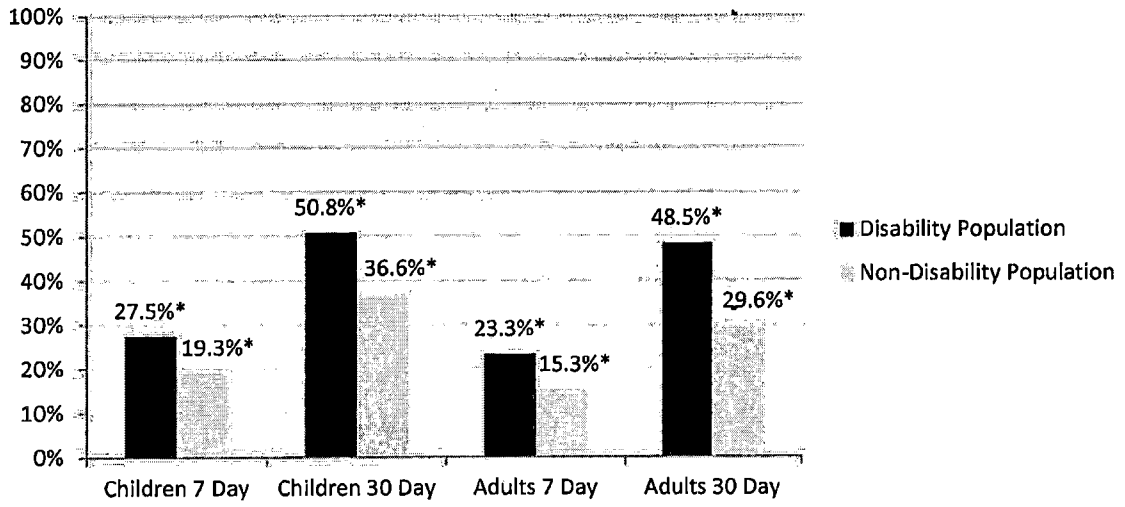
Within the calendar year 2013, approximately 28 percent of children and 23 percent of adults under 65 with disabilities received a follow-up within 7 days of discharge. By contrast, approximately 19 percent of children and 15 percent of adults under 65 without disabilities received a follow-up within 7 days of discharge. All differences were statistically significant.

Within the calendar year 2013, approximately 51 percent of children and 49 percent of adults under 65 with disabilities received a follow-up within 30 days of discharge. By contrast, approximately 37 percent of children and 30 percent of adults under 65 without disabilities received a follow-up within 30 days of discharge. All differences were statistically significant.

Within the calendar year 2013, approximately 21 percent of seniors with disabilities received a follow-up within 7 days of discharge (21.4%; Numerator= 66; Denominator=309). By contrast, within the calendar year 2013, approximately 41 percent of the seniors with disabilities received a follow-up within 30 days of discharge (41.1%; Numerator= 127; Denominator=309). Owing to the very small sample size of the FUH measure in the non-disabled population, comparisons with a non-disabled population could not be made for the senior age category.

Figure 9 below shows a graph comparing the rate of Follow-Up After Hospitalization for Mental Illness by age group and disability status.

Figure 9: Utilization Rates for Follow-Up After Hospitalization for Mental Illness by Age Group and Disability Status



Data Source: Administrative Claims Data provided to DHS by Providers and MCOs.

Note 1. * denotes that there was a significant difference between the two populations within age category at $\alpha = .01$.

Certified Peer Services

Mental Health Measure: Calendar Year 2013

The Certified Peer Support Services (CPS) measure gives the percentage of individuals who received self-help or peer services within the measurement year of 2013.

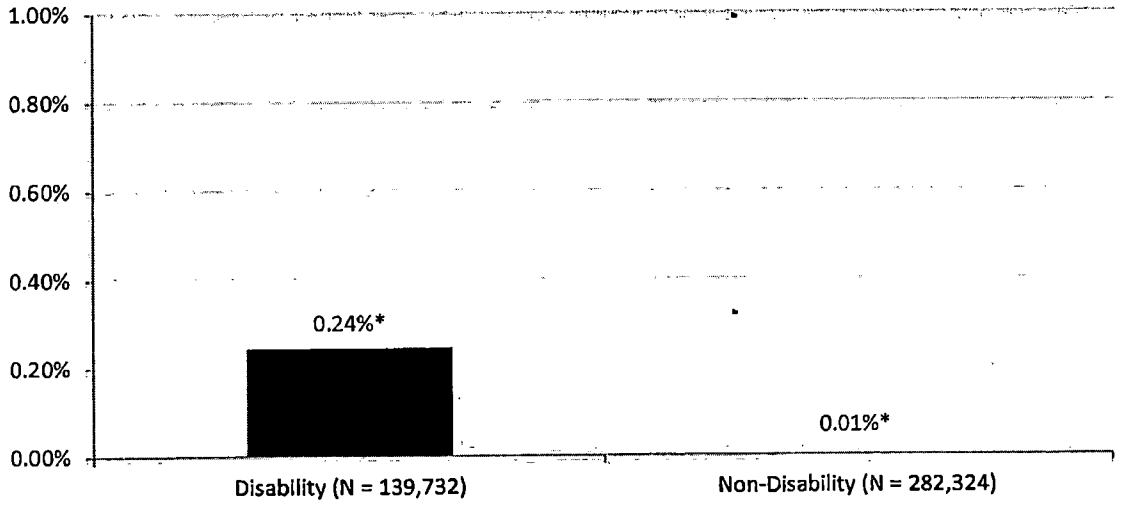
Individuals included in the denominator of the CPS measure met the following criteria:

- Individuals age 21-64 as of December 31, 2013 (adults)
- Enrolled in Medical Assistance for at least one month during the calendar year 2013 with a paid MHCP claim with a procedure code (H0038) for self-help or peer services

Within the calendar year 2013, a very small percentage of the population received certified peer services. Specifically, approximately 342 persons with disabilities received certified peer services. By contrast, approximately 30 persons without disabilities received such services. This difference was statistically significant, and the ratio of disability to non-disability individuals receiving services was large.

Figure 10 below shows a graph comparing the rate of Certified Peer Services by disability status.

Figure 10: Utilization Rates for Certified Peer Services by Disability Status



Data Source: Administrative Claims Data provided to DHS by Providers and MCOs.

Note 1. * denotes that there was a significant difference between the two populations within age category at $\alpha = .01$.

Well-Child Visits in the First 15 Months of Life

Medical Care Measure: Calendar Year 2013

Well-Child Visits in the First 15 Months of Life (W15) measures the percentage of children who turned 15 months old during the measurement year and who had six or more visits with a primary care provider (PCP) during their first 15 months of life.

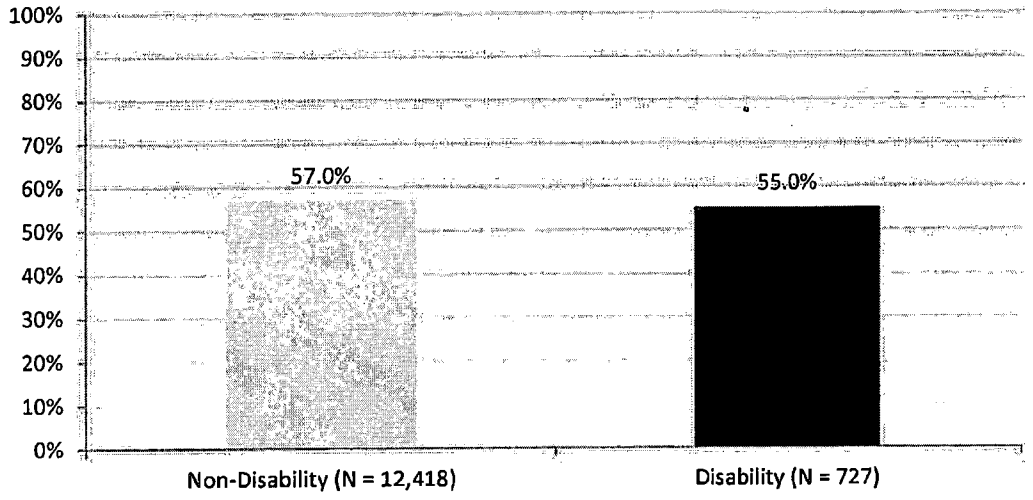
Children included in the denominator of the W15 measure met the following criteria:

- Children age 15 months during the measurement year 2013.
- Continuously enrolled during the time period from 31 days of age through 15 months of age. Medicaid beneficiaries may not have more than a single month gap in enrollment.

Within the calendar year 2013, 55 percent of children with disabilities received at least six well-child visits. By contrast, 57 percent of children without disabilities received at least six well-child visits. This difference was not statistically significant.

Figure 11 below shows a graph comparing the rate of Well-Child Visits in the First 15 Months of Life by disability status.

Figure 11: Utilization Rates for Well-Child Visits in the First 15 Months of Life by Disability Status



Data Source: Administrative Claims Data provided to DHS by Providers and MCOs.

Well-Child Visits in the Third, Fourth, Fifth and Sixth Years of Life

Medical Care Measure: Calendar Year 2013

Well-Child Visits in the Third, Fourth, Fifth and Sixth Years of Life (W34) measures the percentage of children three to six years of age who had one or more well-child visits with a primary care provider (PCP) during the measurement year.

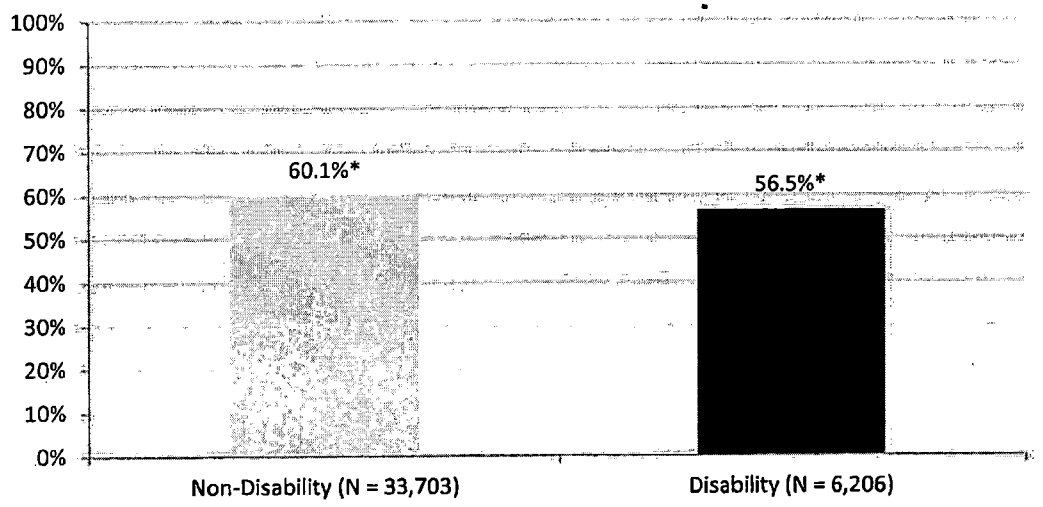
Children included in the denominator of the W34 measure met the following criteria:

- Children age three to six years as of December 31st of the measurement year 2013.
- Continuously enrolled during the measurement year 2013. Medicaid beneficiaries may not have more than a single month gap in enrollment.

Within the calendar year 2013, approximately 56 percent of children with disabilities received at least one well-child visit with a PCP. By contrast, approximately 60 percent of children without disabilities received at least one well-child visit with a PCP.

Figure 12 below shows a graph comparing the rate of Well-Child Visits in the Third, Fourth, Fifth, and Sixth Years of Life by disability status.

Figure 12: Utilization Rates for Well-Child Visits in the Third, Fourth, Fifth and Sixth Years of Life by Disability Status



Data Source: Administrative Claims Data provided to DHS by Providers and MCOs.

Note 1. * denotes that there was a significant difference between the two populations within age category at $\alpha = .01$.

Adolescent Well-Care Visits

Medical Care Measure: Calendar Year 2013

Adolescent Well-Care Visits (AWC) measures the percentage of children 12–20 years of age who had at least one comprehensive well-care visit with a primary care provider (PCP) or an OB/GYN practitioner during the measurement year.

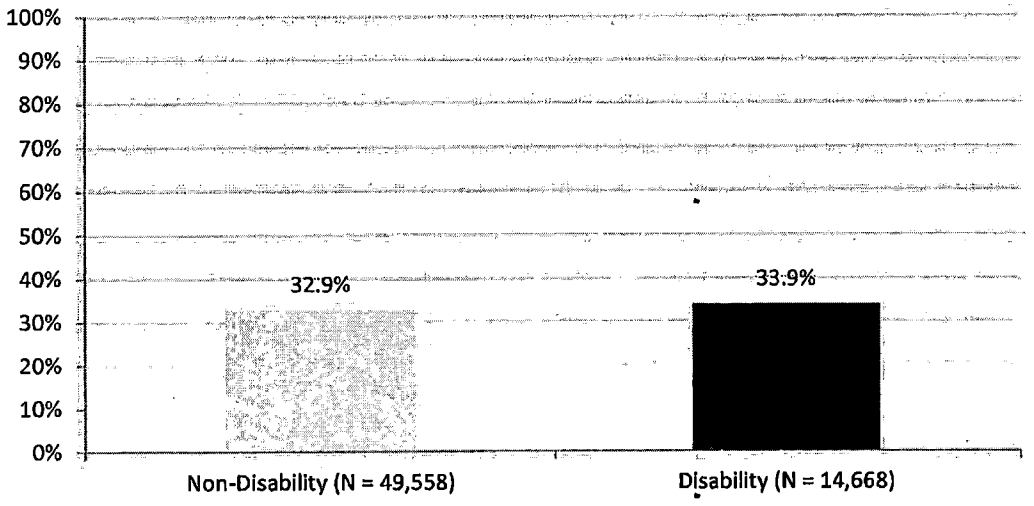
Children included in the denominator of the AWC measure met the following criteria:

- Individuals age 12-20 years as of December 31, 2013.
- Continuously enrolled during the measurement year 2013 and the year prior. Medicaid beneficiaries may not have more than a single month gap in enrollment.

Within the calendar year 2013, approximately 34 percent of children with disabilities received at least one comprehensive well-care visit with a PCP or an OB/GYN practitioner. By contrast, approximately 33 percent of children without disabilities received at least one comprehensive well-care visit with a PCP or an OB/GYN practitioner. This difference was not statistically significant.

Figure 13 below shows a graph comparing the rate of Adolescent Well-Care visits by disability status.

Figure 13: Utilization Rates for Adolescent Well-Care visits by Disability Status



Data Source: Administrative Claims Data provided to DHS by Providers and MCOs.

Children and Adolescents' Access to Primary Care Practitioners

Medical Care Measure: Calendar Year 2013

Children and Adolescents' Access to Primary Care Practitioners (CAP) measures the percentage of children 12 months to 19 years of age who had a visit with a primary care provider (PCP).

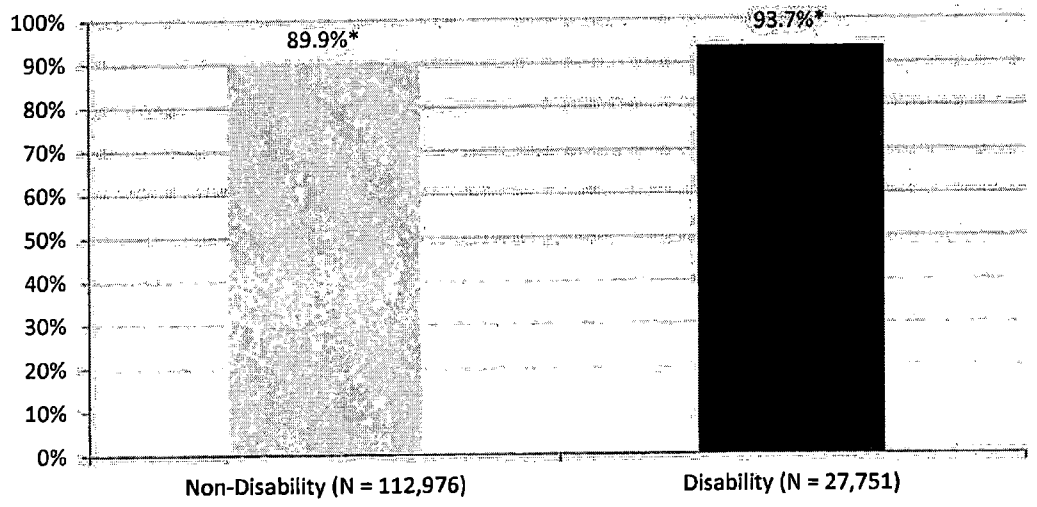
Children included in the denominator of the CAP measure met the following criteria:

- Individuals age 12 months to 19 years as of December 31, 2013.
- Continuously enrolled during the measurement year 2013 (for children age one to six) and the year prior (for individuals age seven to 19). Medicaid beneficiaries may not have more than a single month gap in enrollment during each year.

Within the calendar year 2013, approximately 94 percent of children with disabilities received a visit with a PCP. By contrast, approximately 90 percent of children without disabilities received a visit with a PCP. This difference was statistically significant.

Figure 14 below shows a graph comparing the rate of Children and Adolescents' Access to Primary Care Practitioners by disability status.

Figure 14: Utilization Rates for Children and Adolescents' Access to Primary Care Practitioners by Disability Status



Data Source: Administrative Claims Data provided to DHS by Providers and MCOs.

Note 1. * denotes that there was a significant difference between the two populations within age category at α =.01.

Childhood Immunization Status

Medical Care Measure: Calendar Year 2013

Childhood Immunization Status (CIS) measures the percentage of children 2 years of age who had four diphtheria, tetanus and acellular pertussis (DTaP); three polio (IPV); one measles, mumps and rubella (MMR); three H influenza type B (HiB); three hepatitis B (HepB), one chicken pox (VZV); four pneumococcal conjugate (PCV); one hepatitis A (HepA); two or three rotavirus (RV); and two influenza (flu) vaccines by their second birthday. The measure calculates a rate for each vaccine and nine separate combination rates. For the purposes of this report, a single combination is analyzed, and is listed below:

- Immunization for DTaP, IPV, MMR, HiB, HepB, VZV, and PCV.

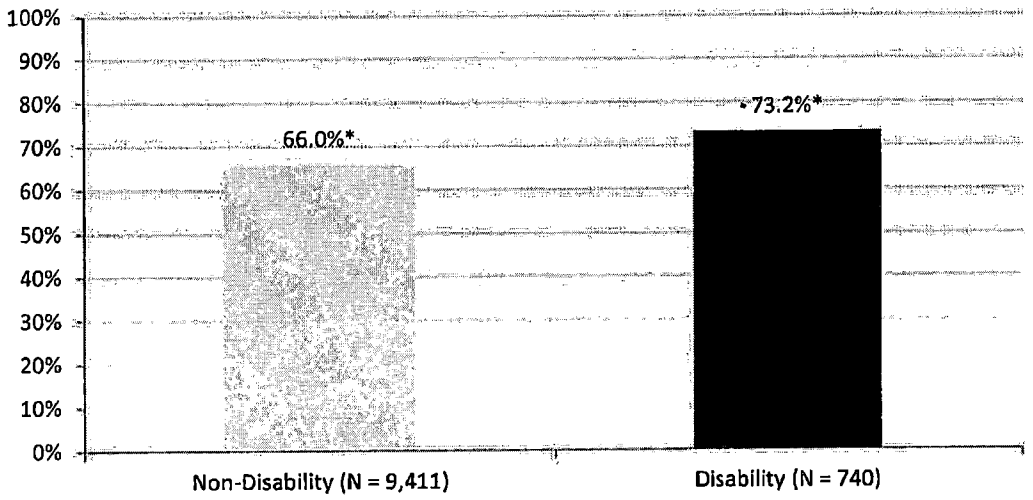
Children included in the denominator of the CIS measure met the following criteria:

- Children age two during the measurement year 2013.
- Continuously enrolled during the period 12 months prior to the child's second birthday. Medicaid beneficiaries may not have more than a single month gap in enrollment.

Within the calendar year 2013, approximately 73 percent of children with disabilities received the aforementioned immunizations. By contrast, approximately 66 percent of children without disabilities received the aforementioned immunizations. This difference was statistically significant.

Figure 15 below shows a graph comparing the rate of Childhood Immunization Status by disability status.

Figure 15: Utilization Rates for Childhood Immunization Status by Disability Status



Data Source: Administrative Claims Data provided to DHS by Providers and MCOs.

Note 1. * denotes that there was a significant difference between the two populations within age category at $\alpha = .01$.

Human Papillomavirus Vaccine for Female Adolescents

Medical Care Measure: Calendar Year 2013

The Human Papillomavirus Vaccine for Female Adolescents (HPV) measure gives the percentage of female adolescents 13 years of age who had three doses of the human papillomavirus (HPV) vaccine by their 13th birthday.

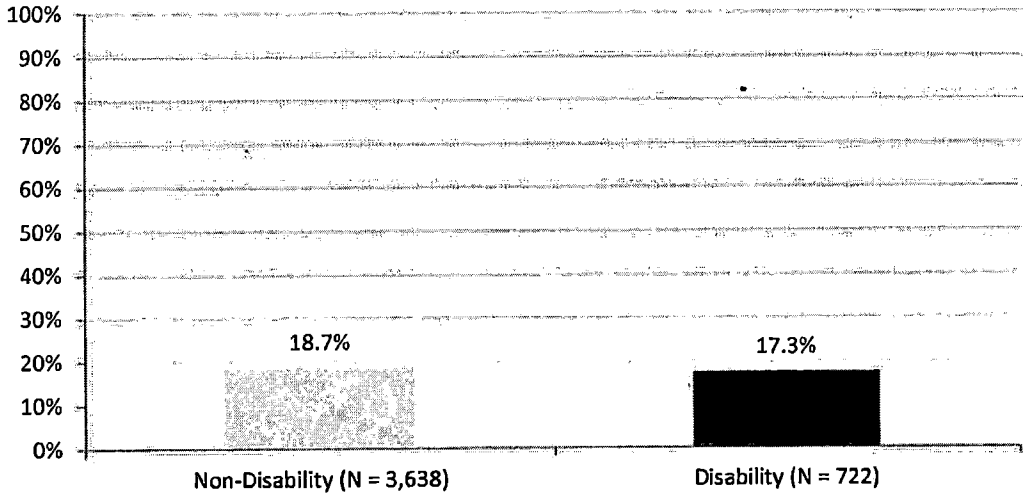
Children included in the denominator of the HPV measure met the following criteria:

- Females age 13 during the measurement year 2013.
- Continuously enrolled during the measurement year 2013 and the year prior. Medicaid beneficiaries may not have more than a single month gap in enrollment.

Within the calendar year 2013, approximately 17 percent of female children with disabilities received a HPV vaccine by their 13th birthday. By contrast, approximately 19 percent of female children without disabilities received a HPV vaccine by their 13th birthday. This difference was not statistically significant.

Figure 16 below shows a graph comparing the rate of Human Papillomavirus Vaccine for Female Adolescents by disability status.

Figure 16: Utilization Rates for Human Papillomavirus Vaccine for Female Adolescents by Disability Status



Data Source: Administrative Claims Data provided to DHS by Providers and MCOs.

Appropriate Treatment for Children with Upper Respiratory Infection

Medical Care Measure: Calendar Year 2013

The Appropriate Treatment for Children with Upper Respiratory Infection (URI) measure gives the percentage of children 3 months–18 years of age who were given a diagnosis of upper respiratory infection (URI) and were not dispensed an antibiotic prescription.

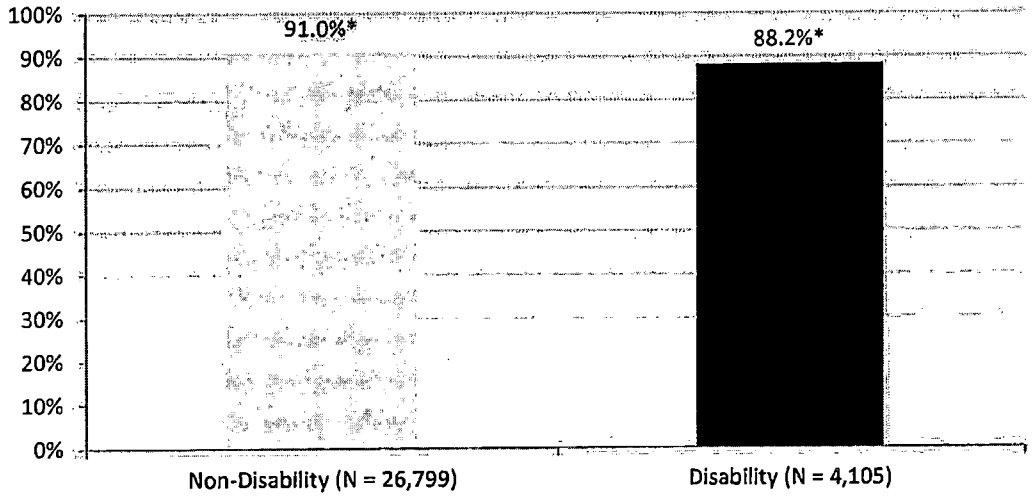
Children included in the denominator of the URI measure met the following criteria:

- Children aged three months as of July 1 of the year prior to the measurement year to 18 years as of June 30 of the measurement year.
- Continuously enrolled during the measurement year 2013 and the year prior. No gaps in enrollment during the continuous enrollment period are allowed for this measure.

Within the calendar year 2013, approximately 88 percent of children with disabilities were given a diagnosis of upper respiratory infection (URI) and were not dispensed an antibiotic prescription. By contrast, approximately 91 percent of children without disabilities were given a diagnosis of upper respiratory infection (URI) and were not dispensed an antibiotic prescription. This difference was statistically significant.

Figure 17 below shows a graph comparing the rate of Appropriate Treatment for Children with Upper Respiratory Infection by disability status.

Figure 17: Utilization Rates for Appropriate Treatment for Children with Upper Respiratory Infection by Disability Status



Data Source: Administrative Claims Data provided to DHS by Providers and MCOs.

Note 1. * denotes that there was a significant difference between the two populations within age category at $\alpha = .01$.

Conclusion

On January 28, 2013, Governor Mark Dayton issued an executive order establishing an Olmstead Sub-Cabinet to develop and implement a comprehensive Minnesota Olmstead Plan. The main purpose of the Olmstead Plan is to move the state forward, towards greater integration and inclusion for people with disabilities.

The rates derived from this report will serve as a baseline for future studies, in order to monitor and evaluate the degree to which utilization changes over time for individuals with disabilities in receiving services. Ideally, improving access to services will be illustrated in corresponding changes to utilization rates of services over time.

Appendix A - Disability Classification for Children

Purpose:

To establish the denominator for health care utilization measures to be reported for action item 2G in the "Healthcare and Healthy Living" section of the Olmstead Plan, for children aged 0-20.

Background:

DHS Health Care Research and Quality Division (HRQ) is producing several measures of health care utilization in order to establish baseline data for medical, dental, chiropractic, and mental health care for persons with disabilities. Measures will be reported for persons enrolled in Medical Assistance with disabilities (as defined below), and for a comparison group of persons enrolled in Medical Assistance without disabilities.

Dates used:

Calendar Year 2013 (1/1/2013 – 12/31/2013)

Inclusions:

Persons enrolled in Medical Assistance (major program MA) at any point during the measurement year, and aged 0-20 inclusive as of the end of the measurement year (12/31/2013).

Exclusions:

Persons who are not enrolled in Medical Assistance at any point during the measurement year, and who are not aged 0-20 as of 12/31/2013.

Source of data:

DHS health care program enrollment and claims data

Definition:

MA child enrollees with disabilities will be defined as those who:

1. Have a paid claim during calendar year 2013 with one or several specified diagnosis codes or billing codes indicating a disabling condition or functional limitations, OR

2. Have been enrolled in MA with an eligibility type indicating disability at any point during the measurement year, OR

3. Have a score of 25 points or greater using a modified version of the algorithm developed at DHS for screening recipients as likely to have a disability, for the State Medical Review Team (SMRT).

Details:

1) Diagnosis codes and billing codes that indicate disabling conditions or functional limitations are listed in the following table:

Qualifier	Description
Epilepsy	Diagnosis code indicating Epilepsy: (345.00, 345.01, 345.10, 345.11, 345.20, 345.21, 345.30, 345.31, 345.40, 345.40, 345.50, 345.51, 345.60, 345.61, 345.70, 345.71, 345.80, 345.81, 345.90, 345.91)
Cystic Fibrosis	Diagnosis code indicating Cystic Fibrosis: (277.00, 277.01, 277.02, 277.03, 277.09)
Developmental Disability	Diagnosis code indicating a significant degree of Developmental Disability: (318.0, 318.1, 318.2)
Congenital hereditary muscular dystrophy	Diagnosis code indicating congenital hereditary muscular dystrophy: (359.0)
Infantile Cerebral Palsy	Diagnosis code indicating Infantile Cerebral Palsy: (343.0, 343.1, 343.2, 343.3, 343.4, 343.8, 343.9)
Children 4 and over using diapers	Billing codes associated with children 4 and over using diapers: (T4529, T4530, T4531, T4532)
Children who buy wheelchairs or walkers	Billing codes associated with children who buy wheelchairs or walkers: (E1037, E1229, E1231-E1239, E0130, E0135, E0140, E0141, E0143, E0144, E0147-E149)
School based IEP service	HCPCS code indicating the child received a school based individualized education program (IEP) service: (T1018).
Cochlear device	HCPCS code indicating the child received or is currently using a cochlear implant: (L8614, L8615, L8616, L8617, L8618, L8619, L8627, L8628, L8629, L8621, L8622, L8623, L8624).
PCA services	HCPCS code indicating the child received personal care attendant (PCA) services: (T1019).

2) Medical Assistance eligibility types indicating disability are listed in the following table:

Eligibility Type Code	Description
15	1619A (Supplemental Security Income)
16	1619B (Supplemental Security Income)
BT	BLIND/TEFRA
BX	BLIND
DC	DISABLED/CHILD AGE 18 THROUGH 20
DP	EMPLOYED DISABLED WITH PREMIUM
DQ	DISABLED/QMB ONLY
DS	DISABLED/SLMB
DT	DISABLED/TEFRA

3) Modified SMRT Algorithm description:

The SMRT algorithm was designed at DHS to screen health care program enrollees based on diagnoses and services reported on claims, enrollee age, and other enrollee information, to identify those who are likely to have a disability. The algorithm was modeled after criteria used by the Social Security Administration for determining eligibility for Supplemental Security Income (SSI).

The algorithm considers 18 months of claims history, and weights each of several factors using a point system. A person who has at least 25 points is identified as being likely to have a disability

It should also be noted however, that this is a *modified* version of the original SMRT algorithm. Specifically, it is modified in order to prevent duplication with other aspects of the definition for disability noted in other sections. When there was conceptual overlap between the original SMRT algorithm and other qualifying criteria, that component was removed from SMRT.
The components of the SMRT algorithm are as follows:

1. **Inpatient Stays:** count of the number of months during which the recipient had an inpatient stay
    a. Greater than or equal to 10 months = 20 points
    b. 8-9 months = 10 points
    c. 4-7 months = 6 points
    d. 1-3 months = 2 points
    e. 0 months = 0 points
2. **Severe Mental Health:** count of the number of distinct dates of service for which there was a claim with a severe mental health diagnosis (ICD-9-CM diagnosis codes 295.00 – 297.9)
    a. Greater than or equal to 10 dates of service = 20 points
    b. 8-9 dates of service = 10 points
    c. 4-7 dates of service = 6 points
    d. 1-3 dates of service = 2 points
    e. 0 dates of service = 0 points
3. **Age:** recipient age as of the end of the measurement period
    a. Greater than or equal to 40 = 3 points
    b. Less than 40 = 0 points
4. **Chemical Dependency in conjunction with Mental Illness:** recipient has a diagnosis of chemical dependency (ICD-9-CM diagnosis codes 291.0 – 292.9 or 303.00 – 305.9) on one or more claims, AND a diagnosis of severe mental illness (ICD-9-CM diagnosis codes 295.00 – 297.9) on one or more claims; number of points assigned varies by recipient age
    a. Age is greater than or equal to 40 = 5 points
    b. Age is less than 40 = 2 points
5. **Presumptive Disability or Blindness:** recipient has a diagnosis on the list of presumptive disabilities on one or more claims
    a. Diagnosis code present = 8 points
6. **Homeless:** recipient has a diagnosis code indicating homelessness (ICD-9-CM diagnosis codes V60.0 or V60.1) on one or more claims
    a. Diagnosis code present = 3 points
7. **Group Residential Housing (GRH):** recipient has been in the GRH program during the 18 month look back time period

   a. Enrolled in GRH = 5 points
8. **Diabetes:** recipient has a diagnosis of diabetes mellitus (ICD-9-CM diagnosis codes 250.00 – 250.93) on one or more claims
   a. Diagnosis code present = 3 points
9. **HIV:** recipient has a diagnosis indicating Human Immunodeficiency Virus infection (ICD-9-CM diagnosis codes 042, V08, 079.53) on one or more claims
   a. Diagnosis code present = 4 points
10. **Quadriplegia and Other Paralysis:** recipient has a diagnosis indicating quadriplegia, hemiplegia, or other paralysis (ICD-9-CM diagnosis codes 342.00 – 342.12, 342.80 – 342.92, 344.00 – 344.42, 344.81 – 344.9) on one or more claims
   a. Diagnosis code present = 8 points
11. **Disability indicator in MAXIS:** recipient has a disability indicated in MAXIS; number of points assigned varies by recentness of the indication
   a. Indication 10 or more years ago = 0 points
   b. Indication 5-10 years ago = 3 points
   c. Indication 2-5 years ago = 5 points
   d. Indication within past 2 years = 10 points
12. **Emphysema:** recipient has a diagnosis of emphysema (ICD-9-CM diagnosis codes 491.20, 491.21, 492.0, 492.8, 506.4, 518.1) on one or more claims
   a. Diagnosis code present = 4 points
13. **Morbid Obesity:** recipient has a diagnosis of morbid obesity (ICD-9-CM diagnosis code 278.01) on one or more claims
   a. Diagnosis code present = 4 points
14. **Compassionate Allowance Diagnosis:** recipient has a diagnosis on the list of Social Security Administration list of Compassionate Allowances conditions on one or more claims
   a. Diagnosis code present = 25 points
15. **Developmental Disability:** recipient has a diagnosis of developmental disability (ICD-9-CM diagnosis codes 315.00 – 315.09, 315.1, 315.2, 315.31 – 315.32, 315.39, 315.4 – 315.5, 315.8 317, 319) on one or more claims
   a. Diagnosis code present = 8 points
16. **Rule 36:** recipient is living in a residential facility for adults with mental illness.
   a. Living in Rule 36 facility = 5 points
17. **ESRD:** recipient has a diagnosis of end stage renal disease (ICD-9-CM diagnosis code 585.6) on one or more claims
   a. Diagnosis code present = 25 points

Estimated size of the denominator:

The estimated number of MA enrollees aged 0-20 during Calendar Year 2013 who would be classified as disabled using this definition is 52,138. This number amounts to 11.9% of all MA enrollees aged 0-20 (438,966) during 2013.

Appendix B - Disability Classification for Adults

Purpose:

To establish the denominator for health care utilization measures to be reported for action item 2G in the "Healthcare and Healthy Living" section of the Olmstead Plan.

Background:

DHS Health Care Research and Quality Division (HRQ) is producing several measures of health care utilization in order to establish baseline data for medical, dental, chiropractic, and mental health care for persons with disabilities. Measures will be reported for persons enrolled in Medical Assistance with disabilities (as defined below), and for a comparison group of persons enrolled in Medical Assistance without disabilities. This analysis will be limited to persons aged 21-64.

Dates used:

Calendar Year 2013 (1/1/2013 – 12/31/2013)

Inclusions:

Persons enrolled in Medical Assistance (major program MA) at any point during the measurement year, and aged 21-64 inclusive as of the end of the measurement year (12/31/2013).

Exclusions:

Persons who are not enrolled in Medical Assistance at any point during the measurement year, and who are not aged 21-64 as of 12/31/2013.

Source of data:

DHS health care program enrollment and claims data.

Definition:

MA enrollees with disabilities will be defined as those who:

1. Have been enrolled in MA with an eligibility type indicating disability at any point during the measurement year, OR

2. Have a score of 25 points or greater using the algorithm developed at DHS for screening recipients as likely to have a disability, for the State Medical Review Team (SMRT).

Details:

1) Medical Assistance eligibility types indicating disability are listed in the following table:

Eligibility Type Code	Description
15	1619A (Supplemental Security Income)
16	1619A (Supplemental Security Income)
BC	BREAST AND CERVICAL CANCER PROGRAM (Effective 07/01/2002)
BD	BLIND/PRESCRIPTION DRUG (Effective 07/01/2002)
BQ	BLIND/QMB (QUALIFIED MEDICARE BENEFICIARY) ONLY
BS	BLIND/SLMB (SERVICE-LIMITED MEDICARE BENEFICIARY)
BT	BLIND/TEFRA
BW	BLIND/QWD
BX	BLIND
DC	DISABLED/CHILD AGE 18 THROUGH 20
DI	EMPLOYED DISABLED WITH NO PREMIUM (No longer used effective 01/01/04)
DP	EMPLOYED DISABLED WITH PREMIUM
DQ	DISABLED/QMB ONLY
DS	DISABLED/SLMB
DT	DISABLED/TEFRA
DW	DISABLED/QWD (No longer used.)
DX	DISABLED
1B	BLIND QUALIFYING INDIVIDUAL QI-1
1D	DISABLED QUALIFYING INDIVIDUAL QI-1

2) SMRT Algorithm description:

The SMRT algorithm was designed at DHS to screen health care program enrollees based on diagnoses and services reported on claims, enrollee age, and other enrollee information, to identify those who are likely to have a disability. The algorithm was modeled after criteria used by the Social Security Administration for determining eligibility for Supplemental Security Income (SSI).

The algorithm considers 18 months of claims history, and weights each of several factors using a point system. A person who has at least 25 points is identified as being likely to have a disability.

The components of the SMRT algorithm are as follows:

1. **Inpatient Stays:** count of the number of months during which the recipient had an inpatient stay
    a. Greater than or equal to 10 months = 20 points
    b. 8-9 months = 10 points
    c. 4-7 months = 6 points
    d. 1-3 months = 2 points
    e. 0 months = 0 points
2. **Severe Mental Health:** count of the number of distinct dates of service for which there was a claim with a severe mental health diagnosis (ICD-9-CM diagnosis codes 295.00 – 297.9 or 301.83)
    a. Greater than or equal to 10 dates of service = 20 points
    b. 8-9 dates of service = 10 points
    c. 4-7 dates of service = 6 points
    d. 1-3 dates of service = 2 points
    e. 0 dates of service = 0 points
3. **Age:** recipient age as of the end of the measurement period
    a. Greater than or equal to 40 = 3 points
    b. Less than 40 = 0 points
4. **Chemical Dependency in conjunction with Mental Illness:** recipient has a diagnosis of chemical dependency (ICD-9-CM diagnosis codes 291.0 – 292.9 or 303.00 – 305.9) on one or more claims, AND a diagnosis of severe mental illness (ICD-9-CM diagnosis codes 295.00 – 297.9) on one or more claims; number of points assigned varies by recipient age
    a. Age is greater than or equal to 40 = 5 points
    b. Age is less than 40 = 2 points
5. **Presumptive Disability or Blindness:** recipient has a diagnosis on the list of presumptive disabilities on one or more claims
    a. Diagnosis code present = 8 points
6. **Homeless:** recipient has a diagnosis code indicating homelessness (ICD-9-CM diagnosis codes V60.0 or V60.1) on one or more claims
    a. Diagnosis code present = 3 points

7. **Group Residential Housing (GRH):** recipient has been in the GRH program during the 18 month look back time period
    a. Enrolled in GRH = 5 points
8. **Diabetes:** recipient has a diagnosis of diabetes mellitus (ICD-9-CM diagnosis codes 250.00 – 250.93) on one or more claims
    a. Diagnosis code present = 3 points
9. **HIV:** recipient has a diagnosis indicating Human Immunodeficiency Virus infection (ICD-9-CM diagnosis codes 042, V08, 079.53) on one or more claims
    a. Diagnosis code present = 4 points
10. **Quadriplegia and Other Paralysis:** recipient has a diagnosis indicating quadriplegia, hemiplegia, or other paralysis (ICD-9-CM diagnosis codes 342.00 – 342.12, 342.80 – 342.92, 344.00 – 344.42, 344.81 – 344.9) on one or more claims
    a. Diagnosis code present = 8 points
11. **Disability indicator in MAXIS:** recipient has a disability indicated in MAXIS; number of points assigned varies by recentness of the indication
    a. Indication 10 or more years ago = 0 points
    b. Indication 5-10 years ago = 3 points
    c. Indication 2-5 years ago = 5 points
    d. Indication within past 2 years = 10 points
12. **Emphysema:** recipient has a diagnosis of emphysema (ICD-9-CM diagnosis codes 491.20, 491.21, 492.0, 492.8, 506.4, 518.1) on one or more claims
    a. Diagnosis code present = 4 points
13. **Morbid Obesity:** recipient has a diagnosis of morbid obesity (ICD-9-CM diagnosis code 278.01) on one or more claims
    a. Diagnosis code present = 4 points
14. **Compassionate Allowance Diagnosis:** recipient has a diagnosis on the list of Social Security Administration list of Compassionate Allowances conditions on one or more claims. This diagnosis list has been updated as of 2014 with information provided by Debra Wagner and Kathleen Hendricks
    a. Diagnosis code present = 25 points
15. **Developmental Disability:** recipient has a diagnosis of developmental disability (ICD-9-CM diagnosis codes 315.00 – 315.09, 315.1, 315.2, 315.31 – 315.32, 315.39, 315.4 – 315.9, 317, 318.0 – 318.2, 319) on one or more claims
    a. Diagnosis code present = 8 points
16. **Rule 36:** recipient is living in a residential facility for adults with mental illness (living arrangement of 52 or 57 or paid claim with procedure code H0019 for Intensive Residential Treatment Services)
    a. Living in Rule 36 facility = 5 points
17. **End Stage Renal Disease (ESRD):** recipient has a diagnosis of ESRD (ICD-9-CM diagnosis code 585.6) on one or more claims
    a. Diagnosis code present = 25 points

Estimated size of the denominator:

The estimated number of MA enrollees aged 21-64 during Calendar Year 2013 who would be classified as disabled using this definition is 139,732. This number amounts to 33.1% of all MA enrollees aged 21-64 (422,086) during 2013.

Appendix C - Disability Classification for Seniors

Purpose:

To establish the denominator for health care utilization measures to be reported for action item 2G in the "Healthcare and Healthy Living" section of the Olmstead Plan.

Background:

DHS Health Care Research and Quality Division (HRQ) is producing several measures of health care utilization in order to establish baseline data for medical, dental, chiropractic, and mental health care for persons with disabilities. Measures will be reported for persons enrolled in Medical Assistance with disabilities (as defined below), and for a comparison group of persons enrolled in Medical Assistance without disabilities. This analysis will be limited to persons aged 65and over.

Dates used:

Calendar Year 2013 (1/1/2013 – 12/31/2013)

Inclusions:

Persons enrolled in Medical Assistance (major program MA) at any point during the measurement year, and aged 65 and over inclusive as of the end of the measurement year (12/31/2013).

Exclusions:

Persons who are not enrolled in Medical Assistance at any point during the measurement year, and who are not aged 65 and over as of 12/31/2013.

Source of data:

DHS health care program enrollment and claims data

Definition:

MA enrollees with disabilities will be defined as those who:

1) Have been enrolled in MA with an eligibility type indicating disability at any point during the measurement year, OR

2) Have a score of 25 points or greater using the algorithm developed at DHS for screening recipients as likely to have a disability, for the State Medical Review Team (SMRT), OR

3) Possesses a classification of dependency based on scores on Activities of Daily Living (ADL) measures.

Details:

1) Medical Assistance eligibility type indicating disability is listed in the following table:

Eligibility Type Code	Description
DP	EMPLOYED DISABLED WITH PREMIUM

2) SMRT Algorithm description:

The SMRT algorithm was designed at DHS to screen health care program enrollees based on diagnoses and services reported on claims, enrollee age, and other enrollee information, to identify those who are likely to have a disability. The algorithm was modeled after criteria used by the Social Security Administration for determining eligibility for Supplemental Security Income (SSI).

The algorithm considers 18 months of claims history, and weights each of several factors using a point system. A person who has at least 25 points is identified as being likely to have a disability.

The components of the SMRT algorithm are as follows:

1. **Inpatient Stays:** count of the number of months during which the recipient had an inpatient stay
    a. Greater than or equal to 10 months = 20 points
    b. 8-9 months = 10 points
    c. 4-7 months = 6 points
    d. 1-3 months = 2 points
    e. 0 months = 0 points
2. **Severe Mental Health:** count of the number of distinct dates of service for which there was a claim with a severe mental health diagnosis (ICD-9-CM diagnosis codes 295.00 – 297.9 or 301.83)
    a. Greater than or equal to 10 dates of service = 20 points
    b. 8-9 dates of service = 10 points
    c. 4-7 dates of service = 6 points
    d. 1-3 dates of service = 2 points
    e. 0 dates of service = 0 points
3. **Age:** recipient age as of the end of the measurement period
    a. Greater than or equal to 40 = 3 points
    b. Less than 40 = 0 points
4. **Chemical Dependency in conjunction with Mental Illness:** recipient has a diagnosis of chemical dependency (ICD-9-CM diagnosis codes 291.0 – 292.9 or 303.00 – 305.9) on one or more claims, AND a diagnosis of severe mental illness (ICD-9-CM diagnosis codes 295.00 – 297.9) on one or more claims; number of points assigned varies by recipient age
    a. Age is greater than or equal to 40 = 5 points
    b. Age is less than 40 = 2 points
5. **Presumptive Disability or Blindness:** recipient has a diagnosis on the list of presumptive disabilities on one or more claims
    a. Diagnosis code present = 8 points
6. **Homeless:** recipient has a diagnosis code indicating homelessness (ICD-9-CM diagnosis codes V60.0 or V60.1) on one or more claims
    a. Diagnosis code present = 3 points

7. **Group Residential Housing (GRH):** recipient has been in the GRH program during the 18 month look back time period
    a. Enrolled in GRH = 5 points
8. **Diabetes:** recipient has a diagnosis of diabetes mellitus (ICD-9-CM diagnosis codes 250.00 – 250.93) on one or more claims
    a. Diagnosis code present = 3 points
9. **HIV:** recipient has a diagnosis indicating Human Immunodeficiency Virus infection (ICD-9-CM diagnosis codes 042, V08, 079.53) on one or more claims
    a. Diagnosis code present = 4 points
10. **Quadriplegia and Other Paralysis:** recipient has a diagnosis indicating quadriplegia, hemiplegia, or other paralysis (ICD-9-CM diagnosis codes 342.00 – 342.12, 342.80 – 342.92, 344.00 – 344.42, 344.81 – 344.9) on one or more claims
    a. Diagnosis code present = 8 points
11. **Disability indicator in MAXIS:** recipient has a disability indicated in MAXIS; number of points assigned varies by recentness of the indication
    a. Indication 10 or more years ago = 0 points
    b. Indication 5-10 years ago = 3 points
    c. Indication 2-5 years ago = 5 points
    d. Indication within past 2 years = 10 points
12. **Emphysema:** recipient has a diagnosis of emphysema (ICD-9-CM diagnosis codes 491.20, 491.21, 492.0, 492.8, 506.4, 518.1) on one or more claims
    a. Diagnosis code present = 4 points
13. **Morbid Obesity:** recipient has a diagnosis of morbid obesity (ICD-9-CM diagnosis code 278.01) on one or more claims
    a. Diagnosis code present = 4 points
14. **Compassionate Allowance Diagnosis:** recipient has a diagnosis on the list of Social Security Administration list of Compassionate Allowances conditions on one or more claims. This diagnosis list has been updated as of 2014 with information provided by Debra Wagner and Kathleen Hendricks
    a. Diagnosis code present = 25 points
15. **Developmental Disability:** recipient has a diagnosis of developmental disability (ICD-9-CM diagnosis codes 315.00 – 315.09, 315.1, 315.2, 315.31 – 315.32, 315.39, 315.4 – 315.9, 317, 318.0 – 318.2, 319) on one or more claims
    a. Diagnosis code present = 8 points
16. **Rule 36:** recipient is living in a residential facility for adults with mental illness (living arrangement of 52 or 57 or paid claim with procedure code H0019 for Intensive Residential Treatment Services)
    a. Living in Rule 36 facility = 5 points
17. **End Stage Renal Disease (ESRD):** recipient has a diagnosis of ESRD (ICD-9-CM diagnosis code 585.6) on one or more claims
    a. Diagnosis code present = 25 points

3) Classification of Dependency based on Activities of Daily Living Scores.

Case mix summary classifications are created using information obtained from the Minnesota Long Term Care Consultation Services Assessment Form (DHS-3428)[4]. Specifically, DHS uses branching logic to place individuals into different case mixes, depending on their combination of scores on activities of daily living (ADL). The full logic for placing individuals into classifications can be seen on DHS Case Mix Classification worksheet[5].

Additionally, DHS considered individuals who possessed dependency scores on certain individual ADLs to be disabled for the purposes of the Olmstead Plan. Those ADLs involved critical activities of life: toileting, transferring, and eating.

Case Mix Summary Classification	Description
D	Medium ADL
E	Medium ADL Behavior
F	Medium ADL Special Nursing
G	High ADL
H	High ADL Behavior
I	Very High ADL (Eating 3-4)
J	High ADL, Severe Neurological Impairment/3+ Behavior
K	High ADL, Special Nursing
V	Ventilator Dependent - EW
Toileting score greater than 0	Not toileting independent
Transferring score greater than 1	Requires help of at least one for transferring
Eating score greater than 1	Requires active assistance for eating

Estimated size of the denominator:

The estimated number of MA enrollees aged 65 and over during Calendar Year 2013 who would be classified as disabled using this definition is 43,435. This number amounts to 64.1% of all MA enrollees aged 65 and over (67,767) during 2013.

[4] This file can be obtained at the following location: Minnesota Long Term Care Consultation Services Assessment Form

[5] This file can be obtained at the following location: AC, BI, CADI, EW Case Mix Classification Worksheet

Appendix D - Consultation

Below is a list of DHS subject matter experts who have been consulted during the development of this report.

DHS Staff Name	Division	Area of expertise
Meg Heinz	Health Care Eligibility and Access Division	Eligibility Policy
Kathleen Hendricks	Health Care Eligibility and Access Division - State Medical Review Team	State Medical Review process
Jolene Kohn	Aging and Adult Services Division	Program and Policy management
Susan Kurysh	Purchasing and Service Delivery Division	ICD 9 and billing codes
Patrick Lee	Purchasing and Service Delivery Division	Benefits Billing codes
Rick Moldenhauer	Alcohol and Drug Abuse Division	Diagnosis codes for chemical dependency
Heather Petermann	Health Care Administration Policy Development and Implementation	Health Care Homes
Libby Rossett-Brown	Aging and Adult Services Division	Program and Policy management
Lisa Rotegard	Aging and Adult Services Division	Home and Community Based Services
Jenny Roth	Purchasing and Service Delivery Division	Benefits Policy
Jeff Schiff	Health Care Administration State Medicaid Medical Director	Children's Health
Barbara Skoglund	Health Care Eligibility and Access Division	Eligibility Policy
Jerry Storck	Adult Mental Health Division	Diagnosis codes for mental health conditions
Sarah Thorson	Disability Services Division	Children and youth with disabilities; waivered services
Debra Wagner	Health Care Eligibility and Access Division - State Medical Review Team	State Medical Review process

Appendix E – Glossary of Acronyms and Terms

The following is a description of various acronyms and terms listed in this report that are not defined within the report itself.

Acronym	Description
AMI	Acute myocardial infarction
PCI	Percutaneous coronary interventions
IVD	Ischemic vascular disease
LDL-C	Low-density lipoprotein cholesterol
CABG	Coronary artery bypass graft
ED	Emergency department
QMB	Qualified Medicare Beneficiary
SLMB	Service Limited Medicare Beneficiary
TEFRA	Tax equity and Fiscal Responsibility Act
ICD-9-CM	The International Classification of Diseases, Ninth Revision, Clinical Modification
MAXIS	System that processes information to determine eligibility for public assistance programs and mails benefits and notices to public assistance recipients. MAXIS is not an acronym.
QWD	Qualified Working Disabled
Rule 36	Rule 36 establishes standards for adult mental health residential facilities in Minnesota. Compliance with this rule is required for facilities that provide residential mental health treatment for more than four adults.

This information is available in accessible formats for individuals with disabilities by contacting your county worker. For other information on disability rights and protections to access human services programs, contact the agency's ADA coordinator.

Executive Summary

KEY FINDINGS

one

KEY FINDING

From 2008-2010, Minnesota's **infant mortality rate** overall *(5.0 infant deaths per 1,000 live births)* **was lower than the nation's rate** *(6.4 infant deaths per 1,000 live births)*.

While the state has already met the **Healthy People 2020** target of 6.0 infant deaths per 1,000 live births, the nation as a whole has not yet done so.

two

KEY FINDING

Minnesota's overall rate masks significant disparities in rates between American Indians, African Americans, and Whites.

From 2006-2010, **African Americans** *(9.8 infant deaths per 1,000 live births)* and **American Indians** *(9.1 infant deaths per live 1,000 births)* had the **highest infant mortality rates** in the state. These rates more than doubled the rate for Whites *(4.4 infant deaths per 1,000 live births)*.

three

KEY FINDING

Infants born to **African American women** are **two times as likely to die** during the neonatal period *(first month)* than infants born to White women and women in the state as a whole.

Babies born to **American Indian** women are **three times as likely to die** in the post-neonatal period compared to the babies of White women and women in the state overall.

Even when the babies of **African American** and **American Indian** women are **born full-term** or **normal weight** at birth, their **risk of death** before reaching age one is **two to three times** that of Whites (2006 -2010).

KEY FINDINGS

four KEY FINDING

Congenital anomalies are the **leading cause of infant deaths** in Minnesota overall, and the leading cause of infant deaths among Asians, Hispanics, and Whites.

Prematurity is the leading **cause of infant deaths** among **African Americans**, while **Sudden Unexpected Infant Deaths (SUID)**, which includes Sudden Infant Deaths Syndrome (SIDS) and sleep-related deaths, are the leading **causes of deaths** among **American Indian infants** (2006-2010).

five KEY FINDING

Infants born to African American and American Indian **teen mothers,** U.S.-born Black, Asian, and Hispanic women, and women with **less than a high school education** (in the state as a whole), are at **greater risk of dying** before their first birthday compared to foreign-born Black, Asian, and Hispanic women, and women with 16 or more years of education.

six KEY FINDING

The infant mortality rate for infants born to **well-educated** *(i.e., 16 or more years of education)* **African American women** is **significantly higher** than the infant mortality rate of infants born to White women with less than a high school education.

seven KEY FINDING

Compared to women of other racial/ethnic groups, infants born to **African American** and **American Indian** women are at **greater risk of dying** before their first birthday even if their mothers **did not smoke** during pregnancy or **initiated prenatal care** early.

It is obvious from these findings that infant mortality is a complex problem that requires a response from across many sectors and disciplines to reduce the rate overall, and to address disparities in rates. **Reducing the infant mortality rate and improving birth outcomes for all families in Minnesota will take a broad multi-faceted approach and include many partners.**

Executive Summary

RECOMMENDATIONS

The priority recommendations developed by the stakeholders to reduce infant mortality in Minnesota are as follows:

1. **Improve health equity** and address the social determinants of health that most significantly impact disparities in birth outcomes.

2. **Reduce the rate of Sudden Unexpected Infant Deaths** (SUID), which includes SIDS and sleep-related infant deaths in Minnesota.

3. Assure a **comprehensive statewide system** that monitors infant mortality.

4. Provide comprehensive, culturally appropriate, **coordinated health care to all women** during the preconception, pregnancy and post-partum period.

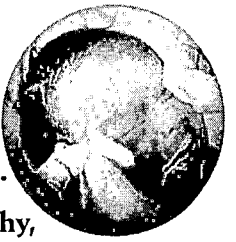
5. **Reduce the rate of preterm births** in Minnesota.

6. **Improve the rate of pregnancies that are planned**, including reducing the rate of teen pregnancies.

7. **Establish an ongoing task force** of stakeholders to oversee implementation of recommendations and action steps.

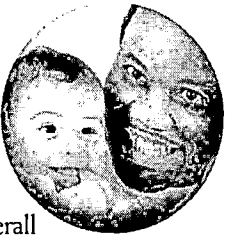
VISION, GOALS & OBJECTIVE

MDH and stakeholders' collective vision, goals, and objectives are as follows:



Vision.....

All babies are born healthy, to healthy parents in healthy communities, and are **given equal opportunities to survive** to age one and beyond.



Goals.....

1) To **reduce** Minnesota's overall **infant mortality** rate, and
2) To **reduce** racial and ethnic **disparities** in infant death rates.

Objective.....

To **reduce** the state's overall **infant mortality rate by 10 percent** from 4.6 infant deaths for every 1,000 babies born alive in 2010 to 4.1 by 2020.

Minnesota's Infant Mortality Reduction Plan

INTRODUCTION

Health, as defined by the World Health Organization, is a *state of complete physical, social and mental well-being, and not merely the absence of disease or infirmity.*[1] Health is created through the interaction of **individual, social, economic,** and **environmental factors**, and in the systems, policies, and processes encountered in everyday life. These include job opportunities, wages, transportation options, the quality of housing and neighborhoods, the food supply, access to health care, the quality of public schools and opportunities for higher education, racism and discrimination, civic engagement, and the availability of social support networks. When groups face serious social, economic, and environmental disadvantages, such as structural racism and a widespread lack of economic and educational opportunities, health inequities are the result. The growing economic inequities and the persistence of health disparities in Minnesota are a matter of life and death for many. Communities across the state are being devastated by high rates of infant mortality, diabetes, suicide and more. Multiple efforts have been made to try to close the significant gaps in health outcomes across populations, but disparities remain, suggesting that more work needs to be done to improve the health of all Minnesotans.

- Even where health outcomes have improved overall, as in infant mortality rates, the disparities in these outcomes remain unchanged: **American Indian and African American babies are still dying at twice the rate** of white babies.

- **Inequities in social and economic factors are the key contributors** to health disparities and ultimately are what need to change if health equity is to be advanced.

- **Structural racism** — the normalization of historical, cultural, institutional dynamics that routinely advantage white people while producing cumulative and chronic adverse outcomes for people of color and American Indians — is rarely talked about. **Revealing where structural racism is operating** and where its effects are being felt is essential for determining where policies and programs can make the greatest improvements.

- **Improving the health of those experiencing the greatest inequities** will result in improved health for all.

The state's low overall infant mortality rate and ranking over the years have masked significant racial an ethnic disparities in infant mortality

Despite having one of the lowest infant mortality rates in the country, infant mortality remains a topic of great public health concern in Minnesota. **Infant mortality,** *defined as the death of an infant before age one,* is an important indicator of the health and well-being of a nation. It is a cause for concern in Minnesota because of the approximately **70,000 infants born alive in the state each year, about 380 do not survive** to their first birthday.[2] In addition, the state's low overall infant mortality rate and ranking over the years have masked significant racial and ethnic disparities in infant mortality. Specifically, **babies born to women of color** – particularly African American and American Indian women – have historically been, and still are, **more likely to die in their first year of life** than babies born to White women. Thus, developing and implementing effective, evidenced-based policies and programs that foster optimal maternal and child health conditions is critical in ensuring that:

- The state fulfills its **Healthy Minnesota 2020** goal that **all babies born in Minnesota experience a healthy start in life.**[3]
- **All babies develop to their fullest potential,** and survive to become successful adults who contribute to the vitality of their communities.[4]
- The state's vision that **"All people in Minnesota enjoy healthy lives and healthy communities"**[3] becomes a reality.
- All Minnesotan's are given an **"Equal opportunity for health."**[3]
- The state realizes its overall objective of **reducing the state's overall infant mortality rate by 10 percent** from 4.6 infant deaths for every 1,000 babies born alive in 2010 to 4.1 by 2020.

A CALL TO ACTION

THIS DOCUMENT *(hereafter called the Plan)* serves as a "call-to-action" to address the infant mortality problem in Minnesota, particularly the persistent racial and ethnic disparities in poor birth outcomes. It outlines a strategic plan with several broad recommendations to further reduce infant mortality in the state. Reducing infant mortality and eliminating health disparities is a national priority called forth in **Healthy People 2020,** the nation's public health agenda.[5] It includes an explicit objective to reduce the national infant mortality rate by the year 2020 to 6.0 infant deaths per 1,000 live births. It also identifies eliminating racial and ethnic health disparities in infant mortality as a national public health goal and priority.