



# *The Arc HealthMeet Assessment Results*

**YEAR 3 TECHNICAL REPORT | NOVEMBER 30, 2015**

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Prepared for The Arc of the US  
by The Boggs Center on Developmental Disabilities  
Rutgers Robert Wood Johnson Medical School

# Year 3 Technical Report

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**NOTE:** HealthMeet assessments were conducted with people with intellectual disabilities, developmental disabilities, or both intellectual and developmental disabilities. They are referred to as people with IDD in this report.

Responses to the assessment questions were provided by the individual with IDD or by a person accompanying them (e.g., family member, staff person). Therefore, the term “respondent” may apply to the person with IDD or the person accompanying them. The term “participants” refers to the individuals who were assessed and the term “proxies” refers to persons accompanying them.

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# Executive Summary

People with intellectual disabilities have been described as facing a cascade of disparities in regard to health and health care access (Krahn, Hammond, & Turner, 2006). With a goal of reducing health disparities and increasing the longevity and quality of life for people with intellectual disabilities, the Arc of the United States established HealthMeet, a four-year project funded by the US Centers for Disease Control and Prevention in August, 2012. HealthMeet is a partnership of The Arc with state and local Arc chapters, national disability organizations, public health systems, health professionals, university systems, and other key stakeholders.

In Years 1-3 (August 2012 – July 2015), 29 Arc Chapters in five states participated in HealthMeet. They provided free, community-based health assessments for individuals with intellectual disabilities. The assessment instrument was developed by The Arc in collaboration with the CDC and others.

The project also presented webinars about health and health care for individuals with intellectual disabilities, their families, direct service professionals, and medical providers. In addition, online training modules were developed for self-advocates and trainees of Leadership Education in Neurodevelopmental Disabilities (LEND) programs and University Centers for Excellence in Developmental Disabilities (UCEDDs).

HealthMeet assessments included general characteristics, lifestyle factors such as diet and physical activity, vital signs, body composition, respiratory health, vision, hearing, oral health, and foot/mobility health. There were minor changes in the assessment instrument in Year 3. Tables presenting assessment findings include data for all three years except where noted.

Participating Arc chapters conducted Follow-up Assessments in Year 3. They included questions about changes since the previous assessment as well as measurements similar to the initial assessments (e.g., body composition and oral health).

This report presents initial HealthMeet assessment results for 1,760 adults and adolescents with disabilities from 29 Arc chapters in five states (California, Massachusetts, New Jersey, North Carolina, and Pennsylvania). It also presents Follow-up Assessment results for 707 participants in the five states. Since participants came from five states and were not randomly selected, the results may not be representative of all individuals with ID, Autism, or “Other disabilities” in those states or in the United States as a whole.

HealthMeet participants were accompanied to the assessments by family members, staff persons, friends, and others. Nearly six in ten (59%) of those accompanying participants were family members, and 36% were staff persons. Nearly eight in ten (77%) of those accompanying HealthMeet participants reported that they were the primary caregiver for the individual with disabilities they accompanied

Responses to assessment questions were provided by the individual with disabilities or by a person accompanying them. Screeners were asked if the person was able to respond to questions on his/her own and if a caregiver or support person assisted in answering questions. However, this was not addressed for each individual question. Therefore, results for each question may represent a direct response from the individual with IDD or from the person accompanying them answering on their behalf.

## Key Findings

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HealthMeet has reached a substantial number of people with IDD who had not previously had contact with The Arc — one out of four participants (26%) in Years 1-2 reported that they had not participated in Arc activities before HealthMeet. (This question was not asked in Year 3.)

More than half of HealthMeet participants (53%) were 40 years of age or older; the average (mean) age was 42.4 years. Nearly nine in ten participants who identified a specific disability (87%) were reported to have a condition associated with intellectual disability alone or with another disability. Almost half of the participants (48%) lived with their parents or family, nearly four in ten (38%) lived in a group home, and 13% lived in their own home or apartment.

Less than one in four participants (23%) had a Body Mass Index (BMI) representing healthy weight (BMI 18.5 – 24.9), compared with an age-adjusted rate of 29% among the US adult population (Centers for Disease Control and Prevention, 2014b). The overall obesity rate of 46% among HealthMeet participants was higher than the age-adjusted rate of 35% in the general population of US adults, and the extreme obesity rate of 12% was twice the age-adjusted rate of 6% in the general population (Fryar, Carroll, & Ogden, 2014).

Signs or symptoms of oral health issues were observed in more than one-third (35%) of participants. The rate of missing teeth was 2.5 times the rate among the general population – 25% among HealthMeet participants, compared with 10% of the US general population (NIDCR, 2015),

HealthMeet participants had a high risk of falls, a major cause of serious injury in the US (Adams, Dey, & Vickerie, 2005). Seventeen percent of HealthMeet respondents reported falling at home in the past year. This is more than three times the fall injury rate of 5% among noninstitutionalized adults aged 65 and older in the US (Schiller, Kramarow, & Dey, 2007). As in the general population, the risk of falling was higher among women (22%) than men (14%).

Thirteen percent of Year 3 HealthMeet participants reported that they have diabetes. This is similar to the estimated prevalence of 12-14% among the US adult population (Menke, Casagrande, Geiss, & Cowie, 2015).

Eighty-four percent of Follow-up Assessment participants with health problems identified at their initial assessment reported that they had gone to the doctor to talk about them.

Seventy-six percent of Follow-up Assessment participants reported using the information they learned during the first assessment to make healthier lifestyle choices.

The concerns identified in the HealthMeet assessments from Years 1-3 present both challenges and targets of opportunity for interventions to improve the health of people with IDD in the US

# Technical Report

## *Introduction to HealthMeet Assessment Results*

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The US Centers for Disease Control and Prevention (CDC) entered into a Cooperative Agreement with The Arc of the United States to conduct the HealthMeet project in August, 2012. HealthMeet's goal is to reduce health disparities and increase the longevity and quality of life for people with intellectual disabilities. HealthMeet is a partnership of The Arc with state and local Arc Chapters, national disability organizations, public health systems, health professionals, university systems, and other key stakeholders.

In Years 1-3 (August 2012 – July 2015), 29 Arc Chapters from five states (California, Massachusetts, New Jersey, North Carolina, and Pennsylvania) participated in the project. They provided free health assessments for individuals with intellectual disabilities in community settings. The assessment instrument was developed by The Arc in collaboration with the CDC and others.

HealthMeet also presented webinars about health and health care for individuals with intellectual disabilities, their families, direct service professionals, and medical providers. Other project activities included two training modules on health, wellness, and exercise through the University of Minnesota's accessible online education platform Self-Advocacy Online (<http://www.selfadvocacyonline.org/>) and development of modules on health promotion and communication (<http://www.iddhealthtraining.org/>). The modules are designed for use by Leadership Education in Neurodevelopmental Disabilities (LEND) programs and University Centers for Excellence in Developmental Disabilities (UCEDDs).

Initial HealthMeet assessments addressed participants' general demographic characteristics, lifestyle factors such as diet and physical activity, vital signs, body composition, respiratory health, vision, hearing, oral health, and foot/mobility health. They included questions of the participants or their proxies (e.g., living arrangement) as well as screener observations (e.g., breathing difficulties) and measurements (e.g., height and weight).

There were minor changes in the assessment instrument in Year 3. They included the addition of a question about diabetes, deletion of a few questions, and changes in the response choices for some questions. Tables presenting assessment findings include data for all three project years except where noted. To protect participants' privacy, results with numbers of ten or less are not displayed.

Follow-up Assessments were conducted in Year 3. They included questions such as "Since you came to the last assessment, do you feel like you have more information on health issues and how to live a healthier life?" With the exception of demographic and lifestyle characteristics, Follow-up Assessments also included vital signs, body composition, respiratory health, vision, hearing, oral health, and foot/mobility health.

This report describes results of initial HealthMeet assessments conducted between April 2013 and July 2015 and follow-up assessments conducted between August 1, 2014 and July 31, 2015.

## *Initial Assessments*

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A total of 1,760 adults and adolescents with disabilities participated in initial assessments. The distribution among states was: California – 22%; Massachusetts – 16%; New Jersey – 22%; North Carolina – 11%; and Pennsylvania – 30% (see Appendix A, Table 1.)

In addition to presenting results for all participants, this report compares results for individuals with diagnoses of intellectual disabilities (ID), Autism, and “Other” Disabilities. Comparisons by gender and by age group also are presented. These comparisons follow the structure of the analyses in The Arc FINDS report (Anderson, Larson, & Wuorio, 2011). Since HealthMeet participants came from five states and were not randomly selected, the results may not be representative of all individuals with intellectual disabilities and/or developmental disabilities in those states or in the United States as a whole.

Responses to assessment questions were provided by the individual with disabilities or by a person accompanying them. However, this was not addressed for each individual question. In Years 1 & 2, each module except the General Characteristics section included questions asking whether the person with a disability was able to answer questions on his/her own and whether a caregiver or support person assisted in answering questions. In Year 3, these questions were asked once at the end of the assessment. Since these questions were only asked once during a module or at the end of the assessment, it is not known if the individual with IDD or the person accompanying them answered a particular question. Therefore, results for each question may represent a direct response from the individual with IDD or from the person accompanying them answering on their behalf.

The term “respondent” may apply to the person with IDD or the person accompanying them. The term “participants” refers to the individuals who were assessed and the term “proxies” refers to persons accompanying them.

The number of responses for individual questions varied widely. The total number of responses is presented for each question; the numbers for each sub-group (disability, gender, and age) also are presented. Results are presented in the order of the assessment questions.

## *Characteristics of Those Accompanying HealthMeet Participants*

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HealthMeet participants were accompanied to the assessments by family members, staff persons, friends, and others. A contact person was identified for 82% of participants (see Appendix A, Table 2a).

Seventy-seven percent of contact persons identified themselves as the participant’s primary caretaker. Primary caretaker status differed significantly between age groups. Only 69% of participants ages 40 and older were accompanied by a primary caretaker while 91% of the youngest participants (14-21 years), 92% of 22-26 year-olds, and 85% of 27-39 year-olds were accompanied by a primary caretaker.

Family members accompanied nearly three out of five participants (59%); staff persons accompanied 36% of participants. The proportion of participants accompanied by family members declined with age and the proportion accompanied by staff members increased with age. The youngest group (ages 14-21) was twice as likely as the oldest group (ages 40 and older) to be accompanied by a family member - 91% and 44%, respectively. In contrast,



the oldest group of participants was seven times as likely as the youngest group to be accompanied by a staff person - 49% and 7%, respectively.

## *General Characteristics of HealthMeet Participants*

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### **Guardianship Status**

Overall, two-thirds (67%) of respondents reported that the participant was his/her own legal guardian (i.e., did not have a guardian appointed) (see Table 2b). There were significant differences between Age groups. The highest proportions of participants reported as being their own guardians were among the two oldest groups (27-39 years and 40 years and older) – 67% and 73%, respectively. The youngest group (14-21 year-olds) had the lowest proportion of appointed guardians (41%).

### **Age**

More than half of HealthMeet participants (53%) were 40 years of age or older and 27% were ages 27-39. The Autism group had the highest proportion of 14-21 year-olds (35%) and the lowest proportion of those ages 40 and older (29%).

### **Gender**

Fifty-two percent of HealthMeet participants were male and 48% were female. Gender varied significantly by disability group: only 17% of the Autism group was female, compared with nearly half of the ID group (48%) and 64% of the Other Disability group.

### **Race/Ethnicity**

Race/Ethnicity was categorized as: White, Black, Hispanic, Asian/Pacific Islander, and Other Race. Overall, 62% of the participants were identified as White, 18% as Black, 7% as Hispanic (of any race), 6% Asian/Pacific Islander, and 7% of Other race. There were substantial differences in Race/Ethnicity between age groups – the youngest (ages 14-21) and oldest (40 and older) had the highest proportions of White participants – 74% and 69%, respectively. Just under half of 22-26 year-olds (48%) and over half of 27-39 year-olds (56%) were White.

### **Type of Disability**

This analysis used disability categories similar to the Arc's FINDS survey report, prepared for The Arc by the Research and Training Center on Community Living at the University of Minnesota (Anderson, Larson, & Wuorio, 2011). Disabilities were clustered in three categories: "ID," "Autism," and "Other."

The assessments included an item asking respondents whether the person with a disability had any of the following disabilities: Autism; Cerebral Palsy; Down Syndrome; Fetal Alcohol Syndrome; Fragile X Syndrome; Traumatic Brain Injury; Intellectual Disability; or Other. Respondents could identify all disabilities that applied. The most common disabilities were Intellectual Disability (69%), Down Syndrome (11%), Autism (9%), and Cerebral Palsy (9%) (see Table 2b.) Due to confidentiality concerns, specific information about "Other disabilities" (4%) that were not listed was not available for this analysis.

Some individuals had more than one disability. If any of their disabilities were Intellectual Disability, Down Syndrome, Fetal Alcohol Syndrome, or Fragile X Syndrome, they were included in the "ID" group. If one of their disabilities was Autism and another disability that

was not ID, they were included in the “Autism” group. If their disabilities were Cerebral Palsy, Traumatic Brain Injury, or “Other” and did not include ID or Autism, they were included in the “Other Disability” group. Overall, 87% were in the ID group, 5% were in the Autism group, and 8% were in the Other Disability group.

There were gender differences in participants identified with Autism and Other Disabilities. The proportion of males reported to have Autism (13%) was more than three times the proportion of females (4%). The proportion of males with Other Disabilities (3%) was half of the proportion of females with Other Disabilities (6%).

There were significant differences in Disability Type between the age groups. Autism was reported for 21% of the youngest participants (ages 14-21) but only 5% of the oldest age group (40 and older). Similarly, Down Syndrome was reported for 20% of 14-21 year-olds but only 5% of participants ages 40 and older.

### **Number of Diagnoses**

Overall, one diagnosis was reported for 80% of participants, two diagnoses were reported for 20%, and less than 1% had three or more diagnoses reported. There were significant differences in the number of diagnoses between genders and age groups. Females were significantly more likely than males to have a single diagnosis - 83% and 76%, respectively. Those ages 40 and older had the highest percentage (84%) with one diagnosis, while 22-26 year-olds had the lowest percentage (74%).

### **Employment**

Overall, 44% of respondents reported working for pay. The ID group had the highest proportion among the three Disability groups (45%). The youngest age group (ages 14-21) was least likely to report working (27%) and the 27-39 year-old group had the highest reported employment rate (50%).

Thirty-nine percent of respondents reported working full time. There were no significant differences in full-time or part-time work status by disability group, gender, or age. Ten percent of Year 3 respondents reported working in the community, while 90% reported working in a work program. (This question was asked in Year 3 only.)

### **Access to Doctors (Years 1 & 2 only)**

Nearly all participants (97%) reported having a doctor, with no significant group differences. The proportion of those reporting that the doctor understands the participant's health was at least 96% for all groups. (The assessment did not indicate whether the individual or the person accompanying them responded to this question.)

### **Living Arrangements**

The largest proportion of participants reported living with their parents or family (48%), 38% lived in a group home, and 13% lived in their own home or apartment. Nearly two-thirds (65%) of the Autism group lived with parents or family, compared with 51% of the ID group and 43% of the Other Disability group.

The proportion living with parents or family declined with age – from 86% of 14-21 year-olds to 29% of those ages 40 and older. More than half of those 40 years and older lived in a group home (53%). This was significantly higher than the other age groups.

## Health Insurance

Insurance status was grouped into four categories, in the following order: Private, Medicare, Medicaid, and Uninsured. (If a participant had Private coverage and Medicaid, for example, they were included in the Private category.) Medicare (49%) and Medicaid (37%) were the most common forms of insurance for HealthMeet participants. Private insurance coverage varied by Disability type and age. Those with Autism were more likely (32%) to have private insurance than the ID group (13%) or those with Other Disabilities (10%). Twenty-five percent of the youngest age group (14-21 years) had private insurance, more than twice the proportion of those in the oldest age group (10%).

## Participation in Special Olympics and Arc Activities (Years 1 & 2 only)

Fifty-four percent of respondents reported that they have participated in Special Olympics; 30% reported that they currently participate in Special Olympics. Current Special Olympics participation by the youngest group (ages 14-21) was more than twice the participation rate of the oldest group (40 and older) – 53% and 24%, respectively.

Three out of four respondents (74%) said they had participated in Arc activities. More than half of the youngest age group (53%) reported participating in Arc activities, compared with 73-79% of the other age groups.

More than seven in ten participants (73%) reported that they currently participate in Arc activities. Those in the Other disability group were less likely (57%) than those in the ID group (74%) to currently participate in Arc activities. The youngest age group (14-21) was least likely to currently participate in Arc activities (47%), while current Arc participation exceeded seven in ten among the other age groups (71-78%).

## Health Status

Overall, the largest proportion of respondents rated their health as Good (59%), followed by Very Good with 24%. The only difference in self-rated health was between age groups – those ages 40 and older were least likely to rate their health as Very Good (20%), while 29-33% of the other age groups reported Very Good health.

## Women's Preventive Health Use (Years 1 & 2 only)

Three out of four (75%) female respondents said they have had a mammogram.

Among women reporting the time since their last mammogram, nearly nine out of ten (87%) reported that their last mammogram was within the past two years.

Among women 50 years and older, 95% reported that their last mammogram was within the past two years. The Other Disability group was less likely (40%) than the ID group (74%) to have had a mammogram within the past 12 months.

Eighty percent of female respondents said they have had a pap smear. There were significant differences by age group. Younger women were less likely than older women to report that they have had a pap smear. Only one-third of 22-26 year old women (33%) reported having a pap smear, compared with 86% of women ages 40 and older.

The largest proportion of women who responded to a question about the time since their last pap smear reported that they had a pap smear within the past year (61%), followed by those who said they had a pap smear within the past two years (19%).

## **Tobacco and Alcohol Use**

Overall, 7% of participants reported using tobacco. Daily tobacco use was reported by 81% of smokers ages 40 and older and 82% of 27-39 year-old smokers, compared with 69% of 22-26 year-olds.

Twelve percent of participants reported that they use alcohol. Alcohol use differed by gender and age. Females (10%) were less likely than males (15%) to report alcohol use. Sixteen percent of 22-26 and 27-39 year-olds reported using alcohol, while only 10% of 14-21 year-olds and those forty years and older reported alcohol use.

## **Diet, Sun Safety and Exercise (Years 1 & 2 only)**

Two out of three participants (67%) reported eating less than three servings of fruits and vegetables per day. Females (12%) were less likely than males (17%) to report eating less than one serving of fruits and vegetables per day.

Respondents were asked to indicate if they take any of a list of five actions to protect their skin in the sun. The most frequent responses were “use sunscreen” (58%), followed by “wear a hat” (46%) and “wear sunglasses” (37%).

Nearly half (47%) of participants reported exercising for at least 30 minutes three or more days per week. Conversely, one in five (20%) reported no regular exercise. The youngest age group (14-21 years) had the largest proportion of respondents who reported exercising three or more days per week (68%) and the oldest age group (40+ years) had the smallest proportion who reported exercising three or more days per week (43%).

## **TV and Computer Games**

Nearly one in four of all respondents (23%) reported five or more hours of TV watching or playing computer/video games per day. Females (44%) were more likely than males (37%) to report two hours or less spent watching TV or playing video games.

# *Health Assessments*

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## **Body Composition, Vital Signs, and Respiratory Health**

### **BODY COMPOSITION**

Assessments included a calculation of participants’ Body Mass Index (BMI). BMI is a measure computed from an individual’s height and weight. It is used as an indicator of body fat and risk for medical problems such as Type 2 diabetes and coronary artery disease (Centers for Disease Control and Prevention, 2014c). The Obese range (BMI 30.0 – 39.9) had the highest proportion of participants with 34%, and 12% were in the Extremely Obese range (BMI 40+) (see Appendix A, Table 3). Twenty-eight percent were Overweight (BMI 25.0-29.9). Twenty-three percent had a BMI in the Normal range (BMI 18.5-24.9). Three percent were Underweight (BMI below 18.5).

Females were less likely (24%) than males (32%) to be Overweight, but more likely to have a BMI in the Obese range – 38% of females compared with 31% of males. Females were nearly twice as likely as males to be in the Extremely Obese range – 15% and 8%, respectively.

BMI could not be calculated for 14% of participants. This was a result of challenges in obtaining height and/or weight measurements or an individual’s refusal to participate. The Other Disability group was less likely than the ID or Autism groups to obtain BMI results –

BMI could not be measured for 28% of the Other Disability group, compared with 12% of the ID group and 11% of the Autism group. Those ages 40 and older had the highest proportion whose BMI could not be measured at 16%, more than twice the percentage of 14-21 year-olds whose BMI could not be measured (7%).

### VITAL SIGNS

Nine out of ten participants (90%) had a “Normal” pulse rate of 60-100 beats per minute. There were no significant differences between groups.

Pulse Oximetry, a noninvasive method of measuring the oxygen level in the blood, was included in the assessments. While there is no “gold standard” for desirable Pulse Oximetry readings, values below 90 generally are considered to indicate low blood oxygen levels (Mayo Clinic Staff, 2014). More than nine in ten participants (93%) had a Pulse Oximetry reading of 94 or above.

Pulse rate was measured for 98% of participants, with no significant differences between groups. Pulse Oximetry was conducted for 94% of participants. Females (92%) were less likely than males (95%) to have Pulse Oximetry conducted. Among the four age groups, the percentage with Pulse Oximetry measurements declined with age, from 98% of 14-21 year-olds to 92% of those ages 40 and older.

Blood pressure was measured both sitting and standing. Two-thirds (67%) of HealthMeet participants had “normal” sitting blood pressure readings (Systolic pressure below 120 and Diastolic pressure below 80). Six percent of participants had high blood pressure (140/90 or higher) while sitting; 26% had pre-hypertension (120-139/80-89). Ten percent of participants had Systolic blood pressure below 90 or Diastolic pressure below 60.

Standing blood pressure was in the “normal” range for 77% of HealthMeet participants. Four percent had standing blood pressure of 140/90 or higher. The risk of low blood pressure (Systolic pressure below 90 or Diastolic pressure below 60) was more than 1.5 times as high for the Other Disability group (63%) as it was for the ID (37%) and Autism groups (42%). The youngest age group had the highest percentage with normal (standing) blood pressure (59%), compared with just 34% of those ages 40 and older.

Sitting blood pressure could not be measured for just 4% of participants; standing blood pressure could not be measured for 19%. The Other Disability group had the highest proportion of those whose standing blood pressure could not be measured with 35%, compared with 18% of the ID and Autism groups. There also were significant differences between age groups. The proportion of those whose standing blood pressure could not be measured ranged from 11% for 14-21 year-olds to 21% for those ages 40 and older.

In Years 1 and 2, screeners were asked to identify if the participant was able to answer questions on his/her own and if a caregiver or support person assisted the participant in answering the questions. Responses indicated that 80% of the participants were able to answer questions on their own and caregivers or support personnel assisted in answering questions for 14% of participants. The youngest age group (14-21) was least likely to be identified as being able to answer questions on their own (68%) and the most likely to have a caregiver or support person assist them in answering questions (23%).

In Years 1 & 2, the most frequently recommended follow-up care was for nutritional counseling due to BMI indicating overweight or obesity (26%). Further medical attention for blood pressure greater than 120/80 was advised for 22% of participants.

In Years 1-2, referrals for vital sign issues were given for 27% of participants, with no significant group differences. Twenty-six percent of participants were given referrals for nutritional issues. Females (31%) were more likely than males (21%) to receive a referral for nutritional issues. The youngest participants (ages 14-21) had the lowest proportion (13%) and those ages 27-39 years old had the highest proportion (32%) receiving nutrition referrals.

### **RESPIRATORY HEALTH**

Nearly four out of five (78%) of participants had a “normal” respiratory rate of 15-20 breaths per minute. There were significant differences between Disability groups. The Other Disability group had the lowest proportion with a “normal” rate (64%) and highest proportion of those with less than 15 or more than 20 breaths per minute (25%). Lung sounds were normal for 97% of participants, with no significant differences between groups.

Signs/symptoms of respiratory issues were identified for 3% of participants with responses regarding respiratory health. Among participants with respiratory signs/symptoms, the most frequent was breathing difficulties (73%), more than three times the proportion with behavior to suggest discomfort or abnormalities (21%). Six percent of participants reported their chest hurts when breathing.

In Years 1 and 2, screeners were asked to identify if the participant was able to answer questions on his/her own and if a caregiver or support person assisted the participant in answering the questions. Responses indicated that 81% of the participants were able to answer questions on their own and caregivers or support personnel assisted in answering questions for 12% of participants. The youngest age group (14-21) was least likely to be identified as being able to answer questions on their own (69%) and the most likely to have a caregiver or support person assist them in answering questions (18%).

Follow-up care related to vital signs was indicated for 18% of participants in Years 1-2. A possible respiratory health deficit was identified in 4% of participants in the Respiratory Health screening. Ninety percent of them were advised to seek further evaluation with a primary care physician and 10% were advised to see a specialist. Referrals for respiratory issues were given to 7% of participants, with no significant group differences.

The Vital Signs, Body Composition, and Respiratory Health module included items regarding Waist to Hip Ratio. The results are not included in this report due to the small number of responses.

### **Vision**

Approximately one in three participants (34%) had “normal” vision of 20/20 or better (see Appendix A, Table 4). The proportion of the Autism group with normal 20/20 vision or better (65%) was much higher than the proportion of the ID (34%) and Other Disability (34%) groups.

Visual acuity could not be measured for 27% of participants. There were age group differences – the oldest age group (age 40 and older) had the highest proportion (30%) whose visual acuity could not be measured, compared with 17-22% of the other age groups.

Signs/symptoms of eye problems such as redness, irritation, and behaviors to suggest discomfort were identified in 6% of the participants with a response in at least one item of the Vision assessment.

Seven percent of participants reported that their eyes hurt, with no significant group differences.

Twenty-one percent of respondents reported trouble seeing. Females had a higher proportion than males who reported trouble seeing – 24% of females compared with 19% of males.

In Years 1 & 2, screeners were asked to identify if the participant was able to answer questions on his/her own and if a caregiver or support person assisted the participant in answering the questions. The results were generally similar to those in the Vital Signs, Body Composition, and Respiratory Health module - responses indicated that 81% of the participants were able to answer questions on their own. Caregivers or support personnel assisted in answering questions for 11% of participants. The youngest age group (14-21 years) was most likely to have a caregiver or support person assist them in answering questions (16%).

In Years 1 & 2, follow-up care was indicated for 25% of vision screening participants and further vision evaluation was recommended for 12% of participants. Among those receiving follow-up care recommendations, follow-up with an Optometrist was recommended for 73% and follow-up with an Ophthalmologist was recommended for 20%.

Screeners reported that 7% of Years 1-2 participants have not visited an eye doctor regularly and should go for a regular full eye exam. Sixteen percent of participants in Years 1-2 received a referral for vision care. Those ages 40 and older had the highest proportion of participants receiving referrals (19%), more than twice the proportion of 14-21 year-olds (7%).

Among the 259 Year 3 participants with Vision information recorded, no follow-up care was recommended for 62%. A vision evaluation was recommended for 14% and a regular check-up was recommended for 24%.

## Hearing

Nearly nine out of ten (88%) participants passed the Hearing Ability Whispered Words test; an additional 2% passed with a hearing aid present (see Appendix A, Table 5.) The oldest participant group (age 40 and older) had the lowest proportion passing the test at 85%. The youngest group (14-21 years) had the highest passing rate at 96%, followed by 22-26 year-olds (95%). Hearing ability could not be measured for 9% of participants.

Seventeen percent of participants were determined to have earwax impaction ear using an otoscope. Females (85%) were more likely than males (80%) to have earwax impaction. Earwax impaction could not be measured for 4% of participants.

Four percent of participants with Hearing screening information recorded showed signs or symptoms of ear problems. Signs/symptoms of ear pain were most common (64%), more than twice the proportion exhibiting behaviors to suggest a hearing deficit (27%) and more than seven times the proportion with signs/symptoms of an ear infection (9%).

Six percent of respondents reported ear pain. Those ages 40 and older were least likely to report ear pain (4%), compared with 10% of 14-21 year-olds and 22-26 year-olds.

Twelve percent of respondents reported trouble hearing when people speak. There were no significant group differences.

In Years 1-2, screeners were asked to identify if the participant was able to answer questions on his/her own and if a caregiver or support person assisted the participant in answering the questions during the hearing screening. The results were generally similar to those in the Vital Signs, Body Composition, and Respiratory Health and Vision modules. Eighty-one percent of participants were identified as being able to answer questions on their own and a caregiver or support person assisted 11% of the participants in answering questions. The

youngest age group (14-21) was less likely than the other age groups to be identified as being able to answer questions on their own - 70% of 14-21 year-olds, compared with 83-85% of the other age groups.

Follow-up hearing care was recommended for 25% of participants in Years 1 & 2. There were no significant group differences.

The screenings indicated a possible hearing deficit and a further hearing evaluation with an audiologist, primary care physician, or other health professional was advised for 6% of the participants.

Screeners found that earwax removal may be needed for 20% of participants in Years 1-2. A referral for hearing care was given to 18% of participants; there were no significant group differences.

Among 262 participants in the Year 3 Hearing screenings, no follow-up care was recommended for 88%. A hearing evaluation was recommended for 7%, and earwax removal was recommended for 5% of Year 3 participants.

## **Oral Health**

Eighty-four percent of participants were rated as passing a general tooth health screen (see Appendix A, Table 6). Those ages 40 and older had the lowest proportion to pass the general tooth health screen. Only 80% of the oldest group passed, compared with 86-90% of the younger age groups.

General tooth health could not be assessed for 5% of participants in the Oral Health screen. The 14-21 year-old group had the largest proportion whose tooth health could not be assessed (8%) and 27-39 year-olds had the lowest proportion (2%).

Signs or symptoms of dental issues were observed for 35% of participants in the Oral Health screen. Among those with dental signs/symptoms, the most common issues were missing teeth (73%), gingivitis (29%), and tooth grinding (14%). There were no significant group differences.

Seven percent of participants reported that their teeth or mouth hurt. There were no significant differences between groups.

During Years 1-2, screeners were asked to identify if the participant was able to answer questions on his/her own and if a caregiver or support person assisted the participant in answering the Oral Health questions. The results were generally similar to those in the Vital Signs, Body Composition, and Respiratory Health, Vision, and Hearing modules. Eighty-one percent of participants were identified as being able to answer questions on their own. A caregiver or support person assisted 11% of the participants in answering questions in Years 1-2.

No follow-up care was recommended for 84% of participants. The assessments indicated that there may be an urgent oral health issue for 4% of participants. A regular check-up was recommended for 34% of Year 3 participants.

Twelve percent of Years 1-2 participants in the Oral Health assessment were identified as having a possible oral health deficit and further evaluation with a dentist or other health professional was advised. There were no significant group differences.

A need for maintenance oral care within 6 months or non-urgent oral care within 2-3 months was recommended for 22% of Oral Health assessment participants in Years 1-2. Two-thirds



(66%) of them were identified as needing maintenance oral health care in the next 6 months. An evaluation within two-three months was recommended for 35%.

Referrals for dental care were given to 25% of participants in Years 1-2.

## **Foot/Mobility Health**

Eighty-one percent of participants were given a rating of Pass for the foot inspection (see Appendix A, Table 7.) The foot inspection could not be completed for 8% of participants in the Foot/Mobility Health module. There were no significant group differences in foot inspection results or completion rate.

Screenings included a Basic Gait Analysis via the Get Up and Go Test (Barry, Galvin, Hogan, & Fahey, 2014), with a scale of 0 (No fall risk) to 5 (Very high fall risk). Ninety-three percent of participants in the Foot screening completed the test.

There were significant differences in scores between males and females and between age groups. The proportion of females receiving a score of 4-High fall risk (7%) was twice as high as the proportion of males (3%). In general, fall risk increased with age. Eighty-five percent of 14-21-year olds had low fall risk scores of 0-1, compared with 62% of those age 40 and older.

Overall, the Basic Gait Analysis was completed for 93% of participants. Ninety-four percent of the ID group completed the Gait Analysis, significantly higher than the 83% of the Other Disability group.

Nine percent of participants who had a foot inspection had signs or symptoms of foot issues identified. Fifty-five percent of them had foot pain, 31% had signs or symptoms of infection, and 14% showed behaviors to suggest discomfort or abnormalities. There were no significant differences by disability type, gender or age.

Thirteen percent of participants (or their proxies) reported that their feet hurt often. Eleven percent reported that they often feel dizzy when walking. Females (15%) were more likely than males (8%) to report dizziness. Seventeen percent of participants said they often feel unsteady when walking. Those in the Other Disability group were much more likely than the ID or Autism groups to report feeling unsteady when walking – 28% of the Other Disability group, compared with 17% of the ID group and 2% of those with Autism. Females (22%) were more likely than males (14%) to report feeling unsteady when walking. Those age 40 and older had the highest proportion reporting that they feel unsteady when walking (21%).

Seventeen percent of participants reported falling at home in the last year. The risk of falling in the last year was significantly higher for females (22%) than for males (14%). The two age groups with the highest proportion that reported falling in the last year were 22-26 year-olds (21%) and those ages 40 and older (20%), in contrast with 13% of those ages 14-21 and 27-39.

Thirteen percent of Year 3 HealthMeet participants reported that they have diabetes. The Other Disability group had the highest proportion reporting diabetes. (The results are not displayed in order to protect participants' privacy due to the small number of responses.)

In Years 1 & 2, 79% of foot and mobility screening participants were able to answer questions on their own. This was a slightly lower percentage than the results in the Vital Signs, Body Composition and Respiratory Health, Vision, Hearing, and Oral Health modules. The youngest group (14-21 year-olds) was less likely than other age groups to be identified as being able to answer questions on their own – 65% of 14-21 year-olds, compared with 81-84 percent of other age groups.

A caregiver or support person assisted 13% of the Year 1-2 participants in answering questions. Those ages 14-21 were most likely to receive assistance – 24%, compared with 9-13% of other age groups.

No follow-up care was recommended for 85% of participants, while a potentially urgent foot care issue was identified for 6% of participants. Further evaluation with a podiatrist, physiotherapist, primary care physician, or other health professional was recommended for 13% of Year 1-2 participants. Three-fourths (74%) of them received recommendations for an evaluation by a podiatrist and a primary care visit was recommended for 21%.

Follow-up care was recommended for 21% of participants in Years 1-2. The most common recommendations were for evaluations for non-urgent foot care evaluations (47%) and pedicures (43%). Twenty-five percent of participants received referrals for foot/mobility issues in Years 1-2.

## *Follow-Up Assessments*

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Follow-up Assessments were conducted in Year 3. They included questions such as “Since you came to the last assessment, do you feel like you have more information on health issues and how to live a healthier life?” Follow-up assessments also included modules similar to the initial assessments: vital signs, body composition and respiratory health; vision; hearing; oral health; and foot/mobility health. Appendix B presents tables with Follow-up assessment results for 707 HealthMeet participants in five states.

Eight out of ten (79%) participants reported feeling that they had more information on health issues and how to live a healthier life since their previous assessment. Females were more likely than males to report feeling that they had more information – 83% and 75%, respectively.

Seventy-six percent of participants reported using the information they learned during the first assessment to make healthier lifestyle choices. Females were more likely than males to report using the information – 79% and 71%, respectively.

The Arc identified nine conditions such as obesity and irregular pulse as “red flags.” Fifty-seven percent of the 707 participants with follow-up information recorded had at least one red flag in their initial assessment. Twenty-two percent of those with red flags had two red flags, followed by 21% with one and 19% with four. Two percent had seven red flags. Among participants with red flags, the average (mean) number was three (data not shown).

The most common red flag issue concerned height/weight (34%), followed by dental health (32%) and foot issues (31%).

Eighty-four percent of follow-up participants with health problems identified at their initial assessment reported going to the doctor to talk about them. Females were more likely than males to report going to the doctor – 88% of females did so, compared with 78% of males. There also were significant differences between age groups. The youngest group (14-21 year-olds) had the highest proportion reporting that they went to the doctor (91%), while the 22-26 year-old group had the lowest proportion (69%).

Four out of five follow-up participants (79%) who reported going to their doctor said the health problem is something that they are still going to the doctor to talk about. Twenty-one

percent reported that they were treated by the doctor and the issue is no longer a problem. There were no significant group differences.

Among participants with height/weight concerns who reported not going to their doctor to talk about them, the two most common reasons were “I did not want to or think I needed to go to the doctor” and “I was not able to go for another reason” – both at 34%. Fifteen percent reported that they forgot to make an appointment. Only 2% reported that they did not have a way to get to the doctor. Three percent reported that they could not find a doctor to see them. There were no significant group differences.

Follow-up participants were asked how they are making healthy choices in their lives since the last assessment. The most common responses were: “eating healthier meals” (60%); “talking with caregivers or doctors when I don’t feel well” (44%); and exercising more often (42%).

The most frequent new activities or programs to promote health reported by follow-up participants were health programs at The Arc (21%), exercise classes (19%), and walking clubs (17%).

## *Additional Analyses*

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In addition to analyses by Disability Group, Gender, and Age Group, The Arc requested that The Boggs Center conduct analyses of selected questions by Living Arrangement, Guardianship Status, and Public vs. Private Insurance. Results of these analyses are presented in Appendix C.

### **Living Arrangement and Guardianship Status**

Analyses of differences by Living Arrangement (excluding those in institutions due to small sample size) and by Guardianship Status were conducted for: 1. Lifestyle questions (fruit and vegetable consumption, TV/computer games, and exercise); 2. Vital Characteristics (BMI, blood pressure – sitting and standing; 3. Vision (trouble seeing and referral for vision care); 4. Hearing (earwax impaction, ear pain, trouble hearing when people speak); 5. Oral Health (dental signs and symptoms); and 6. Foot/mobility Characteristics (foot signs/symptoms, diabetes) (see Appendix C, Table 1).

There were significant differences between those in different living arrangements in fruit and vegetable consumption patterns, TV viewing or computer game usage, and exercise. At 27%, those living in their own home had the highest proportion reporting that they ate less than one serving of fruits and vegetables per day, compared with 15% of those living with parents or family and 9% of those in a group home. Participants living in their own home or apartment were more likely to report spending over six hours per day watching TV or using computer games (12%) than those living with parents or family (7%) or in a group home (5%). Participants living in group homes had the highest proportion reporting no exercise – 27%, compared with 16% of those with parents or family and 17% of those in their own home or apartment.

There were no significant differences by Living Arrangement in Vital Characteristics, Vision, Hearing, Oral Health, or Foot/Mobility Characteristics.

There was one significant difference in lifestyle factors between those who reported being their own guardian and those who were not. Participants who reported that they were their

own legal guardian were less likely to report eating more than five servings of fruits and vegetables per day – 3% and 7%, respectively.

Participants who reported being their own guardian were more likely than those who had guardians to receive a referral for vision care – 17% and 12%, respectively. They also were less likely than those who had a guardian to pass the general tooth health screen.

### **Private vs. Public Insurance**

Analyses of differences between participants with Private Insurance and those with Public Insurance (Medicare and Medicaid) were conducted regarding: 1. Women's Preventive Health (ever having a mammogram, ever having a pap smear – Years 1 & 2 only); 2. Oral Health (dental signs and symptoms); Vision (trouble seeing, referral for vision care); and 3. Hearing (earwax impaction, ear pain, trouble hearing when people speak) (see Appendix C, Table 2).

There was one significant difference between participants with Private Insurance and those with Public Insurance – women with Public Insurance were more likely to have had a mammogram than those with Private Insurance – 78% and 56%, respectively.

## *Discussion*

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### **Similarities and Differences between HealthMeet Results and Other Similar Studies**

The health of adults with IDD has been addressed in a number of recent national surveys. Reports that include information about the health of adults with IDD include analyses of: the 1994-95 National Health Interview Survey Disability Supplement (NHIS-D); the National Residential Information Systems Project (RISP) of the Rehabilitation Research and Training Center (RTC) on Community Living at the University of Minnesota's Institute on Community Integration; annual National Core Indicators (NCI) for public developmental disabilities agencies, a collaboration of the National Association of State Directors of Developmental Disabilities Services (NASDDDS) and the Human Services Research Institute (HSRI); and The Arc's Family and Individual Needs for Disability Supports (FINDS) 2010 survey. (Approximately one-third of the individuals with disabilities whose families responded to the FINDS survey were 27 years of age and older.)

The Research and Training Center (RTC) on Community Living at the University of Minnesota's Institute on Community Integration conducted several analyses of NHIS-D results. The findings were drawn from a national stratified random sample of more than 200,000 respondents. Reports addressed topics including estimates of the prevalence of intellectual and developmental disabilities among children and adults in the United States (Larson, et al., 2001) and characteristics of and service use by individuals with IDD (Larson, Lakin, Anderson, & Kwak, 2001).

An RTC on Community Living DD Data Brief on Health Insurance Coverage and Health Care Experiences of Persons with Disabilities in the NHIS-D analyzed results of the Health Insurance and Access to Care Supplements and a Disability Follow-back Survey to the 1994-95 NHIS-D (Anderson, Larson, Lakin, & Kwak, 2003). The analyses were based on a representative sample of 2,988 non-institutionalized individuals with IDD.

Using combined data from the 1994-95 NHIS-DS and the RTC on Community Living's Residential Information Systems Project (RISP), RTC researchers analyzed living arrangements of children and adults with IDD in the United States (Larson, Doljanac, &

Lakin, 2005). The RISP issues comprehensive annual reports on residential services for individuals with IDD in the fifty states and the District of Columbia. The information is provided by state agencies and private facilities serving individuals with IDD (Larson et al., 2014).

The RTC on Community Living also analyzed results of the FINDS internet survey conducted in 2010 by the Arc of the United States (Anderson, Larson, & Wuorio, 2011). Their report presented findings from 5,287 respondents to the family caregiver survey. It included questions about issues including educational, housing, employment, and support needs of individuals with IDD and their families.

National Core Indicators (NCI) reports each year on performance and outcome measures for services to individuals with IDD and their families. NCI indicators address health, welfare, and rights, as well as individual outcomes, family indicators, and other issues. The 2013-14 Adult Consumer Survey Report provides information about 13,157 individuals from 25 states and one regional council (National Core Indicators, 2014).

## Characteristics of Persons Accompanying Participants

Seventy-seven percent of the individuals accompanying HealthMeet participants reported that they were primary caretakers. Fifty-nine percent said they were family members and 35% were staff persons. All (100%) of the FINDS Survey respondents were caregivers — 91% were parents or siblings and 6% were paid caregivers.

## General Characteristics of HealthMeet Participants

### AGE, GENDER, AND LIVING ARRANGEMENTS

HealthMeet participants had an age profile similar to those receiving supports and services from NCI states, but in general they were older than the US population with IDD. The average age of HealthMeet participants was 42.4 years (data not shown), similar to the average age of 43 years among 2013-14 NCI participants. In contrast, the average age in the FINDS survey was 24.6 years. Only 6% of HealthMeet participants were under age 22, while the combined analysis of NHIS-D and RISP data estimated that 62% of the US population with ID and/or DD was under age 18. At the other end of the age spectrum, more than half (53%) of HealthMeet participants were ages 40 or older, while the combined analysis of NHIS-D and RISP data found that only 38% of all US adults with ID and/or DD were age 18 or older.

The proportion of HealthMeet participants 40 years of age or older (53%) was more than three times the proportion 40 or older in the FINDS survey sample (15%). This reflects the differing target groups for HealthMeet (adults and adolescents) and the FINDS survey (children and adults).

Fifty-two percent of HealthMeet participants were male and 48% were female, in comparison with 2013-14 NCI respondents, who were 58% male and 42% female.

The pattern of living arrangements among HealthMeet participants also was more similar to those receiving publicly sponsored supports and services than the US population with IDD as a whole. Just under half of HealthMeet participants (48%) lived with parents or family members and the 2012 RISP estimated that 55% of individuals receiving services from state IDD agencies lived with a family member. Thirty-five percent of 2013-14 NCI respondents lived with a parent or relative. In contrast, the combined NHIS-D and RISP analysis found that nearly eight in ten (78%) people with IDD lived with a relative. The proportion of those living with family in the FINDS survey was similar – 78% of caregivers responding reported that their family member with IDD lived with them.

Since the FINDS survey sample was younger than the HealthMeet sample, it is not surprising that a higher percentage of FINDS survey respondents lived with family. Even among those ages 40 and older, however, there is a substantial difference —29% of HealthMeet participants ages 40 and older lived with parents or family, while 81% of those ages 40 and older in the FINDS survey lived with family. No similar comparison with the combined NHIS-D and RISP data analysis is possible, since the RISP reports do not include age.

#### **TYPE OF DISABILITY**

In general, HealthMeet assessments had a higher proportion of participants in the ID group than the FINDS survey and a lower proportion in the Autism group. Overall, 87% of HealthMeet participants were in the ID group, 5% were in the Autism group, and 8% were in the Other group. Among FINDS survey respondents, 62% were in the ID group, 25% were in the ASD group, and 13% were in the Other Disability group. The RTC on Community Living analysis of the NHIS-D survey of community-dwelling individuals with IDD (in living arrangements of fewer than four persons) estimated that 76% of those ages 18 and older with IDD had intellectual disabilities alone or with other developmental disabilities and 24% had developmental disabilities and no intellectual disability. On average, 95% of 2013-14 NCI participants had intellectual disabilities and 17% had an autism spectrum disorder with or without an intellectual disability.

#### **RACE/ETHNICITY**

The Race/Ethnicity profile of HealthMeet participants was more similar to the 2013-14 NCI profile than the FINDS survey respondents. The HealthMeet breakdown was: White – 62%; Black – 18%; Hispanic (of any Race) – 7%; Asian/Pacific Islander – 6%; and Other race – 7%. The average profile for 2013-14 NCI respondents was: 71% White; 21% Black; 4% Asian/Pacific Islander; 1% American Indian or Alaskan Native; 2% Other race; and 1% Two or More Races. Four percent were Hispanic (of any race). FINDS survey respondents were 90% White, 5% Black, 3% Latino/Hispanic, 1% Asian American, and 1% Native American. (Since caregivers answered this FINDS survey question about themselves and not the individual with IDD they care for, it is possible that their family member with IDD could be of a different race/ethnicity).

#### **EMPLOYMENT**

The proportion of HealthMeet participants who reported working for money/pay (44%) was nearly three times the proportion of 2013-14 NCI respondents who reported having a paid job in the community (16%).

#### **HEALTH INSURANCE**

Nearly half of HealthMeet participants (49%) were Medicare beneficiaries, in contrast to one-fourth (24%) of FINDS survey respondents. Thirty-seven percent of HealthMeet participants were Medicaid beneficiaries, while 60% of FINDS survey respondents (60%) were Medicaid beneficiaries. Thirteen percent of HealthMeet participants had private insurance, compared with the 59% of FINDS survey respondents. The differences reflect the younger age of FINDS survey respondents compared with HealthMeet participants.

#### **HEALTH STATUS**

It was hard to compare the health status of HealthMeet participants and other survey respondents, since none of them used the same classification scheme. In general, however, only a small proportion of respondents reported Poor health — 2% of HealthMeet participants (or their proxies), and 4% of 2013-14 NCI respondents.

There was a trend of declining health status as respondents aged. For example, the proportion of HealthMeet participants (or their proxies) reporting Very Good health declined from 33% of 14-21 year-olds to 20% of those 40 and older. Similarly, the RTC analysis of health insurance coverage and health care experiences of individuals with IDD using NHIS-D survey data found that those 36 years and older were less likely than adults ages 18 to 35 to rate their health as Excellent or Very Good.

### **ACCESS TO DOCTORS**

The proportion of HealthMeet participants who reported that they had a doctor (97%) was similar to the proportion of 2013-14 NCI respondents (98%) who reported having a primary care doctor.

### **DOCTOR UNDERSTANDING PERSON'S HEALTH**

Ninety-seven percent of HealthMeet participants or their proxies reported that their doctor understands their health. By comparison, 46% of respondents to the NHIS-D survey with ID or DD rated their primary care provider as Excellent in regard to their interest in the person and their condition.

### **TOBACCO USE**

Tobacco use was reported at the same rate (7%) among HealthMeet participants and 2013-14 NCI respondents.

### **BODY MASS INDEX (BMI)**

Only 23% of HealthMeet participants had a BMI representing healthy weight (BMI 18.5 – 24.9) compared with 31% of 2013-14 NCI respondents. The proportion of underweight (BMI <18.5) HealthMeet participants was lower than the proportion of NCI respondents — 3% and 5%, respectively. More than four in ten (46%) of HealthMeet participants had a BMI in the obese (BMI 30.0 – 39.9) or extremely obese range (BMI 40.0+), compared with 33% of 2013-14 NCI respondents.

### **EXERCISE**

Forty-seven percent of HealthMeet participants in Years 1 & 2 reported exercising for at least 30 minutes three or more times per week. While NCI findings do not provide a direct comparison, 2013-14 NCI respondents reported going out for exercise an average of 6.6 times per month, or approximately 1.75 times per week.

### **WOMEN'S PREVENTIVE HEALTH**

Among the female HealthMeet participants ages 40 and older who reported the time since their last mammogram in Years 1 & 2, nearly nine in ten (87%) reported that their last mammogram was within the past two years. In comparison, 75% of women 2013-14 NCI respondents over 40 were reported to have had a mammogram in the past two years.

Among the HealthMeet participants (in Years 1-2) who reported the time since their last pap smear – 87% of them reported having a pap smear within the past three years. In comparison, 67% of women NCI respondents age 18 and older were reported to have had a Pap test in the past three years.

## Conclusions and Study Limitations

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### Conclusions

Important findings from HealthMeet initial and follow-up assessments include:

- ▶ HealthMeet reached a substantial number of individuals (26% of participants in Years 1-2) who had not participated in Arc activities before HealthMeet.
- ▶ With an average age of 42.4 years, the age profile of HealthMeet participants was generally similar to those receiving services through state developmental disabilities service systems as reported in the 2013-14 National Core Indicators (average age 42 years), but older than the estimated US population with IDD as a whole.
- ▶ The proportion of HealthMeet participants who lived with their families (48%) was lower than the percentage reported by public developmental disabilities agencies in the 2012 RISP survey (55%) and much lower than the proportion of the estimated US population with IDD living with family (78%).
- ▶ The proportion of HealthMeet participants with a BMI representing healthy weight (23%) was lower than the US population with a healthy BMI (29%).
- ▶ The overall obesity rate among HealthMeet participants (46%) was higher than the age-adjusted rate among general population of US adults (35%). The extreme obesity rate (12%) among HealthMeet participants was twice the age-adjusted rate in the general US adult population (6%).
- ▶ The rate of missing teeth was 2.5 times the rate among the general population – 25% among HealthMeet participants, compared with 10% in the US general population.
- ▶ The risk of falling among HealthMeet participants (17%) was more than three times the risk among noninstitutionalized adults aged 65 and older in the US (5%).
- ▶ The 13% prevalence rate of diabetes among HealthMeet participants in Year 3 was similar to the 12-14% estimated prevalence rate among US adults.
- ▶ Eighty-four percent of follow-up participants who had health problems at their initial assessment reported going to the doctor to talk about them.
- ▶ Nearly eight out of ten participants (79%) reported feeling that they had more information on health issues and how to live a healthier life since their previous assessment.
- ▶ Three out of four participants (76%) reported using the information they learned during the first assessment to make healthier lifestyle choices.
- ▶ Females reported more positive health behaviors following their initial assessment. They were more likely than males to report going to the doctor to talk about their health problems (88% and 78%, respectively). Females also were more likely than males to report feeling that they had more information on health issues since their previous assessment (83% and 75%), and more likely to report using the information (79% and 71%).

### Study Limitations

Since these analyses used disability categories similar to the Arc's FINDS survey report (Anderson, Larson, & Wuorio, 2011), limitations related to the disability categories employed



in the FINDS study also apply to this report. Therefore, it is possible that a participant might not meet all of the diagnostic criteria for the self- (or proxy-) reported disability. However, the FINDS study used an internet survey, while the HealthMeet assessments were conducted in-person by health professionals associated with Arc chapters as staff members or volunteers. Also, it is our reasoned assumption that participants and those accompanying them provided disability information in good faith.

HealthMeet assessments were conducted in five states and participants were not selected from a random sample designed to be generalized to the population with IDD. Therefore, this report provides information only about the HealthMeet participants and the findings may not be representative of all people with IDD in those states or in the US as a whole.

While the assessments included questions asking if the participant was able to answer questions on his/her own, it is not known whether the person with IDD responded to a particular question. This limitation is especially relevant for subjective items such as self-rated health and whether a doctor understands the participant's health.

There also are limitations associated with self-reported health information by people with intellectual disabilities. Fujiura and colleagues have described the importance of and the difficulties in obtaining valid self-reported health information (Fujiura & RRTC Expert Panel on Health Measurement, 2012). In addition to challenges in measurement of subjective experiences of people with intellectual disabilities, there are issues related to recall of events such as use of health services. For example a study of the accuracy of self-reported cancer screenings by women with intellectual disabilities indicated overreporting of procedures, with particular recall problems related to the timing of the screenings (Son, Parish, Swaine, & Luken, 2013).

Two local chapters conducted a small number of assessments in languages other than English (Spanish and Cantonese). Since the assessments were not conducted in languages other than English at most of the chapters, potential respondents who did not speak English in those locations were not able to participate.

Although the results cannot be generalized to the population of people with IDD in the five states with participating chapters or the United States, the assessment findings document health information about more than 1,700 participants. They also suggest targets for interventions to address preventable health conditions among HealthMeet participants and potentially others with IDD.

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**APPENDIX A**

*Initial Assessments*

	N	%
<b>State</b>	<b>1,760</b>	
California	378	21.5
Massachusetts	279	15.9
New Jersey	381	21.7
North Carolina	197	11.2
Pennsylvania	525	29.8

**TABLE 2A: GENERAL CHARACTERISTICS - CAREGIVER**

Characteristic	Totals	Disability Type							Gender						Age Groups							
	N/%	N/%	ID (a)	Autism (b)	Other (c)	F/X2	Sig	Diff	N/%	Male (a)	Female (b)	F/X2	Sig	Diff	N/%	14-21 (a)	22-26 (b)	27-39 (c)	40+ (d)	F/X2	Sig	Diff
Contact person identified (Years 1 & 2 only)	1,143	975	833	52	90				1,057	546	511				1,029	69	152	268	540			
Yes	81.71	83.1	82.8	88.5	82.2	1.2			81.2	81.7	80.6	0.2			81.3	87.0	87.5	80.6	79.3	6.9		
No	18.29	16.9	17.2	11.5	17.8				18.8	18.3	19.4				18.7	13.0	12.5	19.4	20.7			
Person is the primary caretaker	1,341	1,202	1052	59	91				1,268	663	605				1,238	68	197	321	652			
Yes	77.11	78.5	79.1	79.7	71.4	3.0			76.9	78.4	75.2	1.9			78.1	91.2	91.9	85.4	69.0	70.0	***	d<a,b,c
No	22.89	21.5	20.9	20.3	28.6				23.1	21.6	24.8				21.9	8.8	8.1	14.6	31.0			a,b,c<d
Relationship to person	1,373	1,222	1075	56	91				1,291	676	615				1,265	70	199	333	663			
Family member	58.85	59.7	59.0	76.8	57.1	9.7			59.5	60.5	58.4	4.0			59.6	91.4	82.4	71.2	43.6	163.4	***	c,d<a; c,d<b; d<c
Staff person	35.54	35.2	35.6	21.4	38.5				34.9	34.9	34.8				34.6	7.1	13.6	24.9	48.6			a,b<c; a,b,c<d
Friend	1.09	0.9	0.8	1.8	1.1				1.2	1.2	1.1				1.2	0.0	0.5	0.6	1.8			
Other	4.52	4.3	4.6	0.0	3.3				4.5	3.4	5.7				4.7	1.4	3.5	3.3	6.0			

Differences by Disability Type: a = Intellectual Disabilities (ID), b = Autism, c = Other, by Gender: a = Male, b = Female, by Age Groups: a = 14-21, b = 22-26, c = 27-39, d = 40+  
 Significance: \*\*\* p < .001, \*\* p < .01, \* p < .05

**TABLE 2B: GENERAL CHARACTERISTICS**

Characteristic	Totals	Disability Type							Gender						Age Groups							
	N/%	N/%	ID (a)	Autism (b)	Other (c)	F/X2	Sig	Diff	N/%	Male (a)	Female (b)	F/X2	Sig	Diff	N/%	14-21 (a)	22-26 (b)	27-39 (c)	40+ (d)	F/X2	Sig	Diff
Own legal guardian	1,527	1,316	1139	70	107				1,424	739	685				1,376	75	197	368	736			
Yes	66.9	67.0	67.4	60.0	67.3	1.6			68.4	69.2	67.6	0.4			68.3	41.3	61.9	67.4	73.2	37.3	***	a<b,c; b<d
No	33.1	33.0	32.6	40.0	32.7				31.6	30.9	32.4				31.7	58.7	38.1	32.6	26.8			b,c,d<a
Age Groups	1,579	1,411	1221	77	113				1,522	783	739											
14-21	5.4	5.4	5.2	10.4	3.5	22.8	***	a<b	5.4	6.1	4.6	7.1										
22-26	14.9	15.2	14.3	26.0	17.7				14.8	16.4	13.1											
27-39	27.0	28.0	28.1	35.1	22.1				26.9	24.8	29.2											
40+	52.7	51.5	52.4	28.6	56.6			b<a,c	52.9	52.8	53.0											
Gender	1,630	1,428	1246	71	111									1,522	82	225	410	805				
Male	52.3	52.1	51.8	83.1	36.0	38.9	***	c<a<b						51.5	58.5	56.9	47.3	51.3	7.1			
Female	47.7	47.9	48.2	16.9	64.0			b<a<c						48.6	41.5	43.1	52.7	48.7				
Race/Ethnicity	1,760	1,513	1,314	81	118				1,630	853	777			1,579	85	235	427	832				
White	61.5	61.2	60.7	63.0	65.3	12.3			62.3	61.3	63.3	3.1		62.4	74.1	48.1	55.7	68.6	67.0	***		b,c<a; b,c<d
Black	18.0	19.4	20.1	9.9	18.6				18.0	17.4	18.7			18.8	9.4	24.7	20.4	17.2				a<b
Hispanic	7.3	7.7	7.7	7.4	7.6				7.6	8.4	6.7			7.7	8.2	10.2	11.5	5.1				d<b,c
Asian/Pacific Islander	6.3	7.2	7.3	9.9	4.2				6.4	6.9	5.9			6.8	0.0	9.4	8.2	6.0				
Other	7.0	4.5	4.2	9.9	4.2				5.7	6.0	5.4			4.4	8.2	7.7	4.2	3.1				d<b
Number of Diagnosis	1,513	1,513	1,314	81	118				1,428	744	684			1,411	76	214	395	726				
One	79.8	79.8	78.5	87.7	89.8	12.3	*	a<c	79.5	76.3	82.9	9.7	**	a<b	79.9	75.0	74.3	76.7	83.9	22.3	**	b,c<d
Two	19.6	19.6	20.9	12.4	10.2			c<a	20.0	23.1	16.5			b<a	19.5	22.4	25.7	22.5	15.7			d<b,c
Three or more	0.5	0.5	0.6	0.0	0.0				0.6	0.5	0.6			0.6	2.6	0.0	0.8	0.4				
Disability (Check all that apply)	1,760	1,513	1,314	81	118				1,630	853	777			1,579	85	235	427	832				
Autism	8.9	10.3	5.7	100.0	0.0	748.2	***		8.7	13.3	3.7	46.3	***	9.1	21.2	16.6	11.5	4.5	55.9	***		
Cerebral Palsy	8.5	9.9	7.0	0.0	49.2	224.8	***		8.7	8.2	9.3	0.6		9.0	3.5	11.1	9.1	8.9	4.4			
Down Syndrome	10.5	12.2	14.1	0.0	0.0	31.9	***		11.0	12.2	9.7	2.7		11.0	20.0	12.3	13.6	8.3	16.7	***		
Fetal Alcohol Syndrome	0.2	0.2	0.2	0.0	0.0	0.5			0.1	0.0	0.3	2.2		0.1	0.0	0.0	0.0	0.2	1.8			
Fragile X Syndrome	0.2	0.3	0.3	0.0	0.0	0.6			0.3	0.5	0.0	3.7		0.3	1.2	0.4	0.2	0.1	3.7			
Traumatic Brain Injury	1.9	2.3	1.8	1.2	8.5	22.7	***		2.0	2.1	1.9	0.1		2.2	0.0	2.1	2.8	2.0	2.8			
Intellectual Disability	69.3	80.6	92.8	0.0	0.0	950.1	***		70.9	69.1	72.8	2.8		71.6	63.5	66.4	73.3	73.1	7.4			
Other	4.3	5.0	0.3	11.1	52.5	634.0	***		4.4	3.1	5.9	7.9	**	4.6	4.7	5.5	4.2	4.6	0.6			
Work for Money/Pay	1,666	1,464	1268	79	117				1,565	817	748			1,531	78	227	416	810				
Yes	44.3	43.2	45.0	35.4	29.1	13.1	**	c<a	44.5	46.6	42.3	3.0		44.3	26.9	46.7	49.8	42.5	16.2	***		a<b,c,d
No	55.7	56.8	55.1	64.6	70.9			a<c	55.5	53.4	57.8			55.7	73.1	53.3	50.2	57.5				b,c,d<a
Work Status	697	604	548	25	31				667	359	308			648	22	102	197	327				
Part-time	61.1	61.3	59.9	68.0	80.7	5.8			61.0	60.7	61.4	0.0		60.3	72.7	58.8	64.0	57.8	3.5			
Full-time	38.9	38.7	40.2	32.0	19.4				39.0	39.3	38.6			39.7	27.3	41.2	36.0	42.2				
Where do you Work (Year 3 only)	171	161	151	-	-				170	99	71			167	-	24	55	86				
In the community	9.9	9.9	9.3	-	-	1.2			10.0	12.1	7.0	1.2		9.6	-	8.3	12.7	8.1	1.1			
In a work program	90.1	90.1	90.7	-	-				90.0	87.9	93.0			90.4	-	91.7	87.3	91.9				
Have a doctor (Years 1 & 2 only)	1,290	1,108	946	60	102				1,194	606	588			1,159	67	166	304	622				
Yes	97.3	97.2	97.3	96.7	97.1	0.1			97.2	96.9	97.6	0.6		97.3	95.5	96.4	97.4	97.8	1.8			
No	2.7	2.8	2.8	3.3	2.9				2.8	3.1	2.4			2.7	4.5	3.6	2.6	2.3				

Differences by Disability Type: a = Intellectual Disabilities (ID), b = Autism, c = Other, by Gender: a = Male, b = Female, by Age Groups: a = 14-21, b = 22-26, c = 27-39, d = 40+  
 Significance: \*\*\* p < .001, \*\* p < .01, \* p < .05

Characteristic	Totals	Disability Type							Gender						Age Groups							
	N/%	N/%	ID (a)	Autism (b)	Other (c)	F/X2	Sig	Diff	N/%	Male (a)	Female (b)	F/X2	Sig	Diff	N/%	14-21 (a)	22-26 (b)	27-39 (c)	40+ (d)	F/X2	Sig	Diff
<b>Doctor understands your health (Years 1 &amp; 2 only)</b>	1,150	990	847	52	91				1,062	523	539				1,035	56	147	269	563			
Yes	96.8	96.6	96.2	100.0	97.8	2.6			96.9	97.1	96.7	0.2			96.7	96.4	98.6	96.3	96.5	2.0		
No	3.2	3.4	3.8	0.0	2.2				3.1	2.9	3.3				3.3	3.6	1.4	3.7	3.6			
<b>Living Arrangement</b>	1,677	1,471	1280	77	114				1,576	822	754				1,537	83	231	414	809			
With your parents or your family	48.4	50.7	50.5	64.9	43.0	25.5	***	a,c<b	48.7	51.3	45.9	5.3			49.6	85.5	81.8	65.0	28.8	323.3	***	d<c<a; c,d<b
In your own home or apartment	13.0	12.5	11.5	11.7	24.6			a,b<c	12.8	11.9	13.8				13.0	4.8	2.6	10.9	17.8			b<c; a,b,c<d
In a group home	38.0	36.3	37.6	22.1	31.6			b<a	37.9	36.4	39.7				36.9	8.4	15.2	23.7	52.8			a,b<c; a,b,c<d
At an institution or facility	0.5	0.5	0.5	1.3	0.9				0.5	0.4	0.7				0.6	1.2	0.4	0.5	0.6			
<b>Insurance Status</b>	1271	1137	980	56	101				1199	599	600				1169	40	159	323	647			
Private	13.1	13.6	13.0	32.1	9.9	24.3	***	a,c<b	13.1	15.5	10.7	10.4	*		13.7	25.0	23.9	15.5	9.6	85.3	***	d<a,b,c
Medicare	48.5	48.5	48.7	33.9	54.5				48.6	49.9	47.3				48.3	17.5	32.7	38.1	59.2			a,b,c<d
Medicaid	36.7	36.4	37.1	32.1	31.7				36.6	32.9	40.3				36.4	52.5	40.9	44.3	30.3			d<a,c
Uninsured	1.7	1.5	1.2	1.8	4.0			a<c	1.7	1.7	1.7				1.6	5.0	2.5	2.2	0.9			
<b>Ever Participated in Special Olympics (Years 1 &amp; 2 only)</b>	1,172	1,019	874	51	94				1,090	550	540				1,061	67	161	273	560			
Yes	54.2	55.3	56.1	56.9	46.8	3.0			54.7	55.8	53.5	0.6			54.9	76.1	60.3	59.7	48.4	26.2	***	d<a,b,c
No	45.8	44.8	43.9	43.1	53.2				45.3	44.2	46.5				45.2	23.9	39.8	40.3	51.6			a,b,c<d
<b>Current Special Olympics Participant (Years 1 &amp; 2 only)</b>	1,144	1,001	862	48	91				1,064	534	530				1,038	60	153	269	556			
Yes	29.55	29.8	30.5	25.0	25.3	1.6			29.9	32.6	27.2	3.7			30.5	53.3	33.3	38.3	23.6	35.6	***	b,d<a; d<c
No	70.45	70.2	69.5	75.0	74.7				70.1	67.4	72.8				69.5	46.7	66.7	61.7	76.4			a<b; a,c<d
<b>Ever Participated in Arc Activities/Services (Years 1 &amp; 2 only)</b>	1,146	988	844	55	89				1,060	534	526				1,031	55	147	263	566			
Yes	74.1	74.1	75.0	78.2	62.9	6.6	*	c<a	73.7	74.2	73.2	0.1			73.0	52.7	78.9	74.1	73.0	14.3	**	a<b,c,d
No	25.9	25.9	25.0	21.8	37.1			a<c	26.3	25.8	26.8				27.0	47.3	21.1	25.9	27.0			b,c,d<a
<b>Current Arc Activities/Services Participant (Years 1 &amp; 2 only)</b>	1,149	998	855	57	86				1,059	534	525				1,032	51	147	262	572			
Yes	72.5	72.7	74.0	75.4	57.0	11.7	**	c<a	72.3	74.0	70.7	1.4			71.7	47.1	78.2	71.0	72.6	18.6	***	a<b,c,d
No	27.5	27.4	26.0	24.6	43.0			a<c	27.7	26.0	29.3				28.3	52.9	21.8	29.0	27.5			b,c,d<a
<b>Health Status</b>	1,485	1,294	1122	67	105				1,389	717	672				1,360	76	196	362	726			
Very Good	23.8	24.1	25.0	16.4	19.1	11.7			24.1	25.0	23.2	1.6			24.6	32.9	30.6	28.7	20.0	30.4	***	d<b,c
Good	58.7	59.0	58.7	68.7	56.2				58.5	58.6	58.5				58.1	57.9	58.7	54.4	59.8			
Fair	15.2	14.8	14.0	13.4	23.8				15.1	14.1	16.2				15.0	9.2	10.2	15.2	16.8			
Poor	2.3	2.2	2.3	1.5	1.0				2.2	2.4	2.1				2.4	0.0	0.5	1.7	3.4			
<b>Ever had a Mammogram (Years 1 &amp; 2 only)</b>	377	323	280	-	38										343	-	20	48	269			
Yes	75.3	74.3	75.0	-	76.3	7.9	*	b<a,c							75.2	-	15.0	22.9	90.7	162.2	***	b,c<d
No	24.7	25.7	25.0	-	23.7			a,c<b							24.8	-	85.0	77.1	9.3			d<b,c
<b>How long since last mammogram (Years 1 &amp; 2 only)</b>	239	204	173	-	29										218	-	-	-	205			
Within the past year (anytime less than 12 months ago)	73.2	71.6	74.0	-	55.2	8.3									72.9	-	-	-	73.2	12.5		
Within the past 2 years (1 year but less than 2 years ago)	13.8	14.2	12.1	-	27.6										14.7	-	-	-	15.1			
Within the past 3 years (2 years but less than 3 years ago)	5.0	5.9	5.8	-	6.9										5.1	-	-	-	4.9			
Within the past 5 years (3 years but less than 5 years ago)	4.6	5.4	5.8	-	3.5										3.7	-	-	-	3.4			
5 or more years ago	3.4	2.9	2.3	-	6.9										-	-	-	-	3.4			
<b>Ever had a Mammogram - Age 50+ (Years 1 &amp; 2 only)</b>	162	134	116	-	18																	
Yes	92.6	93.3	94.8	-	83.3	3.3																
No	7.4	6.7	5.2	-	16.7																	

Differences by Disability Type: a = Intellectual Disabilities (ID), b = Autism, c = Other, by Gender: a = Male, b = Female, by Age Groups: a = 14-21, b = 22-26, c = 27-39, d = 40+  
 Significance: \*\*\* p < .001, \*\* p < .01, \* p < .05



Characteristic	Totals	Disability Type							Gender						Age Groups									
	N/%	N/%	ID (a)	Autism (b)	Other (c)	F/X2	Sig	Diff	N/%	Male (a)	Female (b)	F/X2	Sig	Diff	N/%	14-21 (a)	22-26 (b)	27-39 (c)	40+ (d)	F/X2	Sig	Diff		
How long since last mammogram - Age 50+ (Years 1 & 2 only)	125	104	89	-	15																			
Within the past year (anytime less than 12 months ago)	72.0	69.2	74.2	-	40.0	14.3	**	c<a																
Within the past 2 years (1 year but less than 2 years ago)	13.6	15.4	10.1	-	46.7			a<c																
Within the past 3 years (2 years but less than 3 years ago)	4.8	5.8	5.6	-	6.7																			
Within the past 5 years (3 years but less than 5 years ago)	4.0	4.8	5.6	-	0.0																			
5 or more years ago	5.6	4.8	4.5	-	6.7																			
Ever had a Pap Smear (Years 1 & 2 only)	361	314	267	-	41										334	-	24	59	244					
Yes	80.1	80.9	81.7	-	85.4	16.6	***	b<a,c							79.9	-	33.3	81.4	85.7	49.1	***	a,b<c,d		
No	19.9	19.1	18.4	-	14.6			a,c>b							20.1	-	66.7	18.6	14.3			c,d<a,b		
Time since last pap smear (Years 1 & 2 only)	223	192	164	-	27										202	-	-	37	157					
Within the past year (anytime less than 12 months ago)	61.0	59.4	57.9	-	66.7	2.6									60.4	-	-	43.2	65.0	23.8	*	c<d		
Within the past 2 years (1 year but less than 2 years ago)	18.8	19.8	19.5	-	22.2										19.3	-	-	37.8	14.7			d<c		
Within the past 3 years (2 years but less than 3 years ago)	7.2	7.8	8.5	-	3.7										7.4	-	-	13.5	6.4					
Within the past 5 years (3 years but less than 5 years ago)	7.2	7.3	7.9	-	3.7										6.4	-	-	5.4	5.7					
5 or more years ago	5.8	5.7	6.1	-	3.7										6.4	-	-	0.0	8.3					
Tobacco use	1,509	1,315	1140	71	104				1,414	741	673				1,379	75	203	363	738					
Yes	6.89	7.0	7.1	1.4	9.6	4.5			6.9	7.8	5.8	2.3			7.2	1.3	6.4	7.7	7.7	4.5				
No	93.11	93.0	92.9	98.6	90.4				93.1	92.2	94.2				92.8	98.7	93.6	92.3	92.3					
Tobacco use frequency	98	88	78	-	9				92	56	36				93	-	13	27	52					
Daily	79.6	78.4	76.9	-	88.9	1.3			79.4	75.0	86.1	2.8			78.5	-	69.2	81.5	80.8	17.4	**			
Weekly	12.2	13.6	14.1	-	11.1				12.0	12.5	11.1				12.9	-	7.7	18.5	11.5					
Monthly	8.2	8.0	9.0	-	0.0				8.7	12.5	2.8				8.6	-	23.1	0.0	7.7					
Do you drink alcohol	1,502	1,309	1139	70	100				1,406	728	678				1,374	78	201	365	730					
Yes	12.1	12.6	13.0	8.6	11.0	1.4			12.3	14.7	9.7	8.0	**	b<a	12.6	10.3	16.4	15.9	10.1	10.7	*	d<c		
No	88.0	87.4	87.0	91.4	89.0				87.7	85.3	90.3			a<b	87.4	89.7	83.6	84.1	89.9			c<d		
If yes, how often more than 3 drinks in a day	207	185	162	-	15				196	121	75				191	-	35	62	88					
Daily	1.0	1.1	1.2	-	0.0	3.2			1.0	0.8	1.3	4.2			1.1	-	2.9	0.0	1.1	5.1				
More than once a week	6.3	6.0	6.8	-	0.0				6.6	4.1	10.7				6.8	-	2.9	6.5	9.1					
Once in a while	63.8	68.7	67.9	-	66.7				63.3	62.8	64.0				67.0	-	62.9	71.0	64.8					
Never	29.0	24.3	24.1	-	33.3				29.1	32.2	24.0				25.1	-	31.4	22.6	25.0					
Eat fruits, vegetables (Years 1 & 2 only)	1,191	1,030	878	55	97				1,096	546	550				1,082	63	161	283	575					
Less than 1 serving per day	14.4	14.8	14.5	20.0	14.4	5.9			14.2	16.7	11.8	13.7	**	b<a	14.2	19.1	14.9	15.9	12.7	13.9				
1-2 servings per day	52.3	52.7	53.2	50.9	49.5				53.1	53.5	52.7				53.9	39.7	52.8	50.5	57.4					
3-5 servings per day	27.5	27.1	26.9	27.3	28.9				27.4	23.4	31.3				27.4	39.7	28.0	27.9	25.6					
More than 5 servings per day	4.2	4.0	4.2	0.0	4.1				3.7	4.2	3.1				3.1	0.0	3.1	3.9	3.0					
Never	1.6	1.5	1.3	1.8	3.1				1.6	2.2	1.1				1.5	1.6	1.2	1.8	1.4					
Skin protection from Sun (Years 1 & 2 only)	1,380	1,158	988	68	102				1,255	644	611				1,209	74	177	313	645					
Sunscreen	57.7	59.3	60.3	47.1	57.8				58.9	53.1	65.0				59.7	59.5	61.6	60.7	58.8					
Wears a hat	46.1	47.6	48.5	36.8	46.1				46.5	51.2	41.4				47.2	40.5	39.0	45.1	51.3					
Seeks shade	29.3	30.6	30.8	22.1	34.3				29.6	23.6	35.8				30.1	21.6	29.4	30.4	31.2					
Wears sunglasses	36.5	38.0	38.5	36.8	34.3				37.1	32.6	41.7				37.8	37.8	40.1	42.8	34.7					
Wears long sleeves	14.1	14.8	15.4	11.8	10.8				14.4	13.0	15.9				15.1	4.1	10.7	13.7	18.1					
Does nothing	4.8	5.0	4.7	2.9	9.8				5.1	4.0	6.2				5.1	4.1	7.3	5.1	4.5					

Differences by Disability Type: a = Intellectual Disabilities (ID), b = Autism, c = Other, by Gender: a = Male, b = Female, by Age Groups: a = 14-21, b = 22-26, c = 27-39, d = 40+  
 Significance: \*\*\* p < .001, \*\* p < .01, \* p < .05

Characteristic	Totals	Disability Type							Gender						Age Groups							
	N/%	N/%	ID (a)	Autism (b)	Other (c)	F/X2	Sig	Diff	N/%	Male (a)	Female (b)	F/X2	Sig	Diff	N/%	14-21 (a)	22-26 (b)	27-39 (c)	40+ (d)	F/X2	Sig	Diff
<b>Exercise for at least 30 minutes (Years 1 &amp; 2 only)</b>	<b>1,177</b>	<b>1,020</b>	<b>866</b>	<b>60</b>	<b>94</b>				<b>1,087</b>	<b>541</b>	<b>546</b>				<b>1,078</b>	<b>63</b>	<b>151</b>	<b>287</b>	<b>577</b>			
0 days / week	20.3	21.0	20.8	16.7	25.5	16.1	*		20.6	20.7	20.5	2.1			20.2	7.9	15.2	16.0	25.0	28.4	***	a,c<d
1-2 days / week	32.8	32.6	33.5	23.3	29.8				32.5	32.0	33.0				32.3	23.8	32.5	33.8	32.4			
3-6 days / week	23.3	23.1	22.1	43.3	20.2			a,c<b	23.6	22.4	24.9				23.3	28.6	27.2	24.7	21.0			
7 days / week	23.6	23.3	23.7	16.7	24.5				23.3	25.0	21.6				24.2	39.7	25.2	25.4	21.7			d<a
<b>TV or computer games hours/day</b>	<b>1,503</b>	<b>1,320</b>	<b>1137</b>	<b>75</b>	<b>108</b>				<b>1,407</b>	<b>730</b>	<b>677</b>				<b>1,385</b>	<b>81</b>	<b>198</b>	<b>365</b>	<b>741</b>			
0-2 hours	40.7	40.3	39.4	48.0	44.4	5.4			40.5	37.0	44.3	8.9	*	a<b	40.9	43.2	40.9	41.9	40.2	13.7		
3-4 hours	36.5	36.7	37.8	30.7	29.6				36.4	39.3	33.2			b<a	35.6	28.4	34.9	34.3	37.3			
5-6 hours	15.6	16.0	15.7	14.7	19.4				15.9	15.9	15.8				16.1	12.4	15.7	17.8	15.8			
Over 6 hours	7.1	7.0	7.0	6.7	6.5				7.3	7.8	6.7				7.4	16.1	8.6	6.0	6.8			

Differences by Disability Type: a = Intellectual Disabilities (ID), b = Autism, c = Other, by Gender: a = Male, b = Female, by Age Groups: a = 14-21, b = 22-26, c = 27-39, d = 40+  
 Significance: \*\*\* p < .001, \*\* p < .01, \* p < .05

**TABLE 3: BODY COMPOSITION, VITAL SIGNS AND RESPIRATORY HEALTH**

Characteristic	Totals	Disability Type						Gender						Age Groups									
	N/%	N/%	ID (a)	Autism (b)	Other (c)	F/X2	Sig	Diff	N/%	Male (a)	Female (b)	F/X2	Sig	Diff	N/%	14-21 (a)	22-26 (b)	27-39 (c)	40+ (d)	F/X2	Sig	Diff	
<b>BMI</b>	1,257	1112	968	69	75				1,185	627	558				1,170	77	171	320	602				
Underweight (Below 18.5)	3.4	3.51	3.1	5.8	6.7	8.2			3.5	2.4	4.7	33.8	***	a<b	3.6	2.6	5.3	5.3	2.3	20.8			
Normal (18.5-24.9)	22.5	21.58	21.7	26.1	16.0				22.6	26.0	18.8			b<a	22.3	27.3	29.8	19.4	21.1				
Overweight (25-29.9)	27.9	28.06	27.8	31.9	28.0				28.2	32.1	23.8			b<a	27.6	28.6	24.0	25.0	29.9				
Obese (30.0-39.9)	34.4	34.71	35.1	29.0	34.7				34.2	31.3	37.5			a<b	34.9	28.6	29.8	36.9	36.1				
Extremely Obese (40+)	11.8	12.14	12.3	7.3	14.7				11.6	8.3	15.2			a<b	11.6	13.0	11.1	13.4	10.6				
<b>Pulse</b>	1,557	1,340	1155	77	108				1,447	763	684				1,408	83	205	382	738				
Below 60	6.0	6.12	6.4	7.8	1.9	8.1			6.2	6.7	5.7	0.6			6.1	4.8	3.9	5.2	7.3	9.7			
60-100	89.9	89.48	89.2	84.4	96.3				89.6	89.1	90.1				89.5	86.8	90.7	89.8	89.3				
Above 100	4.2	4.4	4.4	7.8	1.9				4.2	4.2	4.2				4.4	8.4	5.4	5.0	3.4				
<b>Pulse Oximetry</b>	1,479	1,273	1094	75	104				1,374	732	642				1,342	81	198	366	697				
Below 82	1.1	1.1	1.0	2.7	1.0	9.5			1.1	0.7	1.6	7.0			1.0	0.0	1.5	1.1	1.0	34.4	***		
82-87	0.8	0.86	0.7	1.3	1.9				0.8	0.4	1.3				0.8	2.5	2.0	0.3	0.4				
88-93	4.8	5.18	5.1	4.0	6.7				4.7	4.9	4.5				5.0	4.9	1.5	5.5	5.7				
94-96	16.4	16.5	16.7	8.0	20.2				16.5	15.4	17.6				16.6	9.9	14.7	11.8	20.5			a,c<d	
97 and Above	76.9	76.36	76.4	84.0	70.2				76.9	78.6	75.1				76.6	82.7	80.3	81.4	72.3				d<c
<b>Blood Pressure (Sitting)</b>	891	765	663	39	63				827	417	410				801	52	128	221	400				
Below 90/Below 60	10.4	9.67	10.3	5.1	6.4	6.2			10.4	10.1	10.7	0.9			9.2	9.6	8.6	5.9	11.3	19.6			
90-119/60-79	56.6	57.39	57.3	66.7	52.4				56.6	55.4	57.8				57.4	71.2	55.5	62.9	53.3				
120-139/80-89	26.3	26.54	26.1	25.6	31.8				26.2	27.3	25.1				26.5	19.2	27.3	25.3	27.8				
140-159/90-99	6.2	5.88	5.9	2.6	7.9				6.3	6.7	5.9				6.2	0.0	8.6	5.9	6.5				
160+/100+	0.6	0.52	0.5	0.0	1.6				0.5	0.5	0.5				0.6	0.0	0.0	0.0	1.3				
<b>Blood Pressure (Standing)</b>	1,032	882	754	53	75				957	495	462				916	51	132	258	475				
Below 90/Below 60	41.0	39.34	36.9	41.5	62.7	27.5	***	a<c	39.7	39.0	40.5	5.5			38.7	25.5	34.9	34.1	43.6	23.0	*		
90-119/60-79	36.1	36.85	39.1	35.9	14.7			c<a,b	37.3	35.6	39.2				37.5	58.8	37.9	39.9	33.7			d<a	
120-139/80-89	19.2	20.07	20.2	20.8	18.7				19.0	20.4	17.5				19.8	13.7	22.7	21.7	18.5				
140-159/90-99	3.3	3.29	3.5	0.0	4.0				3.5	4.2	2.6				3.6	0.0	4.6	3.9	3.6				
160+/100+	0.5	0.45	0.4	1.9	0.0				0.5	0.8	0.2				0.6	2.0	0.0	0.4	0.6				
<b>Height (without shoes) Could Not Measure / Refused to Participate</b>	1,613	1,382	1,193	79	110				1,495	785	710				1,450	84	210	388	768				
No	92.1	92.84	93.1	96.2	87.3	6.6	*		92.2	91.1	93.5	3.1			93.1	95.2	93.3	93.8	92.5	1.4			
Yes	7.9	7.16	6.9	3.8	12.7				7.8	8.9	6.5				6.9	4.8	6.7	6.2	7.6				
<b>Weight (without shoes) Could Not Measure / Refused to Participate</b>	1,613	1,382	1,193	79	110				1,495	785	710				1,450	84	210	388	768				
No	91.1	91.7	92.2	94.9	83.6	10.9	**	c<a	91.2	90.7	91.8	0.6			92.0	96.4	91.9	93.8	90.6	5.9			
Yes	8.9	8.32	7.8	5.1	16.4			a<c	8.8	9.3	8.2				8.0	3.6	8.1	6.2	9.4				
<b>BMI (based on height and weight) Could Not Measure / Refused to Participate (Years 1 &amp; 2 only)</b>	1,347	1,138	970	67	101				1,232	634	598				1,193	74	173	308	638				
No	86.0	86.7	88.0	89.6	72.3	20.2	***	c<a,b	86.0	86.1	86.0	0.0			87.0	93.2	89.0	89.6	84.5	8.6	*		
Yes	14.0	13.3	12.0	10.5	27.7			a,b<c	14.0	13.9	14.1				13.0	6.8	11.0	10.4	15.5				
<b>Waist to Hip Ratio Could Not Measure / Refused to Participate</b>	1,613	1,382	1,193	79	110				1,495	785	710				1,450	84	210	388	768				
No	85.1	85.5	86.2	86.1	77.3	6.4	*	c<a	85.0	85.0	84.9	0.0			86.0	91.7	88.1	90.2	82.7	15.7	**	d<c	
Yes	14.9	14.5	13.8	13.9	22.7			a<c	15.1	15.0	15.1				14.0	8.3	11.9	9.8	17.3			c<d	

Differences by Disability Type: a = Intellectual Disabilities (ID), b = Autism, c = Other, by Gender: a = Male, b = Female, by Age Groups: a = 14-21, b = 22-26, c = 27-39, d = 40+  
 Significance: \*\*\* p < .001, \*\* p < .01, \* p < .05

Characteristic	Totals	Disability Type						Gender						Age Groups								
	N/%	N/%	ID (a)	Autism (b)	Other (c)	F/X2	Sig	Diff	N/%	Male (a)	Female (b)	F/X2	Sig	Diff	N/%	14-21 (a)	22-26 (b)	27-39 (c)	40+ (d)	F/X2	Sig	Diff
Pulse Could Not Measure / Refused to Participate	1,613	1,382	1,193	79	110				1,495	785	710				1,450	84	210	388	768			
No	98.0	98.1	98.2	97.5	98.2	0.2			98.0	98.6	97.3	3.1			98.2	100.0	98.6	99.2	97.4	6.9		
Yes	2.0	1.9	1.8	2.5	1.8				2.0	1.4	2.7				1.8	0.0	1.4	0.8	2.6			
Pulse Oximetry Could Not Measure / Refused to Participate	1,613	1,382	1,193	79	110				1,495	785	710				1,450	84	210	388	768			
No	93.7	93.6	93.3	94.9	96.4	1.8			93.4	95.2	91.6	7.9	**	b<a	94.1	97.6	96.7	95.6	92.2	11.0	*	
Yes	6.3	6.4	6.7	5.1	3.6				6.6	4.8	8.5			a<b	5.9	2.4	3.3	4.4	7.8			
Blood Pressure Sitting Could Not Measure / Refused to Participate	1,613	1,382	1,193	79	110				1,495	785	710				1,450	84	210	388	768			
No	96.2	96.4	96.1	97.5	99.1	2.9			96.1	96.1	96.1	0.0			96.6	97.6	96.2	97.7	96.0	2.7		
Yes	3.8	3.6	3.9	2.5	0.9				4.0	4.0	3.9				3.5	2.4	3.8	2.3	4.0			
Blood Pressure Standing Could Not Measure / Refused to Participate	1,613	1,382	1,193	79	110				1,495	785	710				1,450	84	210	388	768			
No	81.0	80.9	82.2	82.3	65.5	18.4	***	c<a,b	80.8	82.3	79.2	2.4			81.5	89.3	85.2	82.0	79.3	7.8	*	
Yes	19.0	19.1	17.8	17.7	34.6			a,b<c	19.2	17.7	20.9				18.6	10.7	14.8	18.0	20.7			
Able to answer own questions (Years 1 & 2 only)	1,347	1,138	970	67	101				1,232	634	598				1,193	74	173	308	638			
No	19.8	19.1	18.8	22.4	19.8	0.6			19.2	20.5	17.9	1.4			18.6	32.4	16.2	16.6	18.7	10.9	*	b,c,d<a
Yes	80.3	80.9	81.2	77.6	80.2				80.8	79.5	82.1				81.4	67.6	83.8	83.4	81.4			a<b,c,d
Caregiver or support person assisted in answering questions (Years 1 & 2 only)	1,347	1,138	970	67	101				1,232	634	598				1,193	74	173	308	638			
No	86.0	85.8	85.9	82.1	87.1				86.5	87.2	85.8	0.5			86.8	77.0	89.0	90.3	85.6	10.9	*	a<c
Yes	14.0	14.2	14.1	17.9	12.9				13.5	12.8	14.2				13.2	23.0	11.0	9.7	14.4			c<a
Follow-up care participant should take part in (Years 1 & 2 only)	1,347	1,138	970	67	101				1,232	634	598				1,193	74	173	308	638			
No follow-up care indicated from this screening	47.8	46.3	45.8	49.3	49.5				47.3	50.3	44.2				46.5	56.8	46.8	45.5	45.8			
BMI indicates obesity or overweight, nutritional counseling is strongly advised	25.8	27.9	29.6	19.4	17.8				26.0	21.8	30.4				27.0	20.3	20.8	31.2	27.4			
BMI indicates underweight, nutritional counseling is advised	2.8	2.8	2.7	4.5	3.0				2.9	2.4	3.5				2.9	4.1	2.3	2.9	2.8			
Waist to Hip Indicator suggest a greater risk for conditions associated with obesity, nutritional counseling is advised	15.4	17.4	18.7	13.4	7.9				15.5	13.9	17.2				16.1	5.4	9.8	20.1	17.1			
Blood Pressure is greater than 120/80, further medical attention is advised	22.1	22.6	22.6	19.4	24.8				22.5	23.3	21.6				22.9	14.9	26.0	22.1	23.4			
Follow-up care participant should take part in (Years 1 & 2 only)	66	61	54	-	-				64	39	25				63	-	-	12	37			
Blood Pressure is less than 90/60, further medical evaluation is advised	19.7	19.7	20.4	-	-	2.1			20.3	15.4	28.0	2.0			19.1	-	-	8.3	21.6	13.7		
Pulse is greater than 100 beats per minute, further medical evaluation is advised	51.5	50.8	50.0	-	-				50.0	51.3	48.0				52.4	-	-	66.7	46.0			
Pulse is less than 60 beats per minute, further medical evaluation is advised	25.8	26.2	25.9	-	-				26.6	30.8	20.0				25.4	-	-	16.7	32.4			
Pulse is irregular, further medical evaluation is advised	3.0	3.3	3.7	-	-				3.1	2.6	4.0				3.2	-	-	8.3	0.0			
Medical attention is needed (Years 1 & 2 only)	1,347	1,138	970	67	101				1,232	634	598				1,193	74	173	308	638			
No	82.9	82.5	82.4	86.6	81.2	0.9			83.0	84.7	81.3	2.6			82.2	83.8	87.9	82.8	80.3	5.7		
Yes	17.1	17.5	17.6	13.4	18.8				17.0	15.3	18.7				17.8	16.2	12.1	17.2	19.8			
Referral given for vital sign issues (Years 1 & 2 only)	1,253	1,071	915	63	93				1,145	584	561				1,116	71	158	294	593			
Yes	26.6	28.2	29.3	25.4	19.4	4.4			27.3	28.4	26.2	0.7			28.1	31.0	27.9	28.2	27.8	0.3		
No	73.4	71.8	70.7	74.6	80.7				72.7	71.6	73.8				71.9	69.0	72.2	71.8	72.2			

Differences by Disability Type: a = Intellectual Disabilities (ID), b = Autism, c = Other, by Gender: a = Male, b = Female, by Age Groups: a = 14-21, b = 22-26, c = 27-39, d = 40+  
 Significance: \*\*\* p < .001, \*\* p < .01, \* p < .05

Characteristic	Totals	Disability Type						Gender						Age Groups								
	N/%	N/%	ID (a)	Autism (b)	Other (c)	F/X2	Sig	Diff	N/%	Male (a)	Female (b)	F/X2	Sig	Diff	N/%	14-21 (a)	22-26 (b)	27-39 (c)	40+ (d)	F/X2	Sig	Diff
<b>Referral given for nutritional issues (Years 1 &amp; 2 only)</b>	<b>1,239</b>	<b>1,063</b>	<b>911</b>	<b>61</b>	<b>91</b>				<b>1,134</b>	<b>580</b>	<b>554</b>				<b>1,106</b>	<b>71</b>	<b>158</b>	<b>289</b>	<b>588</b>			
Yes	26.0	27.9	28.7	26.2	20.9	2.6			25.9	21.4	30.7	12.8	***	a<b	27.3	12.7	20.9	31.8	28.6	14.4	**	a<c,d
No	74.0	72.2	71.4	73.8	79.1				74.1	78.6	69.3			b<a	72.7	87.3	79.1	68.2	71.4			c,d<a
<b>Follow-up care recommended for participant (Years 1 &amp; 2 only)</b>	<b>266</b>	<b>244</b>	<b>223</b>	<b>12</b>	<b>-</b>				<b>263</b>	<b>151</b>	<b>112</b>				<b>257</b>	<b>-</b>	<b>37</b>	<b>80</b>	<b>130</b>			
No follow-up care recommended	50.8	49.2	47.1	66.7	-				50.6	55.6	43.8				49.8	-	56.8	53.8	43.1			
Non-urgent medical evaluation was advised	14.7	15.2	16.6	0.0	-				14.8	11.3	19.6				15.2	-	16.2	12.5	16.9			
Nutritional counseling was advised	36.1	37.3	38.1	33.3	-				36.1	31.8	42.0				37.0	-	35.1	33.8	41.5			
Blood Pressure is greater than 120/80 or lower than 90/60, immediate medical attention was advised	20.7	21.7	23.3	8.3	-				20.9	22.5	18.8				21.4	-	16.2	17.5	25.4			
Pulse is greater than 100 beats per minute or less than 60 beats per minute, immediate medical evaluation was advised	1.9	2.1	2.2	0.0	-				1.9	0.0	4.5				2.0	-	0.0	2.5	2.3			
<b>Respiratory Rate</b>	<b>1,407</b>	<b>1,219</b>	<b>1048</b>	<b>72</b>	<b>99</b>				<b>1,309</b>	<b>693</b>	<b>616</b>				<b>1,280</b>	<b>76</b>	<b>184</b>	<b>345</b>	<b>675</b>			
Below 15	12.9	12.7	11.9	6.9	25.3	18.1	**	a,b<c	13.3	12.7	14.0	0.5			13.2	10.5	18.5	11.3	13.0	10.9		
15-20	78.3	78.0	79.0	83.3	63.6			c<a,b	77.9	78.5	77.3				77.7	75.0	71.2	81.5	77.8			
Above 21	8.9	9.3	9.1	9.7	11.1				8.8	8.8	8.8				9.1	14.5	10.3	7.3	9.2			
<b>Respiratory Rate and Rhythm - Could Not Measure / Refused to Participate</b>	<b>1,616</b>	<b>1,385</b>	<b>1,196</b>	<b>79</b>	<b>110</b>				<b>1,498</b>	<b>787</b>	<b>711</b>				<b>1,453</b>	<b>85</b>	<b>210</b>	<b>389</b>	<b>769</b>			
No	93.1	93.6	93.3	96.2	94.6	1.2			92.9	93.5	92.1	1.1			93.5	90.6	95.2	94.3	92.9	3.2		
Yes	6.9	6.4	6.7	3.8	5.5				7.1	6.5	7.9				6.5	9.4	4.8	5.7	7.2			
<b>Lung Sound Measurement</b>	<b>1,282</b>	<b>1,085</b>	<b>924</b>	<b>64</b>	<b>97</b>				<b>1,178</b>	<b>605</b>	<b>573</b>				<b>1,142</b>	<b>72</b>	<b>163</b>	<b>297</b>	<b>610</b>			
Normal	97.1	97.3	97.1	100.0	97.9	2.1			96.9	97.4	96.5	0.7			96.8	97.2	97.6	97.6	96.1	2.0		
Abnormal	2.9	2.7	2.9	0.0	2.1				3.1	2.6	3.5				3.2	2.8	2.5	2.4	3.9			
<b>Listen for Abnormal Lung Sounds - Could Not Measure / Refused to Participate</b>	<b>1,616</b>	<b>1,385</b>	<b>1,196</b>	<b>79</b>	<b>110</b>				<b>1,498</b>	<b>787</b>	<b>711</b>				<b>1,453</b>	<b>85</b>	<b>210</b>	<b>389</b>	<b>769</b>			
No	98.5	98.4	98.3	98.7	99.1	0.4			98.4	97.8	99.0	3.3			98.4	97.7	98.1	99.2	98.2	2.4		
Yes	1.5	1.6	1.7	1.3	0.9				1.6	2.2	1.0				1.6	2.4	1.9	0.8	1.8			
<b>Check if any signs/symptoms present</b>	<b>48</b>	<b>45</b>	<b>39</b>	<b>-</b>	<b>-</b>				<b>45</b>	<b>19</b>	<b>26</b>				<b>45</b>	<b>-</b>	<b>-</b>	<b>11</b>	<b>29</b>			
Breathing difficulties	72.9	73.3	71.8	-	-	5.2			71.1	52.6	84.6	7.5			73.3	-	-	72.7	72.4	1.3		
Behavior to suggest discomfort or abnormalities	20.8	20.0	23.1	-	-				22.2	42.1	7.7				20.0	-	-	18.2	20.7			
Use of accessory musculature	6.3	6.7	5.1	-	-				6.7	5.3	7.7				6.7	-	-	9.1	6.9			
<b>Chest hurts when breathing</b>	<b>1,433</b>	<b>1,238</b>	<b>1081</b>	<b>61</b>	<b>96</b>				<b>1,332</b>	<b>697</b>	<b>635</b>				<b>1,308</b>	<b>68</b>	<b>184</b>	<b>352</b>	<b>704</b>			
Yes	6.4	6.7	6.8	1.6	9.4	3.6			6.5	4.9	8.2	6.0	*	a<b	6.7	8.8	7.6	7.7	5.7	2.4		
No	93.6	93.3	93.3	98.4	90.6				93.5	95.1	91.8			b<a	93.4	91.2	92.4	92.3	94.3			
<b>Respiratory – The participant was able to answer questions on his/her own (Years 1 &amp; 2 only)</b>	<b>1,347</b>	<b>1,138</b>	<b>970</b>	<b>67</b>	<b>101</b>				<b>1,232</b>	<b>634</b>	<b>598</b>				<b>1,193</b>	<b>74</b>	<b>173</b>	<b>308</b>	<b>638</b>			
No	19.4	18.5	17.8	23.9	21.8	2.3			18.8	20.0	17.4	1.4			18.0	31.1	15.6	16.6	17.9	9.7	*	b,c,d<a
Yes	80.6	81.5	82.2	76.1	78.2				81.3	80.0	82.6				82.0	68.9	84.4	83.4	82.1			a<b,c,d
<b>Respiratory – A caregiver or support person assisted the participant in answering questions (Years 1 &amp; 2 only)</b>	<b>1,347</b>	<b>1,138</b>	<b>970</b>	<b>67</b>	<b>101</b>				<b>1,232</b>	<b>634</b>	<b>598</b>				<b>1,193</b>	<b>74</b>	<b>173</b>	<b>308</b>	<b>638</b>			
No	87.7	87.6	87.7	85.1	88.1	0.4			88.2	89.1	87.3	1.0			88.5	82.4	91.3	90.3	87.6	5.5		
Yes	12.3	12.4	12.3	14.9	11.9				11.8	10.9	12.7				11.5	17.6	8.7	9.7	12.4			

Differences by Disability Type: a = Intellectual Disabilities (ID), b = Autism, c = Other, by Gender: a = Male, b = Female, by Age Groups: a = 14-21, b = 22-26, c = 27-39, d = 40+  
 Significance: \*\*\* p < .001, \*\* p < .01, \* p < .05

Characteristic	Totals	Disability Type							Gender						Age Groups							
	N/%	N/%	ID (a)	Autism (b)	Other (c)	F/X2	Sig	Diff	N/%	Male (a)	Female (b)	F/X2	Sig	Diff	N/%	14-21 (a)	22-26 (b)	27-39 (c)	40+ (d)	F/X2	Sig	Diff
<b>No follow-up care indicated from this screening (Years 1 &amp; 2 only)</b>	<b>1,347</b>	<b>1,138</b>	<b>970</b>	<b>67</b>	<b>101</b>				<b>1,232</b>	<b>634</b>	<b>598</b>				<b>1,193</b>	<b>74</b>	<b>173</b>	<b>308</b>	<b>638</b>			
No	17.9	17.9	17.8	17.9	18.8	0.1			17.9	15.5	20.4	5.1	*	a<b	17.3	8.1	16.2	17.2	18.7	5.3		
Yes	82.1	82.1	82.2	82.1	81.2				82.1	84.5	79.6			b<a	82.7	91.9	83.8	82.8	81.4			
<b>Screening indicates possible respiratory health deficit, further evaluation is advised with a (Years 1 &amp; 2 only)</b>	<b>59</b>	<b>50</b>	<b>44</b>	<b>-</b>	<b>-</b>				<b>58</b>	<b>23</b>	<b>35</b>				<b>56</b>	<b>-</b>	<b>-</b>	<b>16</b>	<b>36</b>			
Primary Care Physician	89.8	92.0	90.9	-	-	0.6			89.7	91.3	88.6	0.1			89.3	-	-	100.0	83.3	3.7		
Specialist	10.2	8.0	9.1	-	-				10.3	8.7	11.4				10.7	-	-	0.0	16.7			
<b>Referral given for respiratory issues (Years 1 &amp; 2 only)</b>	<b>1,243</b>	<b>1,069</b>	<b>911</b>	<b>65</b>	<b>93</b>				<b>1,139</b>	<b>587</b>	<b>552</b>				<b>1,111</b>	<b>71</b>	<b>162</b>	<b>294</b>	<b>584</b>			
Yes	6.6	6.7	6.8	4.6	7.5	0.6			7.1	6.6	7.6	0.4			7.1	2.8	6.2	5.8	8.6	4.8		
No	93.4	93.3	93.2	95.4	92.5				92.9	93.4	92.4				92.9	97.2	93.8	94.2	91.4			
<b>Follow-up Care Recommended (Year 3 only)</b>	<b>258</b>	<b>236</b>	<b>216</b>	<b>11</b>	<b>-</b>				<b>255</b>	<b>145</b>	<b>110</b>				<b>249</b>	<b>-</b>	<b>37</b>	<b>77</b>	<b>125</b>			
No follow-up care was recommended	88.4	88.1	88.4	81.8	-	0.6			89.0	91.0	86.4	2.3			88.4	-	78.4	81.8	95.2	15.1	*	b,c<a
Immediate medical attention was advised	0.4	0.4	0.5	0.0	-				0.4	0.0	0.9				0.4	-	0.0	0.0	0.8			
Non-urgent medical attention was advised	11.2	11.4	11.1	18.2	-				10.6	9.0	12.7				11.2	-	21.6	18.2	4.0			d<b,c

Differences by Disability Type: a = Intellectual Disabilities (ID), b = Autism, c = Other, by Gender: a = Male, b = Female, by Age Groups: a = 14-21, b = 22-26, c = 27-39, d = 40+  
 Significance: \*\*\* p < .001, \*\* p < .01, \* p < .05

**TABLE 4: VISION CHARACTERISTICS**

Characteristic	Totals	Disability Type						Gender						Age Groups								
	N/%	N/%	ID (a)	Autism (b)	Other (c)	F/X2	Sig	Diff	N/%	Male (a)	Female (b)	F/X2	Sig	Diff	N/%	14-21 (a)	22-26 (b)	27-39 (c)	40+ (d)	F/X2	Sig	Diff
<b>Vision Acuity</b>	762	670	600	26	44				722	364	358				711	48	106	203	354			
20/10	10.0	10.5	10.7	11.5	6.8	28.3	*		10.0	10.4	9.5	9.0			10.4	4.2	14.2	9.4	10.7	22.7		
20/15	1.2	1.3	1.5	0.0	0.0				1.3	1.4	1.1				1.3	0.0	2.8	1.5	0.9			
20/20	23.1	22.5	20.8	53.9	27.3				23.0	24.7	21.2				22.9	25.0	25.5	23.7	21.5			
20/25	10.0	9.3	9.8	11.5	0.0				10.5	10.4	10.6				10.3	6.3	12.3	12.8	8.8			
20/30	15.6	15.8	15.5	7.7	25.0				15.4	15.9	14.8				15.8	16.7	12.3	17.2	15.8			
20/40	15.9	16.3	16.7	3.9	18.2				15.9	14.8	17.0				16.2	18.8	11.3	16.8	17.0			
20/50	14.8	15.1	15.2	7.7	18.2				14.7	13.5	15.9				14.2	16.7	17.0	11.8	14.4			
20/60	1.4	1.2	1.3	0.0	0.0				1.5	2.5	0.6				1.4	2.1	0.0	0.5	2.3			
20/70	8.0	8.1	8.5	3.9	4.6				7.8	6.3	9.2				7.6	10.4	4.7	6.4	8.8			
<b>Vision Acuity could not measure / refused to participate</b>	1,592	1367	1178	80	109				1,474	771	703				1,435	84	210	381	760			
No	72.6	74.0	74.2	68.8	76.2	1.4			73.2	71.1	75.5	3.7			74.7	79.8	82.9	78.5	70.0	20.3	***	d<b,c
Yes	27.4	26.0	25.8	31.3	23.9				26.8	28.9	24.5				25.3	20.2	17.1	21.5	30.0			b,c<d
<b>Vision Signs/Symptoms Present</b>	87	73	63	-	-				76	41	35				76	-	12	17	44			
Eye irritation	56.3	60.3	58.7	-	-	3.9			59.2	56.1	62.9	1.4			57.9	-	50.0	64.7	56.8	2.3		
Redness	28.7	26.0	27.0	-	-				26.3	31.7	20.0				27.6	-	33.3	23.5	29.6			
Behaviors to suggest discomfort	14.9	13.7	14.3	-	-				14.5	12.2	17.1				14.5	-	16.7	11.8	13.6			
<b>Eyes Hurt</b>	1,390	1,201	1037	65	99				1,292	660	632				1,268	66	191	331	680			
Yes	7.0	6.2	5.8	4.6	11.1	4.7			7.2	5.8	8.7	4.2	*	a<b	7.2	6.1	6.8	7.9	7.1	0.4		
No	93.0	93.8	94.2	95.4	88.9				92.8	94.2	91.3			b<a	92.8	93.9	93.2	92.2	92.9			
<b>Trouble Seeing</b>	1,353	1168	1010	64	94				1,255	642	613				1,235	66	188	320	661			
Yes	21.2	20.6	20.7	12.5	24.5	3.4			21.2	18.7	23.8	4.9	*	a<b	21.8	10.6	19.7	20.9	23.9	7.2		
No	78.8	79.5	79.3	87.5	75.5				78.8	81.3	76.2			b<a	78.2	89.4	80.3	79.1	76.1			
<b>Participant was able to answer questions on his/her own (Years 1 &amp; 2 only)</b>	1,325	1,122	954	68	100				1,210	619	591				1,177	73	173	302	629			
No	19.4	18.7	18.2	26.5	18.0	2.9			19.1	20.5	17.6	1.7			18.3	27.4	15.0	16.9	18.8	5.8		
Yes	80.6	81.3	81.8	73.5	82.0				80.9	79.5	82.4				81.7	72.6	85.0	83.1	81.2			
<b>Caregiver or support person assisted in answering questions (Years 1 &amp; 2 only)</b>	1,325	1,122	954	68	100				1,210	619	591				1,177	73	173	302	629			
No	89.2	89.3	89.7	83.8	89.0	2.3			89.7	90.0	89.3	0.1			89.9	83.6	92.5	92.4	88.7	7.5		
Yes	10.8	10.7	10.3	16.2	11.0				10.3	10.0	10.7				10.1	16.4	7.5	7.6	11.3			
<b>No follow-up care indicated from this screening (Years 1 &amp; 2 only)</b>	1,325	1,122	954	68	100				1,210	619	591				1,177	73	173	302	629			
No	25.4	24.7	24.7	19.1	28.0	1.7			25.5	23.6	27.6	2.5			25.3	15.1	22.5	23.5	28.1	7.5		
Yes	74.6	75.3	75.3	80.9	72.0				74.5	76.4	72.4				74.7	84.9	77.5	76.5	71.9			
<b>Further vision evaluation is advised with an (Years 1 &amp; 2 only)</b>	169	145	124	-	17				155	63	92				158	-	23	34	98			
Optometrist	73.4	73.8	73.4	-	76.5	1.4			74.8	71.4	77.2	0.7			73.4	-	73.9	73.5	73.5	3.8		
Ophthalmologist	19.5	21.4	21.8	-	17.7				18.1	20.6	16.3				19.6	-	17.4	17.7	20.4			
Primary Care Physician	3.0	2.1	2.4	-	0.0				2.6	3.2	2.2				2.5	-	4.4	0.0	3.1			
Other	4.1	2.8	2.4	-	5.9				4.5	4.8	4.4				4.4	-	4.4	8.8	3.1			
<b>Participant has not visited eye doctor regularly and should go for a regular full eye exam (Years 1 &amp; 2 only)</b>	1,325	1,122	954	68	100				1,210	619	591				1,177	73	173	302	629			
No	93.4	93.5	93.1	98.5	94.0	3.1			93.1	93.5	92.7	0.3			93.0	95.9	96.0	92.7	91.9	4.4		
Yes	6.6	6.5	6.9	1.5	6.0				6.9	6.5	7.3				7.1	4.1	4.1	7.3	8.1			

Differences by Disability Type: a = Intellectual Disabilities (ID), b = Autism, c = Other, by Gender: a = Male, b = Female, by Age Groups: a = 14-21, b = 22-26, c = 27-39, d = 40+  
 Significance: \*\*\* p < .001, \*\* p < .01, \* p < .05

Characteristic	Totals	Disability Type							Gender						Age Groups							
	N/%	N/%	ID (a)	Autism (b)	Other (c)	F/X2	Sig	Diff	N/%	Male (a)	Female (b)	F/X2	Sig	Diff	N/%	14-21 (a)	22-26 (b)	27-39 (c)	40+ (d)	F/X2	Sig	Diff
Referral Given for Vision Care (Years 1 & 2 only)	1,206	1,036	881	64	91				1,098	562	536				1,077	70	162	283	562			
Yes	16.0	15.7	16.5	4.7	16.5	6.3	*		16.1	14.1	18.3	3.6			16.6	7.1	18.5	13.4	18.9	9.1	*	
No	84.0	84.3	83.5	95.3	83.5				83.9	85.9	81.7				83.4	92.9	81.5	86.6	81.1			
Follow-up care recommended to the participant (Year 3 only)	259	237	217	-	-				256	149	107				250	-	36	76	127			
No follow-up care was recommended	62.2	62.0	62.2	-	-	0.8			62.9	67.1	57.0	3.2			61.6	-	66.7	59.2	59.8	5.9		
Vision evaluation recommended	13.9	13.1	12.9	-	-				14.1	11.4	17.8				14.0	-	11.1	19.7	11.8			
Recommended a regular check-up	23.9	24.9	24.9	-	-				23.1	21.5	25.2				24.4	-	22.2	21.1	28.4			
Participant wearing (Year 3 only)	257	237	218	-	-				254	148	106				249	-	36	73	130			
Glasses	42.0	41.8	42.7	-	-	3.8			41.7	35.1	50.9	6.3	*	a<b	41.8	-	38.9	38.4	45.4	1.7		
None	58.0	58.2	57.3	-	-				58.3	64.9	49.1			b<a	58.2	-	61.1	61.6	54.6			
Participant wearing - Could Not Measure/ Refused to Participate (Year 3 only)	257	245	224	12	-				264	152	112				258	11	37	79	131			
No	97.8	98.0	98.2	91.7	-	2.6			97.7	98.0	97.3	0.1			98.1	100.0	94.6	96.2	100.0	6.6		
Yes	2.3	2.0	1.8	8.3	-				2.3	2.0	2.7				1.9	0.0	5.4	3.8	0.0			

Differences by Disability Type: a = Intellectual Disabilities (ID), b = Autism, c = Other, by Gender: a = Male, b = Female, by Age Groups: a = 14-21, b = 22-26, c = 27-39, d = 40+  
 Significance: \*\*\* p < .001, \*\* p < .01, \* p < .05



**TABLE 5: HEARING CHARACTERISTICS**

Characteristic	Totals	Disability Type							Gender						Age Groups							
	N/%	N/%	ID (a)	Autism (b)	Other (c)	F/X2	Sig	Diff	N/%	Male (a)	Female (b)	F/X2	Sig	Diff	N/%	14-21 (a)	22-26 (b)	27-39 (c)	40+ (d)	F/X2	Sig	Diff
Hearing Ability Whispered Word Test	1,446	1,240	1073	66	101				1,341	697	644				1,305	71	194	348	692			
Pass	87.8	88.39	87.8	95.5	90.1	4.7			87.8	88.4	87.1	0.6			88.4	95.8	94.9	89.9	85.1	20.2	**	d<b
Not Pass	10.0	9.44	9.8	4.6	8.9				10.1	9.8	10.6				9.6	2.8	4.1	8.6	12.3			b<d
Pass (Hearing aid Present)	2.2	2.18	2.4	0.0	1.0				2.1	1.9	2.3				2.0	1.4	1.0	1.4	2.6			
Hearing Ability Whispered Word Test Could Not Measure / Refused	1,607	1,379	1190	80	109				1,491	783	708				1,448	84	212	389	763			
No	90.9	90.28	90.6	83.8	91.7	4.3			90.7	90.2	91.2	0.5			90.9	85.7	92.5	90.0	91.5	4.1		
Yes	9.1	9.72	9.4	16.3	8.3				9.3	9.8	8.8				9.1	14.3	7.6	10.0	8.5			
Earwax Impaction of External Ear Canal Using Otoscope	1,447	1,241	1075	71	95				1,342	709	633				1,311	74	192	358	687			
Clear	83.1	83.72	83.4	88.7	83.2	1.4			82.6	80.4	85.2	5.3	*	a<b	82.8	77.0	83.3	82.4	83.6	2.1		
Blockage	16.9	16.28	16.6	11.3	16.8				17.4	19.6	14.9				17.2	23.0	16.7	17.6	16.5			b<a
Earwax Impaction of External Ear Canal Using Otoscope – Could Not Measure / Refused	1,607	1,379	1190	80	109				1,491	783	708				1,448	84	212	389	763			
No	95.52	95.21	95.0	96.3	97.3	1.3			95.3	95.5	95.1	0.2			95.4	94.1	96.7	96.7	94.6	3.6		
Yes	4.48	4.79	5.0	3.8	2.8				4.7	4.5	4.9				4.6	6.0	3.3	3.3	5.4			
Symptoms or Signs Present	59	50	44	-	-				57	22	35				58	-	-	16	30			
Ear Pain	64.4	66.0	63.6	-	-	1.2			63.2	59.1	65.7	0.3			65.5	-	-	68.8	56.7	6.6		
Infection	8.5	6.0	6.8	-	-				8.8	9.1	8.6				8.6	-	-	12.5	6.7			
Behaviors to suggest a hearing deficit	27.1	28.0	29.6	-	-				28.1	31.8	25.7				25.9	-	-	18.8	36.7			
Ear Pain	1,430	1,223	1055	69	99				1,325	695	630				1,294	72	192	345	685			
Yes	5.8	6.0	6.2	2.9	6.1	1.2			6.0	4.9	7.3	3.4			6.3	9.7	10.4	7.0	4.4	11.5	**	d<b
No	94.2	94.0	93.8	97.1	93.9				94.0	95.1	92.7				93.7	90.3	89.6	93.0	95.6			b<d
Trouble hearing when people speak	1,426	1,217	1052	70	95				1,325	694	631				1,296	74	192	344	686			
Yes	11.9	11.8	12.1	5.7	12.6	2.6			12.1	11.1	13.2	1.3			12.1	12.2	11.5	9.9	13.4	2.8		
No	88.2	88.3	87.9	94.3	87.4				87.9	88.9	86.9				87.9	87.8	88.5	90.1	86.6			
Participant was able to answer questions on his/her own (Years 1 & 2 only)	1,339	1,133	965	68	100				1,226	630	596				1,189	73	175	308	633			
No	18.8	18.53	18.0	26.5	18.0	3.0			18.5	19.8	17.1	1.5			17.6	30.1	15.4	15.9	17.5	9.1	*	b,c<a
Yes	81.3	81.47	82.0	73.5	82.0				81.5	80.2	82.9				82.4	69.9	84.6	84.1	82.5			a<b,c
Caregiver or support person assisted in answering questions (Years 1 & 2 only)	1,339	1,133	965	68	100				1,226	630	596				1,189	73	175	308	633			
No	88.8	88.5	88.8	83.8	89.0	1.6			89.2	89.8	88.4	0.6			89.5	82.2	91.4	91.2	88.9	6.0		
Yes	11.2	11.5	11.2	16.2	11.0				10.9	10.2	11.6				10.5	17.8	8.6	8.8	11.1			
No follow-up care indicated from this screening (Years 1 & 2 only)	1,339	1,133	965	68	100				1,226	630	596				1,189	73	175	308	633			
No	24.8	24.1	25.1	20.6	17.0	3.7			25.3	25.9	24.7	0.2			24.6	26.0	24.6	24.0	24.6	0.1		
Yes	75.2	75.9	74.9	79.4	83.0				74.7	74.1	75.3				75.4	74.0	75.4	76.0	75.4			
Screening indicates possible hearing deficit, further hearing evaluation is advised with an: (Years 1 & 2 only)	86	66	61	-	-				82	30	52				83	-	-	19	57			
Audiologist	36.1	39.39	42.6	-	-	20.7	***		35.4	26.7	40.4	3.4			36.1	-	-	10.5	43.9	10.9		
Primary Care Physician	54.7	54.55	54.1	-	-				54.9	56.7	53.9				54.2	-	-	84.2	45.6			
Other	9.3	6.06	3.3	-	-				9.8	16.7	5.8				9.6	-	-	5.3	10.5			

Differences by Disability Type: a = Intellectual Disabilities (ID), b = Autism, c = Other, by Gender: a = Male, b = Female, by Age Groups: a = 14-21, b = 22-26, c = 27-39, d = 40+  
 Significance: \*\*\* p < .001, \*\* p < .01, \* p < .05

Characteristic	Totals	Disability Type						Gender						Age Groups								
	N/%	N/%	ID (a)	Autism (b)	Other (c)	F/X2	Sig	Diff	N/%	Male (a)	Female (b)	F/X2	Sig	Diff	N/%	14-21 (a)	22-26 (b)	27-39 (c)	40+ (d)	F/X2	Sig	Diff
Earwax removal may be needed for (right, left, both) ears (Years 1 & 2 only)	1,339	1,133	965	68	100				1,226	630	596				1,189	73	175	308	633			
No	80.4	80.49	80.0	83.8	83.0	1.0			79.7	78.1	81.4	2.0			79.8	80.8	80.0	79.9	79.6	0.1		
Yes	19.6	19.51	20.0	16.2	17.0				20.3	21.9	18.6				20.2	19.2	20.0	20.1	20.4			
Referral Given for Hearing Care (Years 1 & 2 only)	1,230	1,055	894	66	95				1,124	579	545				1,100	68	165	292	575			
Yes	18.0	17.73	18.2	12.1	16.8	1.6			18.9	19.0	18.7	0.0			19.1	25.0	15.2	18.8	19.7	3.3		
No	82.0	82.27	81.8	87.9	83.2				81.1	81.0	81.3				80.9	75.0	84.9	81.2	80.4			
Follow-up care Recommended (Year 3 only)	262	240	219	12	-				259	150	109				253	11	36	79	127			
No follow-up care was recommended	88.2	87.5	87.2	91.7	-	1.5			88.0	86.0	90.8	4.8			87.8	81.8	94.4	88.6	85.8	7.4		
Hearing evaluation recommended	6.5	7.08	6.9	8.3	-				6.6	6.0	7.3				6.7	0.0	5.6	7.6	7.1			
Earwax removal recommended	5.3	5.42	5.9	0.0	-				5.4	8.0	1.8				5.5	18.2	0.0	3.8	7.1			
Wearing Hearing Aids (Year 3 only)	262	240	219	12	-				259	149	110				253	-	36	78	129			
Yes	5.7	5.4	5.0	8.3	-	0.8			5.8	6.0	5.5	0.0			5.5	-	0.0	3.9	8.5	5.3		
No	94.3	94.6	95.0	91.7	-				94.2	94.0	94.6				94.5	-	100.0	96.2	91.5			
Wearing Hearing Aids Could Not Measure / Refused (Year 3 only)	268	246	225	12	-				265	153	112				259	11	37	81	130			
Yes	99.6	99.6	99.6	100.0	-	0.1			99.6	100.0	99.1	1.4			99.6	100.0	97.3	100.0	100.0	6.0		
No	0.4	0.4	0.4	0.0	-				0.4	0.0	0.9				0.4	0.0	2.7	0.0	0.0			

Differences by Disability Type: a = Intellectual Disabilities (ID), b = Autism, c = Other, by Gender: a = Male, b = Female, by Age Groups: a = 14-21, b = 22-26, c = 27-39, d = 40+  
 Significance: \*\*\* p < .001, \*\* p < .01, \* p < .05

**TABLE 6: DENTAL CHARACTERISTICS**

Characteristic	Totals	Disability Type						Gender						Age Groups								
	N/%	N/%	ID (a)	Autism (b)	Other (c)	F/X2	Sig	Diff	N/%	Male (a)	Female (b)	F/X2	Sig	Diff	N/%	14-21 (a)	22-26 (b)	27-39 (c)	40+ (d)	F/X2	Sig	Diff
<b>General Tooth Health</b>	1,480	1,272	1101	71	100				1,371	713	658				1,336	77	198	361	700			
Pass	83.7	83.6	83.0	91.6	84.0	3.6			83.66	82.9	84.5	0.6			83.4	89.6	88.9	86.4	79.6	16.2	***	d<b,c
Not Pass	16.3	16.4	17.0	8.5	16.0				16.34	17.1	15.5				16.6	10.4	11.1	13.6	20.4			b,c<d
<b>Could Not Measure / Refused to Participate</b>	1,592	1,365	1178	78	109				1,478	773	705				1,436	84	212	379	761			
No	94.7	94.8	95.3	89.7	92.7	5.7			94.6	93.5	95.7	3.5			94.9	91.7	93.9	97.6	94.1	9.0	*	a,d<c
Yes	5.3	5.2	4.7	10.3	7.3				5.41	6.5	4.3				5.2	8.3	6.1	2.4	5.9			c<a,d
<b>Dental Signs and Symptoms present</b>	518	460	415	15	30				488	238	250				485	12	39	111	323			
Tooth, tongue or jaw pain	7.1	6.3	6.0	13.3	6.7				7.0	7.1	6.8				6.6	8.3	28.2	8.1	3.4			
Infection	4.3	4.4	4.3	13.3	0.0				4.3	5.5	3.2				4.1	8.3	7.7	3.6	3.7			
Tooth grinding	13.7	14.1	13.5	33.3	13.3				13.7	15.1	12.4				13.8	8.3	18.0	19.8	11.5			
Missing teeth	72.8	73.0	73.3	53.3	80.0				73.0	74.4	71.6				72.8	25.0	43.6	60.4	82.4			
Gingivitis	29.0	27.8	28.4	26.7	20.0				29.1	31.9	26.4				29.1	83.3	35.9	31.5	25.4			
Behaviors to suggest discomfort or an oral health abnormality	2.7	2.8	2.9	6.7	0.0				2.9	2.9	2.8				2.5	8.3	7.7	3.6	1.2			
<b>Teeth or Mouth Hurts</b>	1,416	1,216	1053	65	98				1,315	680	635				1,288	72	193	341	682			
Yes	7.3	7.2	7.4	1.5	9.2	3.7			7.5	6.8	8.2	1.0			7.6	6.9	11.9	7.3	6.6	6.2		
No	92.7	92.8	92.6	98.5	90.8				92.6	93.2	91.8				92.4	93.1	88.1	92.7	93.4			
<b>Participant was able to answer questions on his/her own (Years 1 &amp; 2 only)</b>	1,326	1,121	955	66	100				1,215	621	594				1,179	73	175	299	632			
No	18.6	17.9	17.3	24.2	20.0	2.4			18.3	19.5	17.0	1.3			17.4	27.4	15.4	15.1	17.9	6.8		
Yes	81.4	82.1	82.7	75.8	80.0				81.7	80.5	83.0				82.6	72.6	84.6	85.0	82.1			
<b>Caregiver or support person assisted in answering questions (Years 1 &amp; 2 only)</b>	1,326	1,121	955	66	100				1,215	621	594				1,179	73	175	299	632			
No	89.1	88.9	89.01	87.88	89	0.1			89.3	90.2	88.4	1.0			89.7	83.6	91.4	92.3	88.8	6.4		
Yes	10.9	11.1	10.99	12.12	11				10.7	9.8	11.6				10.3	16.4	8.6	7.7	11.2			
<b>Follow-up Care</b>	1,223	1,058	913	66	79				1,139	591	548				1,118	73	171	303	571			
No follow-up care indicated from this screening	84.4	83.4	82.4	87.9	91.1				83.9	81.9	86.1				83.7	89.0	86.6	82.2	83.0			
Screening indicates that there may be an urgent oral health care issue, and plans should be made for immediate care	4.3	4.2	4.5	3.0	1.3				4.2	4.7	3.7				4.2	4.1	3.5	4.0	4.6			
Further dental evaluation recommended (Year 3 only)	18.4	19.7	21.1	0.0	11.1				18.6	19.7	17.1				19.1	36.4	13.5	15.0	21.7			
Recommended a regular check-up (Year 3 only)	33.5	34.0	33.6	33.3	44.4				32.7	29.6	36.9				33.5	27.3	32.4	37.5	31.8			
<b>Screening indicates possible oral health deficit, further evaluation is advised with a: (Years 1 &amp; 2 only)</b>	164	135	116	-	13				149	75	74				147	-	17	27	101			
Dentist	96.3	98.5	98.28	-	100	0.3			96.6	96.0	97.3	1.0			96.6	-	100.0	100.0	95.1	2.4		
Primary care physician	0.6	0.7	0.86	-	0				0.7	1.3	0.0				0.7	-	0.0	0.0	1.0			
Other	3.1	0.7	0.86	-	0				2.7	2.7	2.7				2.7	-	0.0	0.0	4.0			
<b>Screening (Years 1 &amp; 2 only)</b>	287	245	216	-	22				271	134	137				261	-	36	74	141			
Screening indicates that maintenance oral health care is needed in the next 6 months	64.8	64.9	65.3	-	54.6	2.4			64.9	59.7	70.1	3.2			64.0	-	83.3	59.5	61.7	6.9		
Screening indicates that there may be a non-urgent oral health care needed and recommends you receive an evaluation within the next 2-3 months	35.2	35.1	34.7	-	45.5				35.1	40.3	29.9				36.0	-	16.7	40.5	38.3			
<b>Referral Given for Dental Care (Years 1 &amp; 2 only)</b>	1,226	1,052	891	65	96				1,121	570	551				1,095	70	165	283	577			
Yes	24.6	24.3	24.7	18.5	25.0	1.3			24.5	24.9	24.1	0.1			24.9	14.3	24.2	25.1	26.3	4.9		
No	75.5	75.7	75.3	81.5	75.0				75.5	75.1	75.9				75.1	85.7	75.8	74.9	73.7			

Differences by Disability Type: a = Intellectual Disabilities (ID), b = Autism, c = Other, by Gender: a = Male, b = Female, by Age Groups: a = 14-21, b = 22-26, c = 27-39, d = 40+  
 Significance: \*\*\* p < .001, \*\* p < .01, \* p < .05

**TABLE 7: FOOT CHARACTERISTICS**

Characteristic	Totals N/%	Disability Type							Gender						Age Groups							
		N/%	ID (a)	Autism (b)	Other (c)	F/X2	Sig	Diff	N/%	Male (a)	Female (b)	F/X2	Sig	Diff	N/%	14-21 (a)	22-26 (b)	27-39 (c)	40+ (d)	F/X2	Sig	Diff
<b>Foot Inspection</b>	1,341	1144	1000	60	84				1,248	657	591				1208	72	179	319	638			
Pass	80.5	80.1	79.5	86.7	82.1	2.1			80.1	79.8	80.5	0.1			80.3	81.9	86.6	81.5	77.7	7.5		
Not Pass	19.5	19.9	20.5	13.3	17.9				19.9	20.2	19.5				19.7	18.1	13.4	18.5	22.3			
<b>Foot Inspection Could Not Measure / Refused to Participate</b>	1,597	1,368	1184	78	106				1,483	778	705				1,437	83	210	384	760			
No	92.4	91.9	92.2	85.9	92.5	4.0			92.5	92.3	92.6	0.1			92.6	91.6	94.3	92.5	92.4	1.1		
Yes	7.6	8.1	7.8	14.1	7.6				7.6	7.7	7.4				7.4	8.4	5.7	7.6	7.6			
<b>Basic Gait Analysis via Get Up and Go Test</b>	1,381	1194	1047	70	77				1,293	675	618				1,265	72	184	339	670			
0	10.6	10.8	10.8	8.6	13.0	15.9			9.7	9.3	10.2	14.8	*		10.3	4.2	10.3	11.5	10.3	46.3	***	d<a,b,c; c<a
1	57.4	57.9	58.1	70.0	44.2				58.1	60.4	55.5				58.6	80.6	66.3	63.1	51.8			c<d
2	14.6	14.2	14.1	11.4	16.9				15.1	15.1	15.1				15.2	6.9	13.6	10.9	18.7			
3	6.5	6.3	6.3	4.3	7.8				6.6	5.5	7.8				6.2	4.2	3.3	6.5	7.0			
4	5.3	5.8	5.5	1.4	13.0				5.2	3.4	7.1				5.3	2.8	3.3	3.2	7.2			
5	5.6	5.1	5.2	4.3	5.2				5.3	6.2	4.4				4.5	1.4	3.3	4.7	5.1			
<b>Basic Gait Could Not Measure / Refused to Participate</b>	1,597	1,368	1184	78	106				1,483	778	705				1,437	83	210	384	760			
No	92.9	92.9	93.8	92.3	83.0	17.3	***	c<a	93.3	92.5	94.0	1.3			93.6	91.6	94.8	94.3	93.2	1.6		
Yes	7.1	7.1	6.2	7.7	17.0			a<c	6.7	7.5	6.0				6.4	8.4	5.2	5.7	6.8			
<b>Foot Signs/Symptoms Present</b>	128	109	95	-	-				114	56	58				111	-	-	31	71			
Foot Pain	54.7	56.9	59.0	-	-	3.9			54.4	48.2	60.3	4.8			54.1	-	-	54.8	54.9	2.9		
Infection	31.3	30.3	27.4	-	-				33.3	42.9	24.1				31.5	-	-	32.3	31.0			
Behaviors to suggest discomfort or abnormalities	14.1	12.8	13.7	-	-				12.3	8.9	15.5				14.4	-	-	12.9	14.1			
<b>Do you have Diabetes (Year 3 only)</b>	238	217	200	-	-				235	136	99				230	-	34	74	113			
Yes	13.0	13.8	13.5	-	-	6.6	*	a<c	12.8	10.3	16.2	1.8			13.5	-	2.9	13.5	17.7	6.4		
No	87.0	86.2	86.5	-	-			c<a	87.2	89.7	83.8				86.5	-	97.1	86.5	82.3			
<b>Feet Hurt Often</b>	1,386	1,199	1048	59	92				1,292	672	620				1,266	71	191	328	676			
Yes	13.3	13.0	13.4	3.4	15.2	5.3			13.5	11.9	15.2	2.9			13.5	9.9	10.5	14.0	14.5	3.0		
No	86.7	87.0	86.6	96.6	84.8				86.5	88.1	84.8				86.5	90.1	89.5	86.0	85.5			
<b>Often Feel Dizzy When Walking</b>	1,308	1,129	985	61	83				1,217	631	586				1,197	70	184	313	630			
Yes	10.9	11.1	11.6	3.3	10.8	4.0			11.3	8.1	14.7	13.2	***	a<b	11.3	10.0	13.0	10.2	11.4	1.0		
No	89.1	88.9	88.4	96.7	89.2				88.7	91.9	85.3			b<a	88.7	90.0	87.0	89.8	88.6			
<b>Often Feel Unsteady When Walking</b>	1,313	1,132	986	61	85				1,224	630	594				1,202	70	182	317	633			
Yes	17.3	16.7	16.6	1.6	28.2	18.1	***	b<a; a,b<c	17.7	14.1	21.6	11.5	***	a<b	17.9	18.6	16.5	12.6	20.9	10.0	*	c<d
No	82.7	83.3	83.4	98.4	71.8			c<a; a,c<b	82.3	85.9	78.5			b<a	82.1	81.4	83.5	87.4	79.2			d<c
<b>Fallen at home in the last year</b>	1,327	1,145	997	60	88				1,232	643	594				1,212	69	179	316	648			
Yes	17.0	16.8	16.7	10.0	22.7	4.2			17.6	13.8	21.7	13.2	***	a<b	18.0	13.0	21.2	13.3	19.9	8.8	*	
No	83.0	83.2	83.4	90.0	77.3				82.4	86.2	78.3			b<a	82.0	87.0	78.8	86.7	80.1			
<b>Participant was able to answer questions on his/her own (Years 1 &amp; 2 only)</b>	1,328	1,121	958	66	97				1,217	625	592				1,177	72	173	303	629			
No	20.7	20.2	19.7	28.8	18.6	3.3			20.1	21.3	18.9	1.1			19.0	34.7	16.2	18.8	18.1	12.8	*	b,c,d<a
Yes	79.3	79.8	80.3	71.2	81.4				79.9	78.7	81.1				81.0	65.3	83.8	81.2	81.9			a<b,c,d
<b>Caregiver or support person assisted in answering questions (Years 1 &amp; 2 only)</b>	1,328	1,121	958	66	97				1,217	625	592				1,177	72	173	303	629			
No	87.5	87.2	87.6	84.9	85.6	0.7			87.8	88.6	86.8	0.9			87.9	76.4	91.3	90.4	87.1	13.1	*	a<b,c
Yes	12.5	12.8	12.4	15.2	14.4				12.2	11.4	13.2				12.1	23.6	8.7	9.6	12.9			b,c<a

Differences by Disability Type: a = Intellectual Disabilities (ID), b = Autism, c = Other, by Gender: a = Male, b = Female, by Age Groups: a = 14-21, b = 22-26, c = 27-39, d = 40+  
Significance: \*\*\* p < .001, \*\* p < .01, \* p < .05

Characteristic	Totals	Disability Type						Gender						Age Groups								
	N/%	N/%	ID (a)	Autism (b)	Other (c)	F/X2	Sig	Diff	N/%	Male (a)	Female (b)	F/X2	Sig	Diff	N/%	14-21 (a)	22-26 (b)	27-39 (c)	40+ (d)	F/X2	Sig	Diff
<b>Follow-up Care</b>	<b>1,218</b>	<b>1,054</b>	<b>916</b>	<b>65</b>	<b>73</b>				<b>1,132</b>	<b>604</b>	<b>528</b>				<b>1,111</b>	<b>68</b>	<b>171</b>	<b>305</b>	<b>567</b>			
No follow-up care indicated from this screening	85.0	84.3	83.2	90.8	91.8				84.2	83.4	85.0				84.2	95.6	90.6	83.6	81.1			
Screening indicates that there may be an urgent foot care issue, and plans should be made for immediate care	5.8	5.5	5.8	1.5	5.5				5.9	6.6	5.1				5.9	1.5	5.3	4.6	7.4			
Further foot/mobility evaluation recommended (Year 3 only)	18.2	19.0	19.5	8.3	22.2				18.4	15.0	23.0				18.5	9.1	10.8	16.1	22.9			
Recommended a pedicure (Year 3 only)	21.6	23.1	23.9	25.0	0.0				21.8	23.5	19.5				22.3	9.1	13.5	23.5	25.2			
<b>What follow-up care should the participant take part in: (Years 1 &amp; 2 only)</b>	<b>287</b>	<b>252</b>	<b>225</b>	<b>-</b>	<b>20</b>				<b>273</b>	<b>127</b>	<b>146</b>				<b>262</b>	<b>12</b>	<b>30</b>	<b>60</b>	<b>160</b>			
A pedicure is recommended for participant	43.2	43.3	42.7	-	45.0				44.0	41.7	45.9				43.5	25.0	43.3	43.3	45.0			
Screening indicates that there may be non-urgent foot care needed and recommends you receive an evaluation within the next 3 months.	47.4	48.4	48.9	-	45.0				46.9	51.2	43.2				47.0	75.0	36.7	53.3	44.4			
Screening indicates there may be a need for further mobility assessment	9.4	9.5	9.8	-	10.0				9.2	8.7	9.6				9.9	0.0	0.0	5.0	14.4			
Screening indicates there may be a need for further balance/fall risk assessment	11.5	11.1	11.6	-	10.0				11.0	10.2	11.6				11.8	0.0	23.3	8.3	11.9			
<b>Screening indicates possible foot health/mobility deficit, further evaluation is advised with a: (Years 1 &amp; 2 only)</b>	<b>178</b>	<b>148</b>	<b>131</b>	<b>-</b>	<b>13</b>				<b>164</b>	<b>83</b>	<b>81</b>				<b>160</b>	<b>-</b>	<b>14</b>	<b>35</b>	<b>108</b>			
Podiatrist	73.6	75.0	74.8	-	69.2	3.1			73.2	73.5	72.8	1.6			74.4	-	78.6	65.7	75.9	4.5		
Physiotherapist	1.1	1.4	1.5	-	0.0				1.2	1.2	1.2				1.3	-	0.0	2.9	0.9			
Primary care physician	21.4	19.6	19.1	-	30.8				21.3	19.3	23.5				21.3	-	14.3	28.6	20.4			
Other	3.9	4.1	4.6	-	0.0				4.3	6.0	2.5				3.1	-	7.1	2.9	2.8			
<b>Referral Given for Foot/Mobility Issues (Years 1 &amp; 2 only)</b>	<b>1,220</b>	<b>1,046</b>	<b>894</b>	<b>63</b>	<b>89</b>				<b>1,116</b>	<b>567</b>	<b>549</b>				<b>1,090</b>	<b>69</b>	<b>161</b>	<b>284</b>	<b>576</b>			
Yes	24.8	25.0	25.3	17.5	27.0	2.1			25.5	26.3	24.8	0.3			25.5	20.3	24.2	23.2	27.6	3.2		
No	75.2	75.1	74.7	82.5	73.0				74.5	73.7	75.2				74.5	79.7	75.8	76.8	72.4			

Differences by Disability Type: a = Intellectual Disabilities (ID), b = Autism, c = Other, by Gender: a = Male, b = Female, by Age Groups: a = 14-21, b = 22-26, c = 27-39, d = 40+  
 Significance: \*\*\* p < .001, \*\* p < .01, \* p < .05

**APPENDIX B**

*Follow-up Assessments*

State	N	%
California	109	15.4
Massachusetts	140	19.8
New Jersey	192	27.2
North Carolina	38	5.4
Pennsylvania	228	32.3

Differences by Disability Type: a = Intellectual Disabilities (ID), b = Autism, c = Other, by Gender: a = Male, b = Female, by Age Groups: a = 14-21, b = 22-26, c = 27-39, d = 40+  
 Significance: \*\*\* p < .001, \*\* p < .01, \* p < .05

**TABLE 2: FOLLOW UP CHARACTERISTICS**

Characteristic	Totals N/%	Disability Type						Gender						Age Groups							
		N/%	ID (a)	Autism (b)	Other (c)	F/X2	Sig	Diff	N/%	Male (a)	Female (b)	F/X2	Sig	Diff	N/%	14-21 (a)	22-26 (b)	27-39 (c)	40+ (d)	F/X2	Sig
Since you came to the last assessment do you feel like you have more information on health issues and how to live a healthier life?	656	565	496	29	40			614	317	297				581	19	80	162	320			
Yes	79.4	78.2	78.2	72.4	82.5	1.0		78.8	75.4	82.5	4.6	*	a<b	79.7	79.0	83.8	72.8	82.2	6.8		
No	20.6	21.8	21.8	27.6	17.5			21.2	24.6	17.5			b<a	20.3	21.1	16.3	27.2	17.8			
Since you came to the last assessment do you use the information you learned to make healthier lifestyle choices?	638	553	486	29	38			597	306	291				568	19	80	160	309			
Yes	75.7	74.0	73.9	65.5	81.6	2.2		75.0	71.2	79.0	4.8	*	a<b	75.4	84.2	83.8	66.3	77.4			
No	24.3	26.0	26.1	34.5	18.4			25.0	28.8	21.0			b<a	24.7	15.8	16.3	33.8	22.7			
How many "red flags" did this person receive?	414	368	329	13	26			387	186	201				376	12	49	110	205			
1	20.5	18.5	18.5	23.1	15.4	14.7		19.1	17.2	20.9	9.9			18.6	50.0	14.3	20.9	16.6	30.2	*	b,d<a
2	21.5	21.2	21.0	46.2	11.5			20.4	26.3	14.9				21.3	25.0	28.6	24.6	17.6			
3	17.4	18.5	18.8	15.4	15.4			17.6	16.1	18.9				17.3	8.3	14.3	21.8	16.1			
4	19.1	19.3	18.2	15.4	34.6			20.4	19.4	21.4				20.2	0.0	28.6	14.6	22.4			
5	12.8	13.3	13.4	0.0	19.2			13.4	13.4	13.4				13.3	0.0	12.2	11.8	15.1			
6	6.3	6.5	7.3	0.0	0.0			6.7	6.5	7.0				6.9	16.7	2.0	3.6	9.3			
7	2.4	2.7	2.7	0.0	3.9			2.3	1.1	3.5				2.4	0.0	0.0	2.7	2.9			
For which issues did you receive a red flag?	698	605	529	34	42			656	341	315				622	20	85	173	344			
Height/Weight	33.8	36.4	36.7	26.5	40.5			34.6	27.6	42.2				35.4	25.0	24.7	41.0	35.8			
Blood Pressure	29.2	31.7	32.0	20.6	38.1			29.9	26.1	34.0				30.9	25.0	23.5	35.8	30.5			
Vision	26.8	27.1	27.8	8.8	33.3			26.7	24.6	28.9				27.8	15.0	28.2	27.8	28.5			
Hearing	22.9	23.0	24.0	2.9	26.2			23.3	24.3	22.2				23.6	10.0	23.5	20.8	25.9			
Dental	32.0	33.2	34.2	14.7	35.7			32.8	29.6	36.2				33.4	25.0	30.6	30.1	36.3			
Foot	31.0	31.9	32.5	14.7	38.1			31.1	27.0	35.6				31.2	25.0	29.4	24.9	35.2			
Lungs	12.6	13.9	14.4	2.9	16.7			12.8	12.3	13.3				13.0	15.0	17.7	9.8	13.4			
If you had a health problem at your last assessment, did you go to the doctor to talk about them?	423	366	326	14	26			396	191	205				382	11	48	112	211			
Yes	83.5	83.1	83.1	71.4	88.5	1.9		83.1	78.0	87.8	6.7	**	a<b	83.0	90.9	68.8	85.7	84.4	8.3	*	
No	16.6	16.9	16.9	28.6	11.5			16.9	22.0	12.2			b<a	17.0	9.1	31.3	14.3	15.6			
When you visited the doctor, is your problem something that..?	340	296	266	10	20			317	149	168				305	12	35	83	175			
You are still going to my doctor to talk about?	79.4	79.7	80.5	60.0	80.0	2.5		80.4	77.2	83.3	1.9			80.0	91.7	74.3	80.7	80.0	1.8		
Was treated by your doctor and is no longer a problem?	20.6	20.3	19.6	40.0	20.0			19.6	22.8	16.7				20.0	8.3	25.7	19.3	20.0			
Why did you not see the doctor about your height/weight concern?	68	63	56	-	-			66	39	27				65	-	16	17	32			
I needed help to make an appointment but did not have help	4.4	4.8	5.4	-	-	7.1		4.6	7.7	0.0	6.0			4.6	-	6.3	0.0	6.3	9.1		
I could not find a doctor to see me	2.9	3.2	1.8	-	-			3.0	2.6	3.7				3.1	-	6.3	5.9	0.0			
I made an appointment with the doctor but I have not gone yet	8.8	7.9	8.9	-	-			9.1	5.1	14.8				9.2	-	12.5	5.9	9.4			
I forgot to make an appointment	14.7	12.7	12.5	-	-			15.2	12.8	18.5				15.4	-	25.0	11.8	12.5			
I did not have a way to get to the doctor	1.5	1.6	1.8	-	-			1.5	0.0	3.7				1.5	-	0.0	5.9	0.0			
I did not want to or did not think I needed to go to the doctor	33.8	34.9	35.7	-	-			33.3	35.9	29.6				32.3	-	25.0	41.2	31.3			
I was not able to go for another reason	33.8	34.9	33.9	-	-			33.3	35.9	29.6				33.9	-	25.0	29.4	40.6			

Differences by Disability Type: a = Intellectual Disabilities (ID), b = Autism, c = Other, by Gender: a = Male, b = Female, by Age Groups: a = 14-21, b = 22-26, c = 27-39, d = 40+  
 Significance: \*\*\* p < .001, \*\* p < .01, \* p < .05



Characteristic	Totals N/%	Disability Type						Gender					Age Groups								
		N/%	ID (a)	Autism (b)	Other (c)	F/X2	Sig	Diff	N/%	Male (a)	Female (b)	F/X2	Sig	Diff	N/%	14-21 (a)	22-26 (b)	27-39 (c)	40+ (d)	F/X2	Sig
<b>How are you making healthy choices in your life since your last assessment?</b>	<b>698</b>	<b>605</b>	<b>529</b>	<b>34</b>	<b>42</b>			<b>656</b>	<b>341</b>	<b>315</b>				<b>622</b>	<b>20</b>	<b>85</b>	<b>173</b>	<b>344</b>			
I am eating healthier meals	59.7	59.0	59.6	50.0	59.5			59.3	56.0	62.9				60.1	75.0	65.9	61.3	57.3			
I am exercising more often	41.7	42.3	42.7	44.1	35.7			41.5	38.7	44.4				42.8	65.0	54.1	41.6	39.2			
I am watching less TV or playing fewer video games	16.3	16.5	17.0	20.6	7.1			16.6	14.1	19.4				17.4	25.0	24.7	22.5	12.5			
I am using less tobacco	3.3	3.8	4.4	0.0	0.0			3.2	3.8	2.5				3.5	0.0	7.1	2.9	3.2			
I am drinking less alcohol	2.9	3.3	3.8	0.0	0.0			2.7	3.2	2.2				3.1	5.0	3.5	2.9	2.9			
I am talking with my caregivers or doctors when I don't feel well	43.8	45.3	47.1	29.4	35.7			43.9	37.8	50.5				45.7	45.0	51.8	46.2	43.9			
I have not changed my behavior since the assessment	16.3	16.7	16.3	20.6	19.1			15.9	17.3	14.3				15.0	20.0	14.1	15.6	14.5			
<b>What new activities or programs are you participating in so that you can be more healthy?</b>	<b>698</b>	<b>605</b>	<b>529</b>	<b>34</b>	<b>42</b>			<b>656</b>	<b>341</b>	<b>315</b>				<b>622</b>	<b>20</b>	<b>85</b>	<b>173</b>	<b>344</b>			
Playing sports	14.6	16.4	16.8	14.7	11.9			14.8	16.7	12.7				16.1	35.0	27.1	20.2	10.2			
Exercise Classes	18.8	19.2	18.9	20.6	21.4			19.1	14.4	24.1				20.1	30.0	24.7	20.8	18.0			
Walking Club	16.8	17.7	18.7	17.7	4.8			17.4	14.4	20.6				18.3	20.0	25.9	22.0	14.5			
Dieting or Healthy Eating Classes	8.2	7.9	8.3	2.9	7.1			7.9	5.6	10.5				8.4	0.0	9.4	7.5	9.0			
Cooking Classes	7.6	8.4	8.7	5.9	7.1			7.8	6.2	9.5				7.7	15.0	11.8	8.7	5.8			
Health Programs at the Arc	20.6	20.3	20.8	14.7	19.1			18.3	17.9	18.7				18.5	20.0	15.3	19.1	18.9			
Special Olympics	12.9	13.1	14.0	5.9	7.1			13.0	13.2	12.7				13.8	25.0	15.3	17.3	11.1			
Other	16.2	16.2	16.6	14.7	11.9			15.9	16.4	15.2				16.1	25.0	18.8	15.6	15.1			
<b>Has your contact information changed since your previous health assessment?</b>	<b>635</b>	<b>549</b>	<b>481</b>	<b>32</b>	<b>36</b>			<b>595</b>	<b>312</b>	<b>283</b>				<b>562</b>	<b>19</b>	<b>73</b>	<b>155</b>	<b>315</b>			
Yes	7.1	7.1	7.3	6.3	5.6	0.2		6.9	5.5	8.5	2.1			7.7	15.8	8.2	8.4	6.7	2.4		
No	92.9	92.9	92.7	93.8	94.4			93.1	94.6	91.5				92.4	84.2	91.8	91.6	93.3			

Differences by Disability Type: a = Intellectual Disabilities (ID), b = Autism, c = Other, by Gender: a = Male, b = Female, by Age Groups: a = 14-21, b = 22-26, c = 27-39, d = 40+  
 Significance: \*\*\* p < .001, \*\* p < .01, \* p < .05

**TABLE 3: BODY COMPOSITION, VITAL SIGNS AND RESPIRATORY HEALTH**

Characteristic	Totals	Disability Type							Gender						Age Groups							
	N/%	N/%	ID (a)	Autism (b)	Other (c)	F/X2	Sig	Diff	N/%	Male (a)	Female (b)	F/X2	Sig	Diff	N/%	14-21 (a)	22-26 (b)	27-39 (c)	40+ (d)	F/X2	Sig	Diff
<b>BMI</b>	565	506	443	30	33				545	271	274				530	19	72	155	284			
Underweight (Below 18.5)	2.5	1.78	1.4	3.3	6.1	8.3			2.4	2.2	2.6	13.3	**		2.5	0.0	5.6	3.2	1.4	15.2		
Normal (18.5-24.9)	22.5	22.53	21.9	26.7	27.3				22.2	27.3	17.2			b<a	23.0	36.8	33.3	20.0	21.1			
Overweight (25-29.9)	24.6	25.49	24.8	33.3	27.3				25.0	25.8	24.1				24.2	26.3	22.2	23.2	25.0			
Obese (30.0-39.9)	33.6	32.61	33.9	20.0	27.3				33.4	32.1	34.7				33.4	31.6	25.0	35.5	34.5			
Extremely Obese (40+)	16.8	17.59	18.1	16.7	12.1				17.1	12.6	21.5			a<b	17.0	5.3	13.9	18.1	18.0			
<b>Pulse</b>	691	598	524	34	40				651	333	318				617	20	82	172	343			
Below 60	4.1	4.18	4.4	5.9	0.0	16.3	**		4.2	4.8	3.5	1.3			3.9	5.0	0.0	3.5	5.0	8.7		
60-100	93.5	93.31	93.9	82.4	95.0			b<a	93.6	92.5	94.7				93.8	90.0	96.3	93.0	93.9			
Above 100	2.5	2.51	1.7	11.8	5.0			a<b	2.3	2.7	1.9				2.3	5.0	3.7	3.5	1.2			
<b>Pulse Oximetry</b>	656	566	499	32	35				615	314	301				586	20	78	163	325			
Below 82	1.4	1.41	1.2	0.0	5.7	12.6			1.5	1.6	1.3	4.2			1.5	0.0	1.3	0.6	2.2	16.7		
82-87	0.5	0.53	0.6	0.0	0.0				0.5	1.0	0.0				0.5	0.0	0.0	1.2	0.3			
88-93	6.4	6.54	7.0	3.1	2.9				6.7	7.6	5.7				6.5	0.0	3.9	6.1	7.7			
94-96	22.0	21.91	23.3	15.6	8.6				22.1	22.3	21.9				21.3	10.0	14.1	19.0	24.9			
97 and Above	69.8	69.61	67.9	81.3	82.9				69.3	67.5	71.1				70.1	90.0	80.8	73.0	64.9			
<b>Blood Pressure (Sitting)</b>	433	376	326	23	27				408	205	203				382	11	58	105	208			
Below 90/Below 60	8.8	7.98	7.1	0.0	25.9	18.1	*	a<c	8.1	8.8	7.4	2.8			7.9	0.0	5.2	8.6	8.7	10.9		
90-119/60-79	60.7	60.64	60.4	82.6	44.4			c<a	61.5	58.5	64.5				63.6	72.7	74.1	59.1	62.5			
120-139/80-89	26.8	28.19	29.1	17.4	25.9				26.7	28.8	24.6				25.4	27.3	20.7	29.5	24.5			
140-159/90-99	3.5	2.93	3.1	0.0	3.7				3.4	3.9	3.0				2.9	0.0	0.0	1.9	4.3			
160+/100+	0.2	0.27	0.3	0.0	0.0				0.3	0.0	0.5				0.3	0.0	0.0	1.0	0.0			
<b>Blood Pressure (Standing)</b>	510	442	382	25	35				478	239	239				458	14	56	130	258			
Below 90/Below 60	54.3	53.62	52.4	40.0	77.1	15.8	*	a,b<c	53.8	58.6	49.0	6.8			51.8	28.6	41.1	53.9	54.3	12.0		
90-119/60-79	29.0	30.09	30.6	52.0	8.6			c<a,b	29.9	25.5	34.3				31.4	50.0	42.9	28.5	29.5			
120-139/80-89	14.7	14.93	15.5	8.0	14.3				14.4	13.8	15.1				15.1	21.4	16.1	15.4	14.3			
140-159/90-99	1.8	1.13	1.3	0.0	0.0				1.7	2.1	1.3				1.5	0.0	0.0	1.5	1.9			
160+/100+	0.2	0.23	0.3	0.0	0.0				0.2	0.0	0.4				0.2	0.0	0.0	0.8	0.0			
<b>Height (without shoes) Could Not Measure / Refused to Participate</b>	707	613	533	35	45				664	340	324				631	20	84	176	351			
No	85.4	86.95	87.4	88.6	80.0	2.1			87.1	85.3	88.9	1.9			88.0	95.0	90.5	90.3	85.8	4.0		
Yes	14.6	13.05	12.6	11.4	20.0				13.0	14.7	11.1				12.0	5.0	9.5	9.7	14.3			
<b>Weight (without shoes) Could Not Measure / Refused to Participate</b>	707	613	533	35	45				664	340	324				631	20	84	176	351			
No	87.1	89.1	90.1	91.4	75.6	9.2	*	c<a	89.0	85.6	92.6	8.3	**	a<b	89.9	95.0	91.7	92.1	88.0	3.1		
Yes	12.9	10.93	9.9	8.6	24.4			a<c	11.0	14.4	7.4			b<a	10.1	5.0	8.3	8.0	12.0			
<b>Waist to Hip Ratio Could Not Measure / Refused to Participate</b>	707	613	533	35	45				664	340	324				631	20	84	176	351			
No	71.7	71.1	72.2	68.6	60.0	3.1			72.3	67.7	77.2	7.5	**	a<b	72.6	85.0	83.3	74.4	68.4	9.9	*	d<b
Yes	28.3	28.9	27.8	31.4	40.0				27.7	32.4	22.8			b<a	27.4	15.0	16.7	25.6	31.6			b<d
<b>Pulse Could Not Measure / Refused to Participate</b>	707	613	533	35	45				664	340	324				631	20	84	176	351			
No	98.6	98.5	99.1	97.1	93.3	9.9	**	c<a	98.8	98.8	98.8	0.0			98.9	100.0	98.8	99.4	98.6	1.0		
Yes	1.4	1.5	0.9	2.9	6.7			a<c	1.2	1.2	1.2				1.1	0.0	1.2	0.6	1.4			

Differences by Disability Type: a = Intellectual Disabilities (ID), b = Autism, c = Other, by Gender: a = Male, b = Female, by Age Groups: a = 14-21, b = 22-26, c = 27-39, d = 40+  
 Significance: \*\*\* p < .001, \*\* p < .01, \* p < .05

Characteristic	Totals	Disability Type							Gender					Age Groups								
	N/%	N/%	ID (a)	Autism (b)	Other (c)	F/X2	Sig	Diff	N/%	Male (a)	Female (b)	F/X2	Sig	Diff	N/%	14-21 (a)	22-26 (b)	27-39 (c)	40+ (d)	F/X2	Sig	Diff
<b>Pulse Oximetry Could Not Measure / Refused to Participate</b>	707	613	533	35	45				664	340	324				631	20	84	176	351			
No	93.6	93.3	94.6	91.4	80.0	14.3	***	c<a	93.4	92.7	94.1	0.6			93.7	100.0	94.1	93.8	93.2	1.5		
Yes	6.4	6.7	5.4	8.6	20.0			a<c	6.6	7.4	5.9				6.3	0.0	6.0	6.3	6.8			
<b>Blood Pressure Sitting Could Not Measure / Refused to Participate</b>	707	613	533	35	45				664	340	324				631	20	84	176	351			
No	95.9	96.1	96.6	100.0	86.7	12.4	**	c<a	96.2	96.2	96.3	0.0			96.5	100.0	98.8	97.2	95.4	3.5		
Yes	4.1	3.9	3.4	0.0	13.3			a<c	3.8	3.8	3.7				3.5	0.0	1.2	2.8	4.6			
<b>Blood Pressure Standing Could Not Measure / Refused to Participate</b>	707	613	533	35	45				664	340	324				631	20	84	176	351			
No	65.4	65.6	66.4	71.4	51.1	4.9			66.0	62.4	69.8	4.0	*	a<b	67.2	80.0	79.8	64.8	64.7	9.0	*	d<b
Yes	34.7	34.4	33.6	28.6	48.9				34.0	37.7	30.3			b<a	32.8	20.0	20.2	35.2	35.3			b<c
<b>Respiratory Rate</b>	657	571	501	32	38				621	320	301				591	21	82	163	325			
Below 15	8.8	9.1	9.2	9.4	7.9	4.0			9.0	8.1	10.0	0.7			9.3	9.5	13.4	9.8	8.0	2.6		
15-20	79.0	78.8	77.8	81.3	89.5				78.9	80.0	77.7				78.9	81.0	74.4	77.9	80.3			
Above 21	12.2	12.1	13.0	9.4	2.6				12.1	11.9	12.3				11.8	9.5	12.2	12.3	11.7			
<b>Respiratory Rate and Rhythm - Could Not Measure / Refused to Participate</b>	636	567	492	34	41				615	315	300				600	20	82	170	328			
No	97.0	96.7	97.0	97.1	92.7	2.1			96.9	96.2	97.7	1.1			96.8	100.0	97.6	95.3	97.3	2.3		
Yes	3.0	3.4	3.1	2.9	7.3				3.1	3.8	2.3				3.2	0.0	2.4	4.7	2.7			
<b>Lung Sound Measurement</b>	670	585	512	34	39				633	326	307				603	20	85	166	332			
Normal	96.7	96.6	96.5	97.1	97.4	0.1			96.7	96.6	96.7	0.0			97.0	100.0	97.7	94.0	98.2	7.6		
Abnormal	3.3	3.4	3.5	2.9	2.6				3.3	3.4	3.3				3.0	0.0	2.4	6.0	1.8			
<b>Listen for Abnormal Lung Sounds - Could Not Measure / Refused to Participate</b>	635	566	492	34	40				614	315	299				599	20	82	169	328			
No	98.4	98.4	98.4	100.0	97.5	0.8			98.4	98.4	98.3	0.0			98.3	100.0	98.8	97.0	98.8	2.6		
Yes	1.6	1.6	1.6	0.0	2.5				1.6	1.6	1.7				1.7	0.0	1.2	3.0	1.2			
<b>Check if any signs/symptoms present</b>	25	23	22	-	-				23	-	13				20	-	-	-	11			
Breathing difficulties	48.0	52.2	54.6	-	-	3.8			47.8	-	61.5	5.3			50.0	-	-	-	45.5	4.8		
Behavior to suggest discomfort or abnormalities	24.0	21.7	18.2	-	-				26.1	-	7.7				30.0	-	-	-	36.4			
Use of accessory musculature	28.0	26.1	27.3	-	-				26.1	-	30.8				20.0	-	-	-	18.2			
<b>Chest hurts when breathing</b>	629	548	479	32	37				592	309	283				564	20	79	149	316			
Yes	3.3	3.3	3.3	0.0	5.4	1.6			3.4	3.6	3.2	0.1			3.7	0.0	5.1	2.7	4.1	1.8		
No	96.7	96.7	96.7	100.0	94.6				96.6	96.4	96.8				96.3	100.0	94.9	97.3	95.9			
<b>Follow-up Care Recommended</b>	649	567	494	34	39				613	324	289				586	21	84	158	323			
No follow-up care was recommended	92.9	93.0	92.5	100.0	92.3	3.3			92.8	92.6	93.1	0.5			93.2	100.0	96.4	90.5	93.2	5.5		
Immediate medical attention was advised	0.9	0.9	1.0	0.0	0.0				1.0	1.2	0.7				0.7	0.0	0.0	0.6	0.9			
Non-urgent medical attention was advised	6.2	6.2	6.5	0.0	7.7				6.2	6.2	6.2				6.1	0.0	3.6	8.9	5.9			

Differences by Disability Type: a = Intellectual Disabilities (ID), b = Autism, c = Other, by Gender: a = Male, b = Female, by Age Groups: a = 14-21, b = 22-26, c = 27-39, d = 40+  
 Significance: \*\*\* p < .001, \*\* p < .01, \* p < .05

**TABLE 4: VISION CHARACTERISTICS**

Characteristic	Totals	Disability Type						Gender						Age Groups								
	N/%	N/%	ID (a)	Autism (b)	Other (c)	F/X2	Sig	Diff	N/%	Male (a)	Female (b)	F/X2	Sig	Diff	N/%	14-21 (a)	22-26 (b)	27-39 (c)	40+ (d)	F/X2	Sig	Diff
<b>Vision Acuity</b>	484	434	378	28	28				460	229	231				448	18	63	124	243			
20/10	2.7	3.0	3.4	0.0	0.0	26.9	*		2.8	3.9	1.7	9.0			2.9	0.0	6.4	2.4	2.5	24.6		
20/15	2.1	2.3	2.1	3.6	3.6			a,c<b	2.2	1.3	3.0				2.2	11.1	3.2	2.4	1.2			
20/20	28.7	28.8	26.5	60.7	28.6				28.7	32.8	24.7				28.8	33.3	33.3	31.5	25.9			
20/25	8.9	8.8	9.3	7.1	3.6				9.1	7.9	10.4				9.4	11.1	7.9	9.7	9.5			
20/30	15.9	16.1	15.9	14.3	21.4				15.4	14.9	16.0				15.4	11.1	11.1	9.7	19.8			
20/40	20.3	19.4	20.9	7.1	10.7				20.0	17.9	22.1				20.1	16.7	15.9	21.8	20.6			
20/50	13.4	13.8	13.5	3.6	28.6				13.5	13.5	13.4				13.0	11.1	17.5	12.9	11.9			
20/60	2.5	2.5	2.9	0.0	0.0				2.6	3.1	2.2				2.5	0.0	3.2	2.4	2.5			
20/70	5.6	5.3	5.6	3.6	3.6				5.7	4.8	6.5				5.8	5.6	1.6	7.3	6.2			
<b>Vision Acuity could not measure / refused to participate</b>	681	593	514	35	44				647	329	318				615	21	79	173	342			
No	73.0	74.9	74.9	82.9	68.2	2.2			73.9	72.0	75.8	1.2			76.3	85.7	82.3	76.9	74.0	3.6		
Yes	27.0	25.1	25.1	17.1	31.8				26.1	28.0	24.2				23.7	14.3	17.7	23.1	26.0			
<b>Vision Signs/Symptoms Present</b>	33	24	20	-	-				28	11	17				25	-	-	-	15			
Eye irritation	39.4	45.8	55.0	-	-	5.7			42.9	27.3	52.9	3.2			40.0	-	-	-	40.0	1.7		
Redness	45.5	45.8	35.0	-	-				42.9	45.5	41.2				44.0	-	-	-	40.0			
Behaviors to suggest discomfort	15.2	8.3	10.0	-	-				14.3	27.3	5.9				16.0	-	-	-	20.0			
<b>Eyes Hurt</b>	630	546	476	32	38				591	301	290				561	19	71	156	315			
Yes	4.9	4.4	4.6	0.0	5.3	1.6			5.1	2.3	7.9	9.6	**	a<b	5.4	0.0	5.6	5.8	5.4	1.1		
No	95.1	95.6	95.4	100.0	94.7				94.9	97.7	92.1			b<a	94.7	100.0	94.4	94.2	94.6			
<b>Trouble Seeing</b>	631	546	475	33	38				594	299	295				564	21	72	156	315			
Yes	17.3	16.5	17.9	0.0	13.2	7.5	*		17.7	13.4	22.0	7.6	**	a<b	17.6	9.5	15.3	19.2	17.8	1.5		
No	82.7	83.5	82.1	100.0	86.8				82.3	86.6	78.0			b<a	82.5	90.5	84.7	80.8	82.2			
<b>Follow-up care recommended to the participant</b>	672	581	506	35	40				630	326	304				602	21	79	166	336			
No follow-up care was recommended	60.0	59.2	57.7	88.6	52.5	14.5	*	a,c<b	59.4	66.0	52.3	13.4	**	b<a	59.1	76.2	68.4	56.6	57.1	8.1		
Immediate medical attention was advised	0.2	0.2	0.2	0.0	0.0				0.2	0.0	0.3				0.2	0.0	0.0	0.0	0.3			
Vision evaluation recommended	13.2	13.8	14.6	0.0	15.0				13.7	12.3	15.1				13.8	4.8	10.1	13.3	15.5			
Recommended a regular check-up	26.6	26.9	27.5	11.4	32.5				26.8	21.8	32.2			a<b	26.9	19.1	21.5	30.1	27.1			
<b>Participant wearing</b>	678	585	509	35	41				636	324	312				603	21	79	167	336			
Glasses	36.9	36.2	36.0	25.7	48.8	18.2	**		36.8	30.3	43.6	13.4	**	a<b	37.3	38.1	41.8	33.5	38.1	4.3		
Contacts	0.2	0.2	0.0	0.0	2.4				0.2	0.0	0.3				0.2	0.0	0.0	0.6	0.0			
None	63.0	63.6	64.1	74.3	48.8				63.1	69.8	56.1			b<a	62.5	61.9	58.2	65.9	61.9			
<b>Participant wearing - Could Not Measure/ Refused to Participate</b>	702	608	529	35	44				659	336	323				627	21	83	174	349			
No	97.9	97.5	97.5	100.0	95.5	1.7			97.7	97.9	97.5	0.1			97.6	100.0	95.2	97.7	98.0	2.8		
Yes	2.1	2.5	2.5	0.0	4.6				2.3	2.1	2.5				2.4	0.0	4.8	2.3	2.0			

Differences by Disability Type: a = Intellectual Disabilities (ID), b = Autism, c = Other, by Gender: a = Male, b = Female, by Age Groups: a = 14-21, b = 22-26, c = 27-39, d = 40+  
 Significance: \*\*\* p < .001, \*\* p < .01, \* p < .05

**TABLE 5: HEARING CHARACTERISTICS**

Characteristic	Totals	Disability Type							Gender					Age Groups								
	N/%	N/%	ID (a)	Autism (b)	Other (c)	F/X2	Sig	Diff	N/%	Male (a)	Female (b)	F/X2	Sig	Diff	N/%	14-21 (a)	22-26 (b)	27-39 (c)	40+ (d)	F/X2	Sig	Diff
<b>Hearing Ability Whispered Word Test</b>	604	520	450	32	38				566	295	271				535	20	68	145	302			
Pass	89.1	90.38	89.8	100.0	89.5	3.7			89.2	89.2	89.3	1.1		90.3	100.0	95.6	95.2	86.1	14.5	*	d<c	
Not Pass	10.8	9.42	10.0	0.0	10.5				10.6	10.9	10.3			9.5	0.0	4.4	4.8	13.6				c<d
Pass (Hearing aid Present)	0.2	0.19	0.2	0.0	0.0				0.2	0.0	0.4			0.2	0.0	0.0	0.0	0.3				
<b>Hearing Ability Whispered Word Test Could Not Measure / Refused</b>	675	586	509	35	42				634	326	308				602	20	81	167	334			
No	91.3	90.61	90.2	94.3	92.9	0.9			91.2	92.3	89.9	1.1		91.0	100.0	86.4	90.4	91.9	4.5			
Yes	8.7	9.39	9.8	5.7	7.1				8.8	7.7	10.1			9.0	0.0	13.6	9.6	8.1				
<b>Earwax Impaction of External Ear Canal Using Otoloscope</b>	634	549	481	35	33				594	303	291				562	19	77	154	312			
Clear	80.0	79.78	79.0	88.6	81.8	1.9			79.3	77.9	80.8	0.7		79.0	94.7	81.8	81.2	76.3	5.0			
Blockage	20.0	20.22	21.0	11.4	18.2				20.7	22.1	19.2			21.0	5.3	18.2	18.8	23.7				
<b>Earwax Impaction of External Ear Canal Using Otoloscope – Could Not Measure / Refused</b>	675	586	509	35	42				634	326	308				602	20	81	167	334			
No	95.7	95.56	96.1	100.0	85.7	11.5	**	c<a	95.4	95.1	95.8	0.2		95.4	95.0	96.3	94.0	95.8	1.0			
Yes	4.3	4.44	3.9	0.0	14.3			a<c	4.6	4.9	4.2			4.7	5.0	3.7	6.0	4.2				
<b>Symptoms or Signs Present</b>	21	19	16	-	-				21	10	11				20	-	-	-	14			
Ear Pain	38.1	36.8	37.5	-	-	0.0			38.1	30.0	45.5	0.5		40.0	-	-	-	21.4	7.4	*		
Infection	0.0	0.0	0.0	-	-				0.0	-	-			0.0	-	-	-	0.0				
Behaviors to suggest a hearing deficit	61.9	63.2	62.5	-	-				61.9	70.0	54.6			60.0	-	-	-	78.6				
<b>Ear Pain</b>	607	529	457	33	39				569	291	278				542	20	66	149	307			
Yes	3.0	2.5	2.4	0.0	5.1	2.0			3.0	1.7	4.3	3.3		3.0	0.0	4.6	5.4	1.6	6.1			
No	97.0	97.5	97.6	100.0	94.9				97.0	98.3	95.7			97.1	100.0	95.5	94.6	98.4				
<b>Trouble hearing when people speak</b>	617	536	463	35	38				578	299	279				552	19	72	155	306			
Yes	10.9	10.1	10.8	2.9	7.9	2.5			10.7	10.4	11.1	0.1		10.1	10.5	1.4	9.0	12.8	8.5	*	b<d	
No	89.1	89.9	89.2	97.1	92.1				89.3	89.6	88.9			89.9	89.5	98.6	91.0	87.3				d<b
<b>Follow-up care Recommended</b>	641	557	485	34	38				600	308	292				572	20	78	154	320			
No follow-up care was recommended	74.6	73.61	71.6	91.2	84.2	15.2			74.0	72.4	75.7	1.5		73.3	95.0	75.6	77.9	69.1	22.6	*	d<a	
Immediate medical attention was advised	0.5	0.54	0.4	0.0	2.6				0.5	0.3	0.7			0.5	0.0	1.3	0.0	0.6				
Hearing evaluation recommended	5.5	5.75	6.4	0.0	2.6				5.7	5.8	5.5			5.6	0.0	0.0	3.9	8.1				
Earwax removal recommended	19.5	20.11	21.7	8.8	10.5				19.8	21.4	18.2			20.6	5.0	23.1	18.2	22.2				
<b>Wearing Hearing Aids</b>	648	560	487	35	38				607	308	299				575	20	77	160	318			
Yes	4.0	3.4	3.7	0.0	2.6	1.4			3.8	3.9	3.7	0.0		4.0	0.0	0.0	0.6	6.9	15.8	**	c<d	
No	96.0	96.6	96.3	100.0	97.4				96.2	96.1	96.3			96.0	100.0	100.0	99.4	93.1				d<c
<b>Wearing Hearing Aids Could Not Measure / Refused</b>	675	586	509	35	42				634	326	308				602	20	81	167	334			
Yes	98.4	98.1	98.4	100.0	92.9	7.3	*	c<a	98.3	97.9	98.7	0.7		98.2	100.0	98.8	98.8	97.6	1.5			
No	1.6	1.9	1.6	0.0	7.1			a<c	1.7	2.2	1.3			1.8	0.0	1.2	1.2	2.4				

Differences by Disability Type: a = Intellectual Disabilities (ID), b = Autism, c = Other, by Gender: a = Male, b = Female, by Age Groups: a = 14-21, b = 22-26, c = 27-39, d = 40+  
 Significance: \*\*\* p < .001, \*\* p < .01, \* p < .05

**TABLE 6: DENTAL CHARACTERISTICS**

Characteristic	Totals	Disability Type							Gender						Age Groups							
	N/%	N/%	ID (a)	Autism (b)	Other (c)	F/X2	Sig	Diff	N/%	Male (a)	Female (b)	F/X2	Sig	Diff	N/%	14-21 (a)	22-26 (b)	27-39 (c)	40+ (d)	F/X2	Sig	Diff
<b>General Tooth Health</b>	<b>631</b>	<b>545</b>	<b>479</b>	<b>32</b>	<b>34</b>				<b>589</b>	<b>304</b>	<b>285</b>				<b>559</b>	<b>18</b>	<b>74</b>	<b>151</b>	<b>316</b>			
Pass	83.4	82.4	82.9	81.3	76.5	0.9			82.85	84.2	81.4	0.8			83.9	88.9	90.5	86.8	80.7	6.1		
Not Pass	16.6	17.6	17.1	18.8	23.5				17.15	15.8	18.6				16.1	11.1	9.5	13.3	19.3			
<b>Could Not Measure / Refused to Participate</b>	<b>609</b>	<b>540</b>	<b>468</b>	<b>33</b>	<b>39</b>				<b>587</b>	<b>302</b>	<b>285</b>				<b>572</b>	<b>18</b>	<b>76</b>	<b>156</b>	<b>322</b>			
No	95.9	95.7	96.4	97.0	87.2	7.6	*	c<a	95.7	95.7	95.8	0.0			95.8	94.4	93.4	98.7	95.0	4.9		
Yes	4.1	4.3	3.6	3.0	12.8			a<c	4.26	4.3	4.2				4.2	5.6	6.6	1.3	5.0			
<b>Dental Signs and Symptoms present</b>	<b>253</b>	<b>221</b>	<b>193</b>	<b>8</b>	<b>20</b>				<b>240</b>	<b>113</b>	<b>127</b>				<b>219</b>	<b>-</b>	<b>20</b>	<b>54</b>	<b>143</b>			
Tooth, tongue or jaw pain	5.1	5.0	5.2	0.0	5.0				5.4	3.5	7.1				5.5	-	15.0	3.7	4.9			
Infection	2.8	2.7	3.1	0.0	0.0				2.9	0.9	4.7				2.3	-	0.0	3.7	2.1			
Tooth grinding	2.8	5.0	5.7	0.0	0.0				5.4	4.4	6.3				5.0	-	10.0	11.1	2.1			
Missing teeth	77.9	75.6	76.7	37.5	80.0				77.5	72.6	81.9				76.3	-	45.0	68.5	84.6			
Gingivitis	32.8	34.8	33.7	62.5	35.0				32.5	37.2	28.4				33.3	-	55.0	33.3	29.4			
Behaviors to suggest discomfort or an oral health abnormality	4.4	4.1	4.7	0.0	0.0				4.2	1.8	6.3				2.7	-	5.0	7.4	0.7			
<b>Teeth or Mouth Hurts</b>	<b>602</b>	<b>525</b>	<b>460</b>	<b>31</b>	<b>34</b>				<b>567</b>	<b>297</b>	<b>270</b>				<b>537</b>	<b>18</b>	<b>69</b>	<b>141</b>	<b>309</b>			
Yes	4.7	4.8	4.6	3.2	8.8	1.4			4.9	4.0	5.9	1.1			4.5	5.6	2.9	6.4	3.9	1.9		
No	95.4	95.2	95.4	96.8	91.2				95.1	96.0	94.1				95.5	94.4	97.1	93.6	96.1			
<b>Follow-up Care</b>	<b>668</b>	<b>579</b>	<b>506</b>	<b>33</b>	<b>40</b>				<b>626</b>	<b>325</b>	<b>301</b>				<b>595</b>	<b>19</b>	<b>80</b>	<b>160</b>	<b>336</b>			
No follow-up care indicated from this screening	46.3	44.7	44.9	51.5	37.5				45.2	52.3	37.5				44.7	57.9	43.8	40.0	46.4			
Screening indicates that there may be an urgent oral health care issue, and plans should be made for immediate care	0.6	0.5	0.4	0.0	2.5				0.5	0.0	1.0				0.2	0.0	0.0	0.6	0.0			
Further dental evaluation recommended	12.3	13.1	13.6	3.0	15.0				12.6	10.5	15.0				11.9	5.3	11.3	11.3	12.8			
Recommended a regular check-up	40.7	42.3	42.3	42.4	42.5				41.4	37.9	45.2				42.7	36.8	47.5	46.3	40.2			

Differences by Disability Type: a = Intellectual Disabilities (ID), b = Autism, c = Other, by Gender: a = Male, b = Female, by Age Groups: a = 14-21, b = 22-26, c = 27-39, d = 40+  
 Significance: \*\*\* p < .001, \*\* p < .01, \* p < .05

**TABLE 7: FOOT CHARACTERISTICS**

Characteristic	Totals N/%	Disability Type							Gender						Age Groups								
		N/%	ID (a)	Autism (b)	Other (c)	F/X2	Sig	Diff	N/%	Male (a)	Female (b)	F/X2	Sig	Diff	N/%	14-21 (a)	22-26 (b)	27-39 (c)	40+ (d)	F/X2	Sig	Diff	
<b>Foot Inspection</b>	606	529	464	33	32				622	325	297				540	17	67	154	302				
Pass	85.3	84.7	85.1	84.9	78.1	1.1			85.1	86.3	83.6	0.8			84.8	82.4	92.5	86.4	82.5	4.8			
Not Pass	14.7	15.3	14.9	15.2	21.9				14.9	13.7	16.4				15.2	17.7	7.5	13.6	17.6				
<b>Foot Inspection Could Not Measure / Refused to Participate</b>	663	577	503	33	41				622	325	297				591	19	76	163	333				
No	94.7	94.8	95.0	100.0	87.8	5.9			95.0	95.4	94.6	0.2			95.1	100.0	97.4	95.7	94.0	2.8			
Yes	5.3	5.2	5.0	0.0	12.2				5.0	4.6	5.4				4.9	0.0	2.6	4.3	6.0				
<b>Basic Gait Analysis via Get Up and Go Test</b>	626	542	478	33	31				587	309	278				559	17	71	151	320				
0	9.0	7.9	6.3	3.0	38.7	49.7 ***	a,b<c		8.5	9.1	7.9	3.6			8.1	5.9	2.8	10.6	8.1	39.7 ***			
1	55.6	57.0	57.7	69.7	32.3		c<a,b		56.4	55.7	57.2				57.4	76.5	81.7	61.6	49.1			c,d<b	
2	17.7	17.7	18.6	15.2	6.5				17.4	15.9	19.1				16.8	5.9	9.9	17.2	18.8				
3	8.5	8.1	8.0	9.1	9.7				8.9	10.7	6.8				8.9	5.9	1.4	6.0	12.2			b<d	
4	5.4	5.2	5.0	3.0	9.7				5.6	5.5	5.8				5.4	5.9	1.4	3.3	7.2				
5	3.8	4.1	4.4	0.0	3.2				3.2	3.2	3.2				3.4	0.0	2.8	1.3	4.7				
<b>Basic Gait Could Not Measure / Refused to Participate</b>	663	577	503	33	41				622	325	297				591	19	76	163	333				
No	97.6	97.4	98.2	100.0	85.4	25.6 ***	c<a		97.8	97.9	97.6	0.0			97.8	100.0	96.1	97.6	98.2	1.8			
Yes	2.4	2.6	1.8	0.0	14.6		a<c		2.3	2.2	2.4				2.2	0.0	4.0	2.5	1.8				
<b>Foot Signs/Symptoms Present</b>	41	38	36	-	-				39	15	24				38	-	-	10	22				
Foot Pain	46.3	47.4	47.2	-	-	1.9			46.2	46.7	45.8	0.0			47.4	-	-	50.0	40.9	3.1			
Infection	19.5	18.4	16.7	-	-				20.5	20.0	20.8				21.1	-	-	20.0	27.3				
Behaviors to suggest discomfort or abnormalities	34.2	34.2	36.1	-	-				33.3	33.3	33.3				31.6	-	-	30.0	31.8				
<b>Feet Hurt Often</b>	608	530	465	31	34				568	297	271				540	19	65	148	308				
Yes	8.7	8.3	8.8	0.0	8.8	3.0			9.0	5.1	13.3	11.8 ***	a<b		9.3	10.5	7.7	9.5	9.4	0.2			
No	91.3	91.7	91.2	100.0	91.2				91.0	95.0	86.7		b<a		90.7	89.5	92.3	90.5	90.6				
<b>Often Feel Dizzy When Walking</b>	575	499	441	31	27				539	278	261				510	19	65	140	286				
Yes	8.0	7.8	8.6	0.0	3.7	3.7			8.2	7.6	8.8	0.3			7.8	5.3	6.2	10.0	7.3	1.4			
No	92.0	92.2	91.4	100.0	96.3				91.8	92.5	91.2				92.2	94.7	93.9	90.0	92.7				
<b>Often Feel Unsteady When Walking</b>	578	502	444	31	27				541	278	263				512	19	65	140	288				
Yes	18.3	17.5	17.8	0.0	33.3	11.3 **	a<c		18.3	18.0	18.6	0.0			17.8	10.5	10.8	12.1	22.6	10.4 *			
No	81.7	82.5	82.2	100.0	66.7		c<a		81.7	82.0	81.4				82.2	89.5	89.2	87.9	77.4				
<b>Fallen at home in the last year</b>	593	515	449	33	33				553	287	266				526	19	65	143	299				
Yes	13.3	12.2	12.5	9.1	12.1	0.3			13.4	11.9	15.0	1.2			13.3	0.0	13.9	9.8	15.7	6.0			
No	86.7	87.8	87.5	90.9	87.9				86.6	88.2	85.0				86.7	100.0	86.2	90.2	84.3				
<b>Follow-up Care</b>	663	577	503	33	41				622	325	297				591	19	76	163	333				
No follow-up care indicated from this screening	68.6	68.1	67.0	81.8	70.7				68.3	72.3	64.0				67.7	79.0	75.0	68.7	64.9				
Screening indicates that there may be an urgent foot care issue, and plans should be made for immediate care	1.2	1.0	1.2	0.0	0.0				1.1	0.9	1.4				1.0	0.0	0.0	1.2	1.2				
Further foot/mobility evaluation recommended	10.9	10.8	11.1	6.1	9.8				10.9	9.9	12.1				11.2	15.8	6.6	6.8	14.1				
Recommended a pedicure	13.7	14.4	14.1	12.1	19.5				14.0	11.1	17.2				14.4	5.3	7.9	16.6	15.3				
<b>Do you have Diabetes</b>	583	507	443	29	35				546	288	258				517	17	62	138	300				
Yes	14.4	14.8	14.0	20.7	20.0	1.8			14.7	15.3	14.0	0.2			14.7	5.9	1.6	8.0	21.0	24.0 ***		b,c<d	
No	85.6	85.2	86.0	79.3	80.0				85.4	84.7	86.1				85.3	94.1	98.4	92.0	79.0				d<b,c

Differences by Disability Type: a = Intellectual Disabilities (ID), b = Autism, c = Other, by Gender: a = Male, b = Female, by Age Groups: a = 14-21, b = 22-26, c = 27-39, d = 40+ Significance: \*\*\* p < .001, \*\* p < .01, \* p < .05

**APPENDIX C**

*Additional Analyses*



**TABLE 1: LIVING ARRANGEMENT AND GUARDIANSHIP**

Characteristic	Totals	Living Arrangement							Own Legal Guardian						
	N/%	N/%	With parents or family (a)	In own home or apt (b)	In a group home (c)	At institution or facility (d)	F/X2	Sig	Diff	N/%	Yes (a)	No (b)	F/X2	Sig	Diff
<b>Eat fruits, vegetables (Years 1 &amp; 2 only)</b>	1,191	1,159	532	171	448	-				1,112	726	386			
Less than 1 serving per day	14.4	14.5	15.2	26.9	9.2	-	52.1	***	c<a; a,c<b	14.8	15.7	13.2	13.0	*	
1-2 servings per day	52.3	52.9	50.6	50.9	56.0	-			b<a,c	51.7	53.3	48.7			
3-5 servings per day	27.5	26.8	30.5	15.2	27.2	-				27.7	26.9	29.3			a<b
More than 5 servings per day	4.2	4.1	2.8	4.1	5.6	-				4.1	2.8	6.7			
Never	1.6	1.6	0.9	2.9	2.0	-				1.6	1.4	2.1			
<b>TV or computer games hours/day</b>	1,504	1,465	692	209	555	-				1,413	962	451			
0-2 hours	40.7	40.8	41.8	35.4	42.0	-	17.9	*		39.8	38.1	43.7	5.6		
3-4 hours	36.5	36.3	34.7	35.4	38.6	-				36.8	37.2	35.9			
5-6 hours	15.7	15.8	16.6	16.8	14.1	-				16.0	17.3	13.3			
Over 6 hours	7.1	7.2	6.9	12.4	5.4	-			c<b	7.4	7.5	7.1			
<b>Exercise for at least 30 minutes (Years 1 &amp; 2 only)</b>	1,177	1,143	525	171	439	-				1,099	727	372			
0 days / week	20.3	20.4	16.0	17.0	26.7	-	26.3	**	a<c	19.4	19.5	19.1	1.8		
1-2 days / week	32.8	33.1	33.0	34.5	33.3	-				33.3	32.1	35.8			
3-6 days / week	23.3	22.9	24.6	26.3	19.6	-				23.5	24.4	21.8			
7 days / week	23.6	23.6	26.5	22.2	20.5	-				23.8	24.1	23.4			
<b>BMI</b>	1,290	1,225	600	171	445	-				1,182	821	361			
Underweight (Below 18.5)	3.3	3.51	4.2	4.1	2.3	-	9.0			3.3	3.7	2.5	2.3		
Normal (18.5-24.9)	21.9	21.55	20.0	23.4	22.9	-				22.3	22.9	20.8			
Overweight (25-29.9)	29.8	29.96	29.5	26.3	32.1	-				30.0	29.4	31.6			
Obese (30.0-39.9)	33.5	33.55	33.8	35.1	32.6	-				33.1	33.1	33.0			
Extremely Obese (40+)	11.5	11.43	12.5	11.1	10.1	-				11.3	11.0	12.2			
<b>Blood Pressure (Sitting)</b>	924	880	433	114	327	-				851	563	288			
Below 90/Below 60	10.1	10.1	9.7	9.7	11.0	-	8.6			10.2	8.7	13.2	9.0		
90-119/60-79	58.1	58.1	59.6	58.8	55.7	-				57.9	57.0	59.7			
120-139/80-89	25.3	25.3	23.1	26.3	27.8	-				24.9	27.0	20.8			
140-159/90-99	6.0	5.9	7.4	4.4	4.6	-				6.5	6.6	6.3			
160+/100+	0.5	0.6	0.2	0.9	0.9	-				0.5	0.7	0.0			
<b>Blood Pressure (Standing)</b>	1,065	1,016	473	148	389	-				970	642	328			
Below 90/Below 60	42.8	43.1	40.8	36.5	48.3	-	10.7			43.8	41.7	47.9	7.7		
90-119/60-79	34.9	34.9	36.8	37.8	31.6	-				34.2	34.6	33.5			
120-139/80-89	18.6	18.3	18.0	22.3	17.2	-				18.3	20.3	14.3			
140-159/90-99	3.2	3.2	4.0	2.7	2.3	-				3.2	3.1	3.4			
160+/100+	0.5	0.5	0.4	0.7	0.5	-				0.5	0.3	0.9			

Differences by Disability Type: a = Intellectual Disabilities (ID), b = Autism, c = Other, by Gender: a = Male, b = Female, by Age Groups: a = 14-21, b = 22-26, c = 27-39, d = 40+  
 Significance: \*\*\* p < .001, \*\* p < .01, \* p < .05

Characteristic	Totals	Living Arrangement								Own Legal Guardian					
	N/%	N/%	With parents or family (a)	In own home or apt (b)	In a group home (c)	At institution or facility (d)	F/X2	Sig	Diff	N/%	Yes (a)	No (b)	F/X2	Sig	Diff
<b>Trouble Seeing</b>	1,408	1,339	630	186	515	-				1,293	868	425			
Yes	20.4	20.5	19.8	16.7	22.7	-	3.7			20.3	21.0	19.1	0.6		
No	79.6	79.5	80.2	83.3	77.3	-				79.7	79.0	80.9			
<b>Referral Given for Vision Care (Years 1 &amp; 2 only)</b>	1,261	1,198	558	166	467	-				1,153	742	411			
Yes	15.3	15.7	15.6	15.1	16.3	-	1.5			15.4	17.1	12.2	5.0	*	b<a
No	84.7	84.3	84.4	84.9	83.7	-				84.7	82.9	87.8			a<b
<b>Earwax Impaction of External Ear Canal Using Otoscope</b>	1,488	1,410	677	197	528	-				1,372	919	453			
Clear	83.6	83.4	81.54	87.3	84.1	-	5.6			83.6	84.3	82.1	1.1		
Blockage	16.4	16.6	18.46	12.7	15.9	-				16.4	15.7	17.9			
<b>Ear Pain</b>	1,471	1,399	670	196	525	-				1,355	904	451			
Yes	5.6	5.5	5.8	5.1	5.3	-	0.7			5.8	6.2	4.9	1.0		
No	94.4	94.5	94.2	94.9	94.7	-				94.2	93.8	95.1			
<b>Trouble hearing when people speak</b>	1,467	1,391	668	197	518	-				1,348	894	454			
Yes	11.5	11.5	12.4	10.2	10.8	-	1.2			11.2	11.7	10.1	0.8		
No	88.5	88.5	87.6	89.9	89.2	-				88.8	88.3	89.9			
<b>General Tooth Health</b>	1,534	1,458	694	203	552	-				1,415	951	464			
Pass	84.3	84.2	81.7	83.7	87.3	-	7.5			84.24	81.2	90.5	20.5	***	a<b
Not Pass	15.7	15.8	18.3	16.3	12.7	-				15.76	18.8	9.5			b<a
<b>Dental Signs and Symptoms present</b>	518	495	243	67	182	-				473	345	128			
Tooth, tongue or jaw pain	7.1	7.3	9.9	1.5	5.0	-				7.2	7.5	6.3			
Infection	4.3	4.0	5.4	7.5	1.1	-				4.4	4.9	3.1			
Tooth grinding	13.7	14.1	17.3	7.5	12.1	-				14.2	13.0	17.2			
Missing teeth	72.8	72.3	67.9	80.6	75.3	-				72.9	73.3	71.9			
Gingivitis	29.0	29.5	32.1	35.8	23.1	-				27.7	31.0	18.8			
Behaviors to suggest discomfort or an oral health abnormality	2.7	2.6	2.1	4.5	2.8	-				3.0	2.9	3.1			
<b>Foot Signs/Symptoms Present</b>	128	119	55	11	52	-				110	74	36			
Foot Pain	54.7	56.3	50.9	72.7	57.7	-	4.0			56.4	59.5	50.0	0.9		
Infection	31.3	32.8	40.0	18.2	28.9	-				30.9	28.4	36.1			
Behaviors to suggest discomfort or abnormalities	14.1	10.9	9.1	9.1	13.5	-				12.7	12.2	13.9			
<b>Do you have Diabetes (Year 3 only)</b>	238	230	120	31	78	-				229	174	55			
Yes	13.0	12.6	8.3	12.9	19.2	-	5.2			13.1	15.5	5.5	3.7		
No	87.0	87.4	91.7	87.1	80.8	-				86.9	84.5	94.6			

Differences by Disability Type: a = Intellectual Disabilities (ID), b = Autism, c = Other, by Gender: a = Male, b = Female, by Age Groups: a = 14-21, b = 22-26, c = 27-39, d = 40+  
 Significance: \*\*\* p < .001, \*\* p < .01, \* p < .05

**TABLE 2: PRIVATE VS. PUBLIC INSURANCE**

Characteristic	Totals	Private vs. Public Insurance					
	N/%	N/%	Private (a)	Public (b)	F/X2	Sig	Diff
<b>Ever had a Mammogram (Years 1 &amp; 2 only)</b>	<b>377</b>	<b>306</b>	<b>25</b>	<b>281</b>			
Yes	75.3	76.1	56.0	77.9	6.1	*	a<b
No	24.7	23.9	44.0	22.1			b<a
<b>Ever had a Pap Smear (Years 1 &amp; 2 only)</b>	<b>361</b>	<b>296</b>	<b>28</b>	<b>268</b>			
Yes	80.1	82.4	75.0	83.2	1.2		
No	19.9	17.6	25.0	16.8			
<b>Dental Signs and Symptoms present</b>	<b>518</b>	<b>367</b>	<b>52</b>	<b>315</b>			
Tooth, tongue or jaw pain	7.1	7.1	5.8	7.3			
Infection	4.3	3.5	7.7	2.9			
Tooth grinding	13.7	13.6	21.2	12.4			
Missing teeth	72.8	77.9	61.5	80.6			
Gingivitis	29.0	27.0	30.8	26.4			
Behaviors to suggest discomfort or an oral health abnormality	2.7	3.3	1.9	3.5			
<b>Trouble Seeing</b>	<b>1,408</b>	<b>993</b>	<b>149</b>	<b>844</b>			
Yes	20.4	21.4	20.8	21.5	0.0		
No	79.6	78.7	79.2	78.6			
<b>Referral Given for Vision Care (Years 1 &amp; 2 only)</b>	<b>1,261</b>	<b>842</b>	<b>94</b>	<b>748</b>			
Yes	15.3	16.0	12.8	16.4	0.8		
No	84.7	84.0	87.2	83.6			
<b>Earwax Impaction of External Ear Canal Using Otoscope</b>	<b>1,488</b>	<b>1,016</b>	<b>150</b>	<b>866</b>			
Clear	83.6	87.1	88.0	87.0	0.1		
Blockage	16.4	12.9	12.0	13.1			
<b>Ear Pain</b>	<b>1,471</b>	<b>1,034</b>	<b>150</b>	<b>884</b>			
Yes	5.6	5.4	6.7	5.2	0.5		
No	94.4	94.6	93.3	94.8			
<b>Trouble hearing when people speak</b>	<b>1,467</b>	<b>1,018</b>	<b>148</b>	<b>870</b>			
Yes	11.5	11.4	14.2	10.9	1.3		
No	88.5	88.6	85.8	89.1			

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 Significance: \*\*\* p < .001, \*\* p < .01, \* p < .05