New Mexico School-Based Health Center 2010-2011 Welligent Visit Analysis

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NM Welligent Medical Visit Analysis

Introduction and Methodology

In order to better understand the types of services adolescents receive from School-Based Health Centers (SBHCs), medical encounters for 61 SBHCs in New Mexico were analyzed based on data from Welligent, a software company that hosts and maintains databases of electronic health records. Medical encounter data from individuals between the ages of 14-19 years of age were selected for analysis and a new dataset was created with only data from this age range. Data were cleaned in order to conduct quantitative analysis using SPSS, a statistical analysis program.

Overview

During the 2010-2011 school year, there were a total of 10,017 SBHC-users between the ages of 14-19 years (56% of all SBHC-users) at 61 NM SBHCs. This teenage demographic made 33,434 visits, or 61% of all SBHC visits. The average number of visits to a SBHC for this demographic was 3.3, with a range of 1 to 62 visits during the 2010-2011 school year. The number of visits at the SBHCs ranged from 6 visits at NM SBHC-14, to 2,762 visits at NM SBHC-52.

Key Data Points

10,017 SBHC-users33,434 visits

Gender and Race

The majority of SBHC-users 14-19 years of age were female (63%) and Hispanic was the most frequently reported race (35%). A significant percentage of SBHC-users were also white (19%) and American Indian (13%). About one-third of SBHC-users were categorized as unknown, other or the race category was left blank.

Table 1: SBHC-users by Gender and Race

Characteristic	Total	Percentage
All Students 14-19 years	10,017	100%
Gender		
Female	6,305	63%
Male	3,642	36%
Unknown	70	1%
Race		
Hispanic	3,546	35%
White	1,876	19%
American Indian	1,338	13%
African American	110	1%
Asian or Pacific Islander	71	1%
Unknowns	1,644	16%
Other	255	3%
Blank	1177	12%

Table 2: SBHC-users by Age

Characteristic	Total	Percentage
All Students 14-19 years	10,017	100%
SBHC-users by Age		
14 years	1,874	19%
15 years	2,150	22%
16 years	2,355	23%
17 years	2,144	21%
18 years	1,128	11%
19 years	366	4%

Age

The majority of SBHC-users in the 14-19 year old age range (66%) were between the ages of 15-17, with 16 years of age being the most common age for SBHC-users.

Visits by Month

The number of visits by month was relatively consistent throughout the school year, with the greatest number of visits occurring in September.

Table 3: SBHC visits by Month

Characteristic	Total	Percentage
Total Visits 14-19 years	33,434	100%
# of Visits by Month		
July 2010	494	1%
August 2010	2,414	7%
September 2010	4,156	12%
October 2010	3,731	11%
November 2010	3,856	12%
December 2010	2,182	7%
January 2011	3,529	11%
February 2011	3,226	10%
March 2011	3,504	10%
April 2011	3,275	10%
May 2011	2,613	8%
June 2011	454	1%

Note: There were no medical encounters for July 2011 and percentages may not add up to 100% due to rounding.

High-Need and Low-Need Students

About two-thirds of SBHC-users, 63%, made just one or two visits to the SBHC.

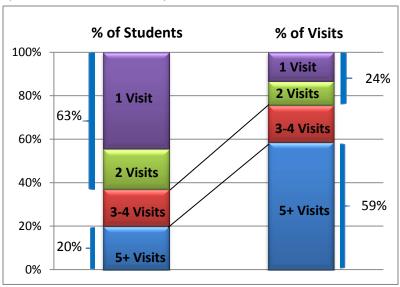
One-fifth of SBHC-users, 20%, had five or more visits.

Table 4: SBHC-users by Visit Frequency

Characteristic	Total	Percentage
All Students 14-19 years	10,017	100%
# of students with 1 visit	4,457	44%
# of students with 2 visits	1,849	19%
# of students with 3-4 visits	1,690	17%
# of students with 5+ visits	2,021	20%

Note: May not add up to 100% due to rounding

Figure 1: Breakdown of Student and Visits to SBHCs (2010-2011 School Year)



A Few Students Make Most of the Visits

The majority of SBHC-users, 63%, made one or two visits to the SBHC. These users account for 24% of all visits.

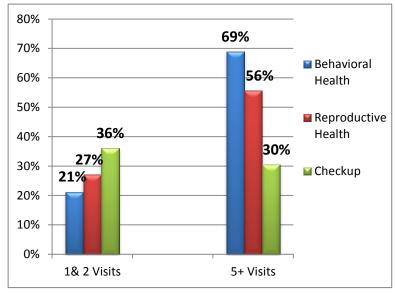
One-fifth of SBHC-users, 20%, made five or more visits to the SBHC. These high-users account for 59% of all visits made to the SBHC.

High-User Students Have Behavioral Health Needs

Over one-third of users who visited the clinic one or two times (36%) had a checkup.

High-users were more likely to have a visit for a behavioral (69%) or reproductive health (56%) concern.

Figure 2: Percent of Low- & High-User Students
Who Had At Least One Visit to a SBHC by Category



Note: The Checkup category includes EPSDT (V20.2), well-child check (V70.0), sports physical (V70.3) and unspecified medical exam (V70.9). EPSDTs comprise 17% of the checkup category total for low-users and 23% of the checkup category total for high-users.

Behavioral Health: Most Visits Were For Adjustment Reaction Disorder, Counseling and Depression Disorders

An analysis of behavioral health codes revealed that there were a total of 13,752 behavioral health visits, representing 41.1% of all 33,434 visits.* A majority of these diagnoses were for adjustment reaction disorder, counseling and major depressive disorder (see Table 5). Figure 4 below shows that Hispanics made 42% of the behavioral health visits, followed by American Indians (18%) and whites (17%).

Table 5: Behavioral Health Visits

Diagnosis	Number of visits	% of total visits (N=33,434)	% females made visit (N=23,381)		% of behavioral health visits (N=13,742)
All Behavioral Visits	13,752	41.1%	38.4%	47.6%	100%
Adjustment Reaction Disorder (309, etc)	4,482	13.4%	13.2%	13.6%	32.6%
Counseling (V654.9, V654.0)	2,800	8.4%	8.2%	8.7%	20.4%
Depression Disorders (296.2, etc)	2,652	7.9%	8.1%	7.7%	19.3%
Family Disruption (V61, V61.0-V61.9, etc)	912	2.7%	2.9%	2.5%	6.6%
PTSD (309.81 - under adjustment reaction)	733	2.2%	2.3%	1.8%	5.3%
Anxiety (300.0, 300.00-300.09, etc)	644	1.9%	1.8%	2.4%	4.7%
Psychosocial Academic Problems	579	1.7%	1.4%	2.4%	4.2%
Dysthymic Disorder (300.4)	527	1.6%	1.6%	1.4%	3.8%
Disturbance of Emotion (313, etc)	510	1.5%	1.0%	2.8%	3.7%
Cannabis (304.3, 304.30-304.33, etc)	476	1.4%	0.6%	3.3%	3.5%
ADD/ADHD (314.0, 314.00, 314.01)	328	1.0%	0.4%	2.5%	2.4%
Bipolar Disorder (296.0, etc)	241	0.7%	0.6%	1.0%	1.8%

Figure 3: Percent of Behavioral Health Visits by Category (N = 13,752)

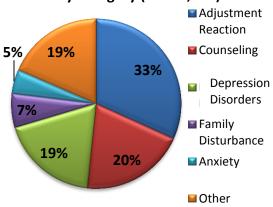
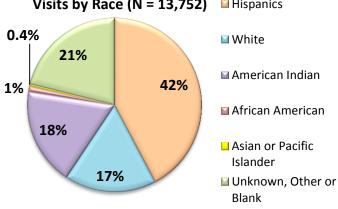


Figure 4: Percent of All Behavioral Health Visits by Race (N = 13,752)

☐ Hispanics



^{*}Note that the diagnosis categories are not mutually exclusive and since an SBHC-user could be diagnosed or receive more than one type of service during a visit, the overall category may be less than the sum of the sub-categories. For this reason, percentages may also not add up to 100%.

Reproductive Health: Most Visits Were For Family Planning

There were 9,781 reproductive health visits, which accounted for 29.3% of all SBHC visits. The largest single category of reproductive health visits was for family planning (84%). Other reproductive health diagnoses, such as pregnancy or a pregnancy test, STI screenings and gynecological complications accounted for a smaller number of reproductive health visits.

Table 6: Reproductive Health Visits

Diagnosis	Number of visits	% of total visits (N = 33,434)	% of reproductive health visits (N = 9,782)
All Reproductive Diagnoses	9,781	29.3%	100%
Family Planning (V25, V25.0-V25.9, etc)	8,225	24.6%	84.1%
Pregnancy or Pregnancy Test (V22, etc)	1,349	4.0%	13.8%
STI Screening (V74.5)	764	2.3%	7.8%
Gynecological Complications (614-616, etc)	646	1.9%	6.6%
Gynecological Exam (V72.3, V72.31, V72.32)	209	0.6%	2.1%
Exposure to STI (V01.6)	130	0.4%	1.3%
STI (054, 054.0-054.9, 054.10-054.79, etc)	78	0.2%	0.8%

Note: Since an SBHC-user could receive multiple diagnoses/more than one type of service during a visit, the overall category may be less than the sum of the sub-categories; percentages may not add up to 100%.

Asthma, Obesity/Overweight and BMI Tests

There were a total of 387 visits for asthma (1.2% of all visits), and 342 obesity/overweight diagnoses (1.0% of all visits). Analysis showed that 18 of the students had both an asthma and obesity/overweight diagnosis. There were a total of 959 BMI tests (2.9% of all visits), and 345 had a diagnosis indicating the adolescent had a BMI greater than or equal to the 95th percentile (V85.54). Only 34 of the obesity/overweight diagnoses had a corresponding BMI test.

Table 7: Asthma, Obesity/Overweight and BMI Tests

Diagnosis	Number of visits or diagnoses	% of total visits (N = 33,434)
BMI Test (V85.51-V85.54)	959	2.9%
Asthma (493, 493.0-493.9, 493.00-493.92)	387*	1.2%
Obesity/Overweight (278.00-278.03)	342	1.0%

^{*291} SBHC-users received asthma care.

Psychotherapy: One in Five SBHC-users Receive Treatment

About one-fifth of students, 21%, had at least one psychotherapy visit.

Those who received psychotherapy treatments received an average of 4 to 5. The number of psychotherapy treatments provided to students ranged from 1 to 41.

Psychotherapy: SBHC-Users and Visits

- 2,147 SBHC-users were provided with at least one psychotherapy visit
- 9,877 psychotherapy visits were provided to SBHC-users

Other Common Diagnoses

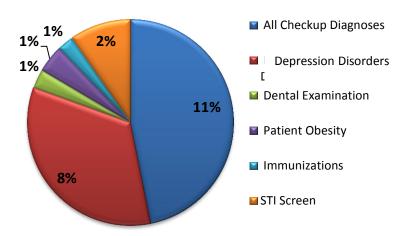
While the vast majority of diagnoses were captured in the broad categories included in this report, other common diagnoses include acute respiratory infection, sinusitis (sinus infection), otitis (ear infection), and bronchitis. Combined, these diagnoses account for about 3% of all visits to the SBHCs.

Table 8: Visits for Other Common Diagnoses

Diagnosis	Number of visits or diagnoses	% of total visits (N = 33,434)
Acute Upper Respiratory Infection (465, 465.0-465.9)	376	1.1%
Sinusitis (461, 461.0-461.9, 473, 473.0-473.9)	366	1.1%
Otitis & Related (380.1-382.9, 380.11-382.02)	240	0.7%
Bronchitis (466, 466.0-466.1, 466.11-466.19)	116	0.3%

Summary of Visits by a Select List of Diagnoses

Figure 5: Percentage of Total Visits by Major Category of Care



All of the major categories of care comprise 24% of SBHC visits.

All checkup diagnoses and depression disorders accounted for a significant percentage of SBHC visits (19%).

Person Level Analysis of Services

Focus Areas: SBHC-users who had a Checkup, Dental Examination, Obesity/Overweight Depression Diagnosis, Immunization or STI Screen

A total of 3,327 SBHC-users had at least one checkup visit, which included 2,493 Well-child checks, 864 sports physicals and 60 unspecified medical examinations. Of those that received a well-child check, 1,859 SBHC-users received an EPSDT (V20.2), accounting for 19% of all SBHC-users. Male SBHC-users (44%) were more likely to have received a checkup visit than female users (27%).

Table 9: Medical Encounter Focus Areas by SBHC-user

Diagnosis	Number of students with at least one visit by diagnosis	% Female SBHC-users with at least one diagnosis (N=6,305)	% Male SBHC- users with at least one diagnosis (N=3,642)	% of all SBHC-users (N = 10,017)
All Checkup Diagnoses	3,327	26.6%	44.3%	33.2%
Well-child Check (V20.2, V70.0)	2,493	20.4%	32.5%	24.9%
Sports physical (V70.3)	864	6.6%	11.9%	8.6%
Unspecified Med Exam (V70.9)	60	0.4%	0.9%	0.6%
STI Screen (V74.5, V73.9)	629	7.7%	3.8%	6.3%
Depression Disorder (296.2, etc)	614	6.9%	4.8%	6.1%
Obesity/Overweight (278.00-278.03)	252	2.4%	2.7%	2.5%
Immunizations (CPT Codes)*	180	1.5%	2.4%	1.8%
Dental Examination (V72.2)	118	0.9%	1.7%	1.2%

Note: Since an SBHC-user could receive multiple diagnoses/more than one type of service during a visit, the overall category may be less than the sum of the sub-categories; percentages may not add up to 100%. The data in this table represents the number of students with a particular diagnosis, not overall number of diagnoses; data may not match other tables if patient was seen multiple times for same diagnosis.

Comorbidity: The Relationship between Behavioral Health Needs and Other Health Care Needs

- Close to a third (32%) of the SBHC-users that made a reproductive health visit, also made a behavioral health visit
- Nearly half (47%) of all SBHC-users that made a visit for asthma, also made a behavioral health visit
- Nearly half (45%) of all SBHC-users that were diagnosed with obesity, also made a behavioral health visit

^{*}The CPT Codes for immunization were based on CHIPRA Measure 6; most immunizations were for Tdap (CPT code 90715)

Considerations and Concerns

The number of visits for asthma and the number of SBHC-users who were diagnosed with obesity and drug use are lower than expected.

- Asthma diagnoses in 2.9% of all SBHC-users (n = 291)
- Any type of drug use for 2.5% of all SBHC-users (n = 247)
- Obesity diagnoses for 2.5% of all SBHC-users (n = 252)

Considering the prevalence of obesity and drug use among teenagers in the general population, these issues may be underdiagnosed among the SBHC-users in this report. In addition, one of the SBHCs submitted over 400 duplicate encounters and race was not consistently listed across many of the SBHCs.

Policy Issues: How SBHCs Would Help With CHIPRA and HEDIS Reporting

Importantly, SBHCs may improve states' reporting on the initial core set of children's health care quality measures (CHIPRA measures) and the Healthcare Effectiveness Data and Information Set (HEDIS) measures, since SBHCs provide services that comprise many of these measures. These services include:

- Immunizations
- EPSDTs and other well-child checkups
- Weight assessments
- STI screens
- Dental services
- Asthma care
- Diabetes care
- Behavioral health services

SBHCs may also lower emergency department visits among children and increase parents' rating of the quality of their children's care. Table 10 on the next page lists the CHIPRA measures for adolescents between the ages of 14-19; please see the "Initial Core Set of Children's Health Care Quality Measures: Technical Specification and Resource Manual for Federal Fiscal Year 2011 Reporting" at the Centers for Medicare and Medicaid Services for more information about these measures. The HEDIS measures for adolescents are similar to the CHIPRA measures, and a summary table of the measures can be found at the National Committee for Quality Assessment website.

Table 10: CHIPRA Measures for Adolescents 14-19 Years of Age (Excerpts)

Measure 6	Adolescent Immunization Status	Percentage of adolescents that had specific vaccines by their 13th birthday
Measure 7	Weight Assessment and Counseling for Nutrition and Physical Activity; BMI	Percentage of children ages 3 to 17 that had an outpatient visit with a PCP or OB/GYN and whose weight is classified based on BMI for age and gender
Measure 9	Chlamydia Screening	Percentage of women ages 16 to 20 that were identified as sexually active and had at least one test for Chlamydia during the measurement year
Measure 12	Adolescent Well-Care Visit	Percentage of adolescents ages 12 to 21 that had at least one comprehensive well-care visit
Measure 13	Preventive Dental Services	Percentage of individuals ages 1 to 20 eligible for Medicaid or CHIP Medicaid Expansion programs that received preventive dental services
Measure 14	Child and Adolescent Access to Primary Care Practitioners	Percentage of children and adolescents ages 12 months to 19 years that had a visit with a primary care practitioner (PCP),
Measure 15	Testing for Children with Pharyngitis	Percentage of children ages 2 to 18 that were diagnosed with pharyngitis, dispensed an antibiotic, and received a group A streptococcus test
Measure 17	Dental Treatment Services	Percentage of individuals ages 1 to 20 eligible for Medicaid or CHIP Medicaid Expansion programs that received dental treatment services
Measure 18	Emergency Department (ED) Visits	Rate of ED visits per 1,000 member months among children up to age 19
Measure 20	Asthma-Related Emergency Room Visits	Percentage of children ages 2 to 20 diagnosed with asthma during the measurement year with one or more asthmarelated emergency room (ER) visits
Measure 21	Follow-Up Care for Children Prescribed ADHD Medication	Percentage of children newly prescribed ADHD meds. that had at least three follow-up visits within10-months
Measure 22	Annual Pediatric Hemoglobin A1C Testing	Percentage of children ages 5 to 17 with diabetes (type 1 and type 2) that had a Hemoglobin A1c (HbA1c) test
Measure 23	Follow-Up After Hospitalization for Mental Illness	Percentage of discharges for children ages 6 to 20 that were hospitalized for treatment of selected mental health disorders and had an outpatient follow-up
Measure 24	Consumer Assessment of Healthcare Providers and Systems (CAHPS)	Survey on parents' experiences with their children's care

Source: Center for Medicare & Medicaid Services. (December, 2011). Initial Core Set of Children's Health Care Quality Measures: Technical Specifications and Resource Manual for Federal Fiscal Year 2011 Reporting.