FY 2012–2013 Clinical Profile for Members With Depression Report

June 2013

This report was produced by Health Services Advisory Group, Inc. for the Colorado Department of Health Care Policy and Financing.

HSAG HEALTH SERVICES ADVISORY GROUP

3133 East Camelback Road, Suite 300 ◆ Phoenix, AZ 85016

Phone 602.264.6382 ◆ Fax 602.241.0757

HSAG HEALTH SERVICES ADVISORY GROUP

CONTENTS

FY 2012–2013 Clinical Profile for Members With Depression Report 1
Introduction 1
Analytic Activities—Data Mining 1
Methodology 1
Findings 2
Analytic Activities—Provider Survey 15
Methodology 15
Findings 15
Other Supplemental Activities 18
Key Informant Interview: Federally Qualified Health Center (FQHC) Data 18
Desk Review: Adult Depression Screening Payment Policies 19
Conclusions 21
Recommendations 21

Appendix A. **Provider Survey Instrument A-1**

HSAG HEALTH SERVICES ADVISORY GROUP

FY 2012–2013 Clinical Profile for Members With Depression Report

Introduction

In Fiscal Year (FY) 2012–2013, the Colorado Department of Health Care Policy and Financing (the Department) contracted Health Services Advisory Group, Inc. (HSAG), to develop a clinical profile for adult Medicaid members with depression using a series of data analyses. This analysis, named the Clinical Profile for Members with Depression (CPMD) project, consisted primarily of a data mining activity, with three supplemental tasks to aid HSAG and the Department in drawing meaningful conclusions from the data mining findings.

This report discusses the results of the CPMD project, including the major findings and conclusions from the data mining activity and the results of the three supplemental activities. Conclusions and recommendations regarding adult Medicaid members diagnosed with depression were drawn from the results of each activity.

Analytic Activities—Data Mining

HSAG evaluated the physical and behavioral health services profile of adult members with a diagnosis of depression during calendar year (CY) 2011, including before and after their initial depression diagnosis in CY 2011. Two preliminary data briefs containing the data mining results were presented to the Department during March 2013 and May 2013. This section discusses the major data mining results pertaining to adult Medicaid members with a diagnosis of depression during CY 2011, and the health care services utilized during the 12 months before and 12 months after their earliest CY 2011 depression diagnosis.

Methodology

Colorado Medicaid members meeting the following criteria were included in the data mining analyses. Medicaid members:

- Were at least 21 years of age as of January 1, 2010.
- Had at least one behavioral health organization (BHO) encounter or claim submitted with a diagnosis for depression and a date of service between January 1, 2011, and December 31, 2011.

All claims with a date of service between January 1, 2010, and December 31, 2012, were used to conduct the investigation for Medicaid members who met the criteria defined above. A member's earliest depression diagnosis[1] in 2011 was defined as his or her *Index Encounter* and served as an anchor point for assessing health care utilization in the previous and subsequent years. After defining a member's Index Encounter, all physical health claims and BHO encounters associated with that member in the 12 months before and after the Index Encounter were identified. Data from

[1] The following ICD-9-CM diagnosis codes were used to identify members with a depression diagnosis: 296.0–296.25, 296.30–296.35, 296.82, 298.0, 300.4, 309.0, 309.1, 309.28, or 311.

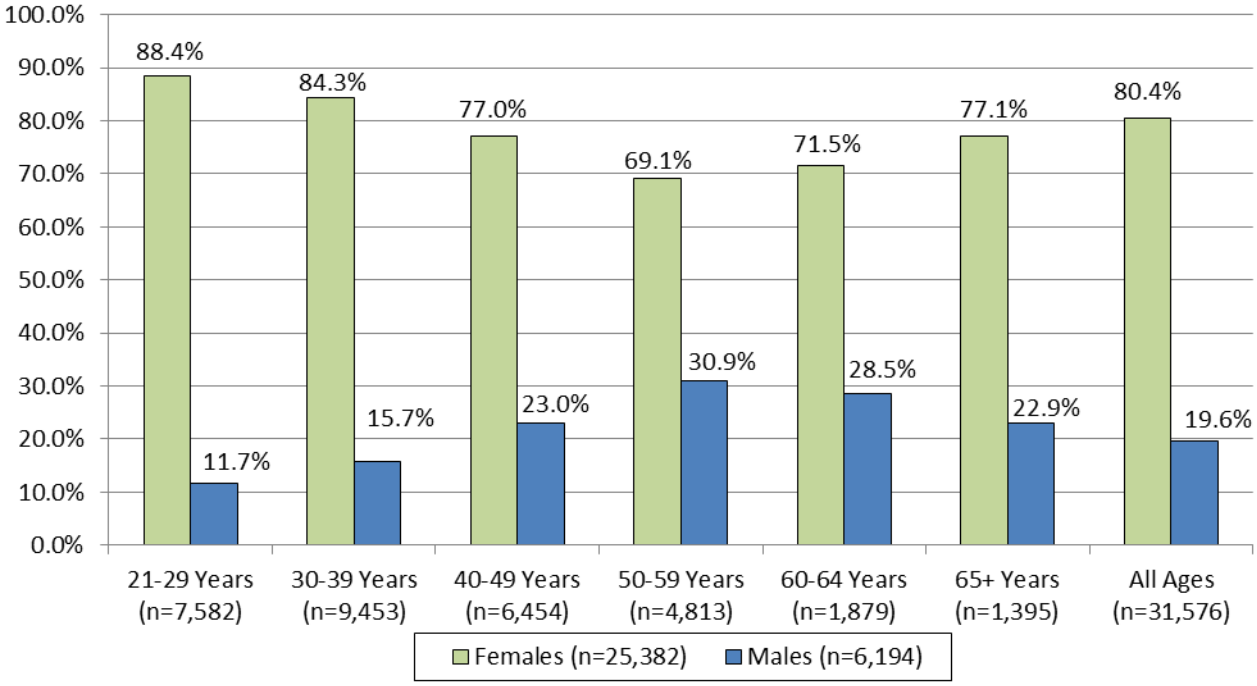
these claims and encounters were organized into a member-level dataset containing indicators of importance to the Department. Results derived from these indicators are presented in the remainder of this section.

Findings

Demographics

There were 31,576 members identified with at least one depression diagnosis during CY 2011. A majority of members were female (80.4 percent), though the distribution of members by sex varied by age group. Figure 1 shows the distribution of members by age group and sex, with each bar noting the percentage of members of each sex in the specified age group.

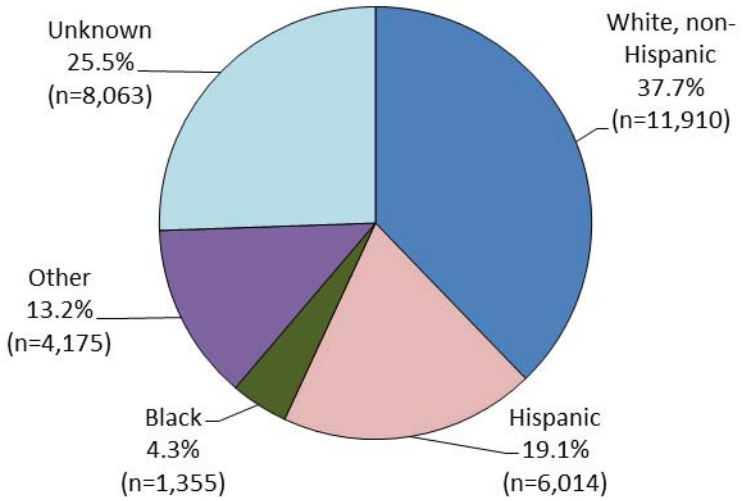
Figure 1—Members With At Least One Depression Diagnosis in CY 2011 by Age and Sex



Note: Totals within age groups may not equal 100 percent due to rounding.

Overall, White, non-Hispanic members accounted for the largest percentage of members (37.7 percent) followed by Hispanic members (19.1 percent). However, it is important to note that approximately one-quarter of members' records contained no race/ethnicity information (25.5 percent). Figure 2 shows the distribution of members by race/ethnicity.

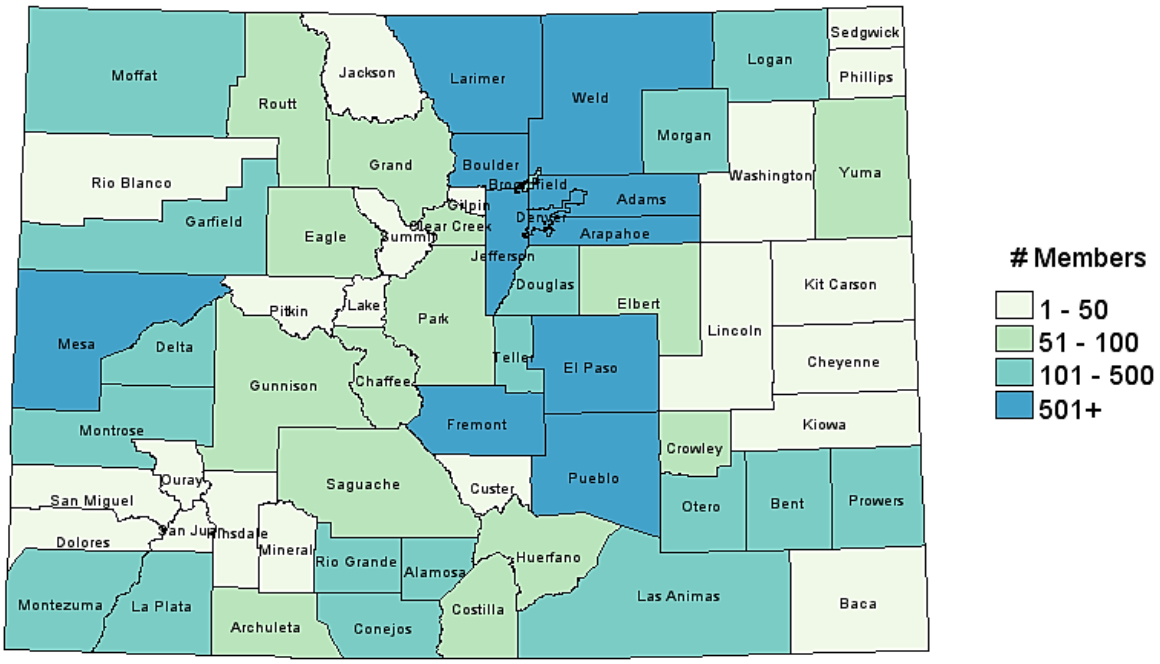
Figure 2—Members With At Least One Depression Diagnosis in CY 2011 by Race/Ethnicity



Note: Totals within age groups may not equal 100 percent due to rounding.

Nearly all members were identified as residents of Colorado (97.7 percent), and residents from Texas (n=76), California (n=63), New Mexico (n=44), Arizona (n=38), and Florida (n=38) accounted for the largest number of non-Colorado residents with a depression diagnosis in CY 2011. Figure 3 shows the distribution of Colorado residents by county of residence, as defined using Quest Analytics software to analyze the address data associated with the members' demographic data.

Figure 3—Members With At Least One Depression Diagnosis in CY 2011 by Colorado County of Residence



Counts exclude five members without valid Colorado counties.
Data Provided by COGNOS
Map provided by Health Services Advisory Group (March 2013)

As seen in Figure 3, members with a depression diagnosis in CY 2011 lived in each of Colorado's 64 counties. Twenty-one counties had 50 or fewer members, 14 counties had between 51 and 100 members, 18 counties had between 101 and 500 members, and 11 counties had 501 or more members. More than three-quarters of Colorado residents (78.5 percent) fell within nine counties; Table 1 lists the nine counties with more than 1,000 members with depression diagnoses in CY 2011.

Table 1—Counties With More Than 1,000 Members With a Depression Diagnosis During CY 2011

County Name	Number of Members	Percent of Colorado Residents
Denver County	4,206	13.6%
El Paso County	3,612	11.7%
Adams County	3,111	10.1%
Arapahoe County	3,007	9.8%
Jefferson County	2,741	8.9%
Pueblo County	2,649	8.6%
Weld County	1,821	5.9%
Larimer County	1,790	5.8%
Boulder County	1,265	4.1%

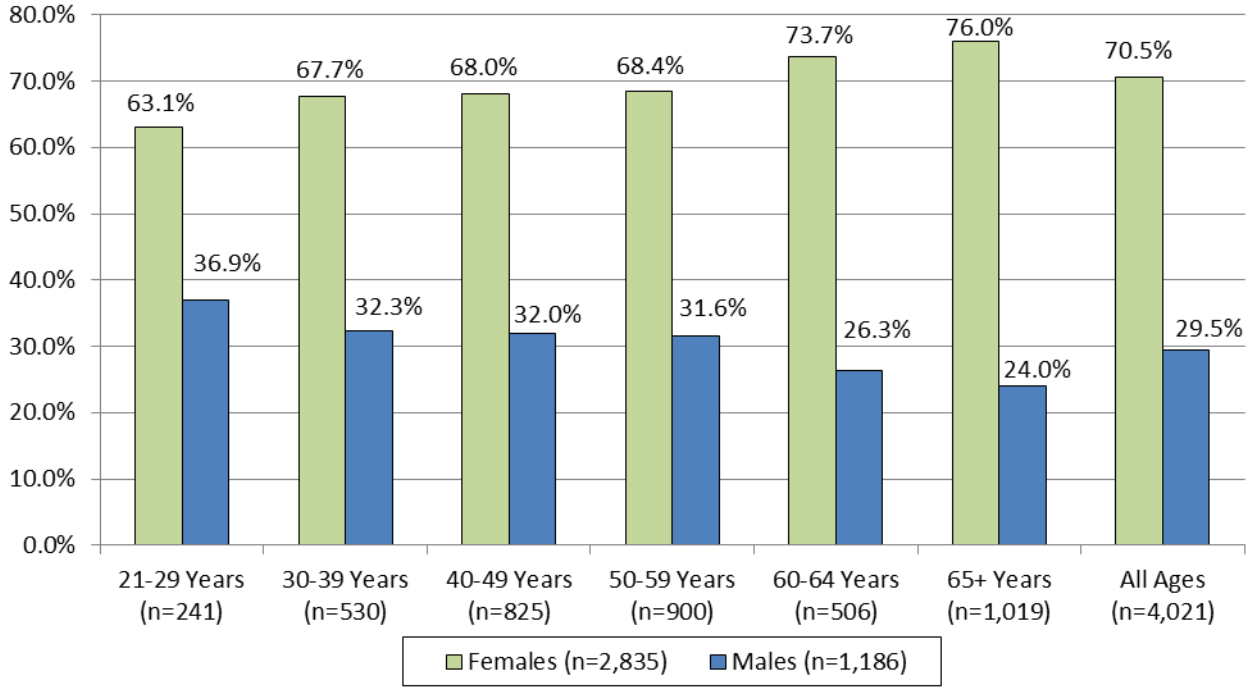
Based on members' ZIP codes, 74.5 percent of Colorado residents live in urban areas, 13.4 percent live in suburban areas, and 12.1 percent live in rural areas. Under the Department's Accountable Care Collaborative (ACC) program, members are enrolled in Regional Care Collaborative Organizations (RCCOs), which may assist members in coordinating care or transitioning between health care settings. Member enrollment in RCCOs did not begin until May 2011; therefore, it is unlikely that RCCOs were active for the entire 12 months before or after a member's Index Encounter. As such, RCCO assignment information will be included with the final analytic dataset supplied to the Department, but it was not considered in the data briefs.

Eligibility

Nearly all study members (93.3 percent) had at least one day of eligibility and enrollment under the fee-for-service (FFS) or Primary Care Physician Program (PCPP) during the 12 months before and after their Index Encounter (n=29,471).

It is important to note that members in this data mining activity were not restricted based on their eligibility, and 12.7 percent of study members were dually-eligible for Colorado Medicaid and Medicare at any point during the 12 months before or after their Index Encounter (n=4,021). One-quarter of these members (25.3 percent, n=1,019) were 65 years of age or older at the time of their Index Encounter, and Figure 4 shows the distribution of these members by age group and sex.

Figure 4—Dually-Eligible Members With At Least One Depression Diagnosis in CY 2011 by Age and Sex

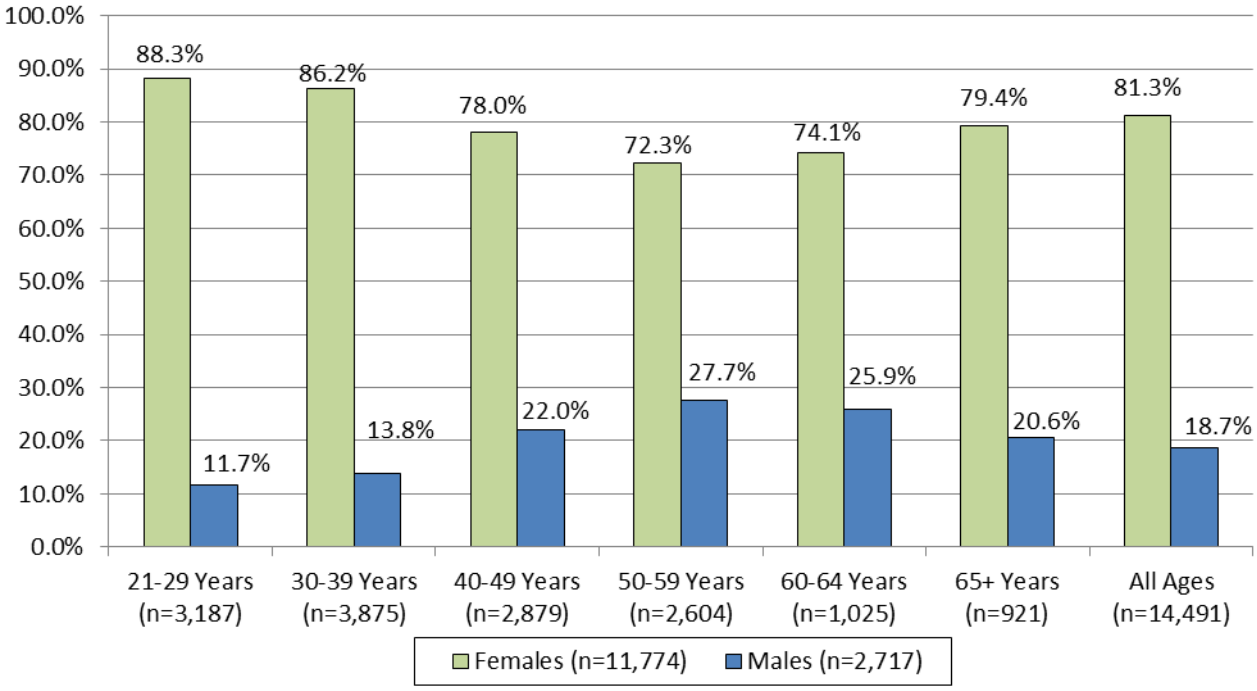


Note: Totals within age groups may not equal 100 percent due to rounding.

Regarding members with services in the prior 12 months, 60.7 percent were eligible and enrolled in FFS, PCPP, or a combination of the two programs for the entire one-year period (n=16,989). Approximately two-thirds of members (69.0 percent) with later year services were eligible and enrolled in FFS, PCPP, or a combination of the two programs for the entire one-year period (n=20,801). For the entire two-year study period (n=14,491), 45.9 percent of all study members were eligible and enrolled in FFS, PCPP, or a combination of the two programs. For future analyses, HSAG recommends that the Department consider restricting findings to non-dually eligible members with full FFS and/or PCPP eligibility in both 12 month periods to determine the profile of those members who failed to receive services for reasons other than Medicaid eligibility.

Reported below are demographics for the 14,491 members with FFS and/or PCPP eligibility throughout the entire study period; these percentages are not substantially different from the demographics of the entire study population. A majority of the fully eligible FFS/PCPP members were female (81.3 percent), though the distribution of members by sex varied by age group. Figure 5 shows the distribution of members by age group and sex, with each bar noting the percentage of members of each sex in the specified age group.

Figure 5—Members With At Least One Depression Diagnosis in CY 2011 by Age and Sex

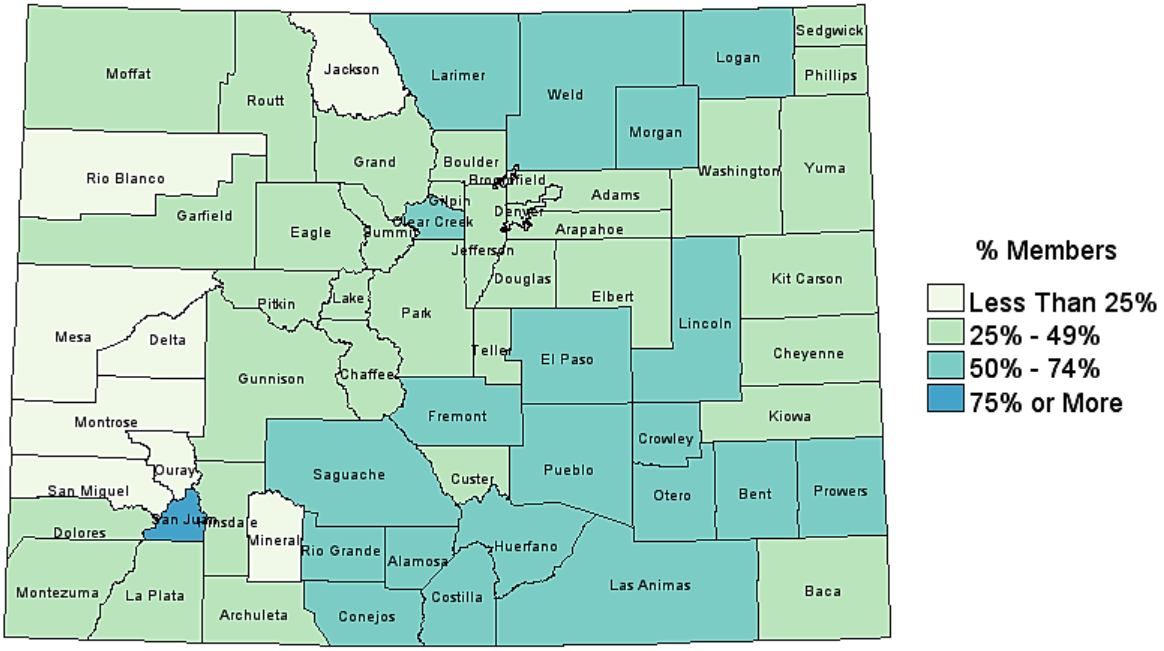


Note: Totals within age groups may not equal 100 percent due to rounding.

Overall, White, non-Hispanic members accounted for the largest percentage of members (35.0 percent) followed by Hispanic members (18.8 percent) and members classified as having an "Other" race (12.5 percent). However, it is important to note that more than one-quarter of members' records contained no race/ethnicity information (27.5 percent).

All but 138 of the members with FFS and/or PCPP enrollment were listed as Colorado residents. Since these members were each eligible and enrolled for a two-year period, this finding may signal the use of an outdated or inaccurate address for these members. Figure 6 shows the percentage of the 14,353 Colorado residents with FFS and/or PCPP eligibility and enrollment for the entire study period in each county (i.e., between 25 and 49 percent of the members in Adams County had FFS and/or PCPP eligibility and enrollment for the 12 months before and after their Index Encounter).

Figure 6—Percentage of Colorado Residents With Complete FFS/PCPP Study Eligibility by Colorado County of Residence



Counts exclude five members without valid Colorado counties.
Data Provided by COGNOS
Map provided by Health Services Advisory Group (April 2013)

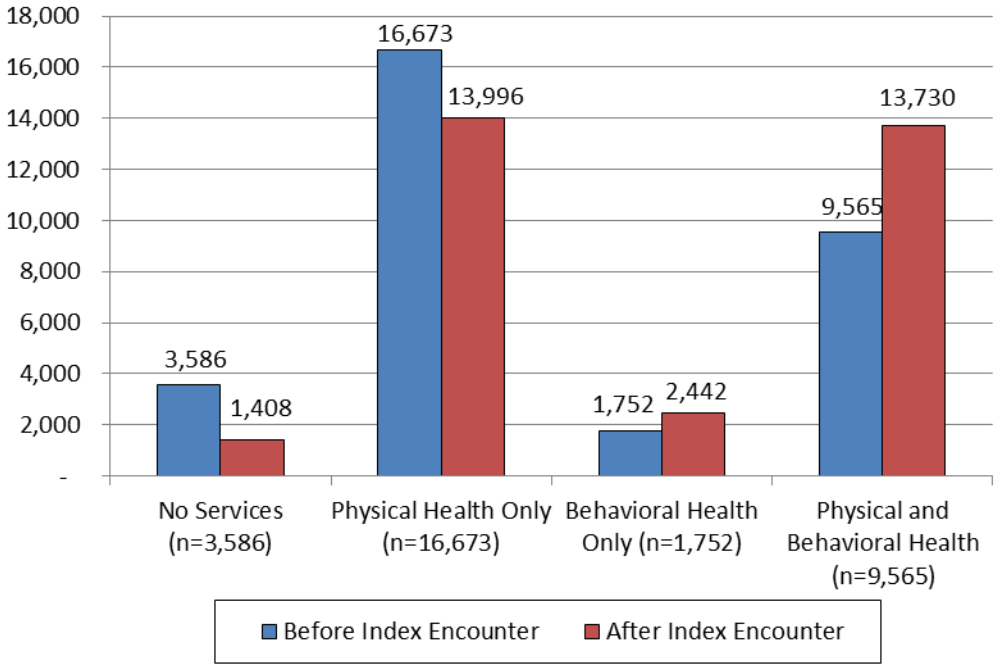
Less than 1 percent (n=114) of the 14,491 fully eligible FFS/PCPP members only received physical or behavioral health services on the day of their Index Encounter, without services in the 12 months before or after their Index Encounter. While 30 of these members had paid pharmacy claims during the study period, there was no pattern to the distribution of these members throughout the State. It is important to note that 95 of these members (83.3 percent) were eligible for Medicare at some point during the study period, and their lack of Medicaid utilization cannot be interpreted as a lack of overall health care utilization.

Health Indicators Prior to the Index Encounter

Among the 31,576 members with a depression diagnosis during CY 2011, 88.6 percent of members (n=27,990) had at least one physical health claim or BHO encounter during the 12 months before their earliest CY 2011 depression diagnosis (i.e., Index Encounter), and 95.5 percent of members (n=30,168) had at least one claim/encounter during the 12 months after their Index Encounter.

Figure 7 shows the distribution of members by the type of claims during the years before and after their Index Encounters.

Figure 7—Members With At Least One Depression Diagnosis in CY 2011 by Type of Health Services Before and After the Index Encounter (n=31,576)



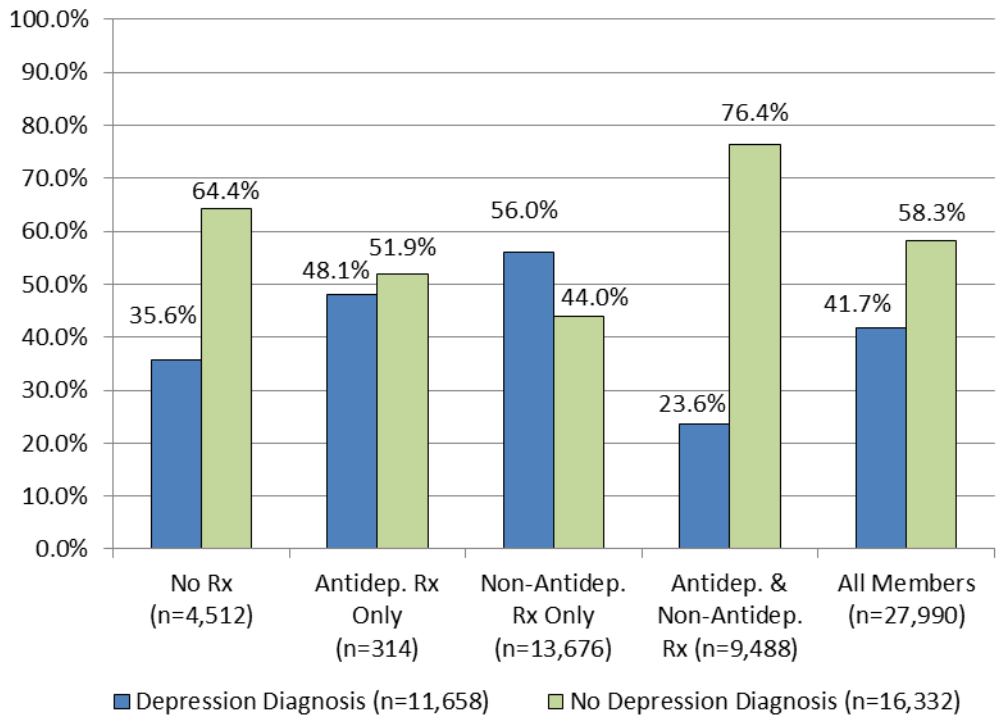
Among the 3,586 members without services during the 12 months prior to their Index Encounter, 15.1 percent (n=540) had at least one prescription for an antidepressant medication during the 12 months prior to their Index Encounter. This suggests that these members were diagnosed and treated for depression at some point in the past (e.g., antidepressant medication) but had not received medication monitoring services prior to their Index Encounter (i.e., a visit with a depression diagnosis that occurred prior to their Index Encounter). Among all members with an Index Encounter, 28.6 percent (n=9,035) received a depression diagnosis by a PCP-type provider in an ambulatory care setting during the Index Encounter or previous 12 months.

The following findings are associated with the 27,990 members (88.6 percent) who had at least one physical health claim and/or behavioral health encounter during the 12 months **prior** to their Index Encounter.

- None of the members had a claim for a depression screening. Standalone reimbursement for adult depression screening was not a covered service in CY 2010 and 2011, potentially contributing to this finding.
- Approximately 60 percent of members (58.3 percent) did not have a depression diagnosis during the 12 months prior to the Index Encounter, indicating the depression diagnosis was the member's first depression-related health care service in at least a year, though they may have received depression-related health care services prior to the CPMD study period.
- More than four of every five members (83.9 percent) had at least one claim for a prescription. More than one-third of members (35.0 percent, n=9,802) had at least one prescription for an antidepressant, although only 24.4 percent of members with an antidepressant prescription had a

depression diagnosis during that time period. Figure 8 shows the percentage of members by depression diagnoses and prescription type during the year prior to their Index Encounter. This figure does not include members who had a pharmacy claim but no other claims during the 12 months prior to their Index Encounter.

Figure 8—Members With At Least One Claim/Encounter in CY 2011 by Prescription Type and Depression Diagnosis Prior to the Index Encounter



- During the 12 months prior to their Index Encounter, 14.1 percent of members (n=3,948) had at least one diagnosis[2] for alcohol or drug dependence (AOD).
  - Half of the members (50.0 percent) with an AOD diagnosis during the prior year had at least one diagnosis of depression during the 12 months prior to their Index Encounter.
  - A statistically significantly higher percentage of members with an AOD diagnosis had a diagnosis[3] for at least one chronic physical health condition than members without an AOD diagnosis and claims during the previous 12 months (32.3 percent of members with AOD versus 24.3 percent without AOD, $p < 0.001$). However, the percentage of members with multiple chronic conditions was similar in both groups (32.5 percent versus 33.9 percent, respectively).

[2] HEDIS 2012 specifications were used to identify members with an alcohol or drug dependence diagnosis. The following ICD-9-CM diagnosis codes were included: 291.x, 292.x, 303.00–303.02, 303.90–303.92, 304.00–304.02, 304.10–304.12, 304.20–304.22, 304.30–304.32, 304.40–304.42, 304.50–304.52, 304.60–304.62, 304.70–304.72, 304.80–304.82, 304.90–304.92, 305.00–305.02, 305.20–305.22, 305.30–305.32, 305.40–305.42, 305.50–305.52, 305.60–305.62, 305.70–305.72, 305.80–305.82, 305.90–305.92, and 535.3x, 571.1x.

[3] HEDIS 2012 specifications were used to identify adults with specific chronic health conditions.

- A majority of members (74.6 percent) did not have claims indicating chronic health conditions (coronary artery disease, congestive heart failure, chronic obstructive pulmonary disease [COPD], asthma, diabetes, or hypertension).
- Among the 7,123 members with a chronic health condition, 33.6 percent had more than one chronic health condition.
  - Hypertension was the most common chronic condition (55.5 percent of members with chronic conditions) followed by diabetes (39.2 percent).

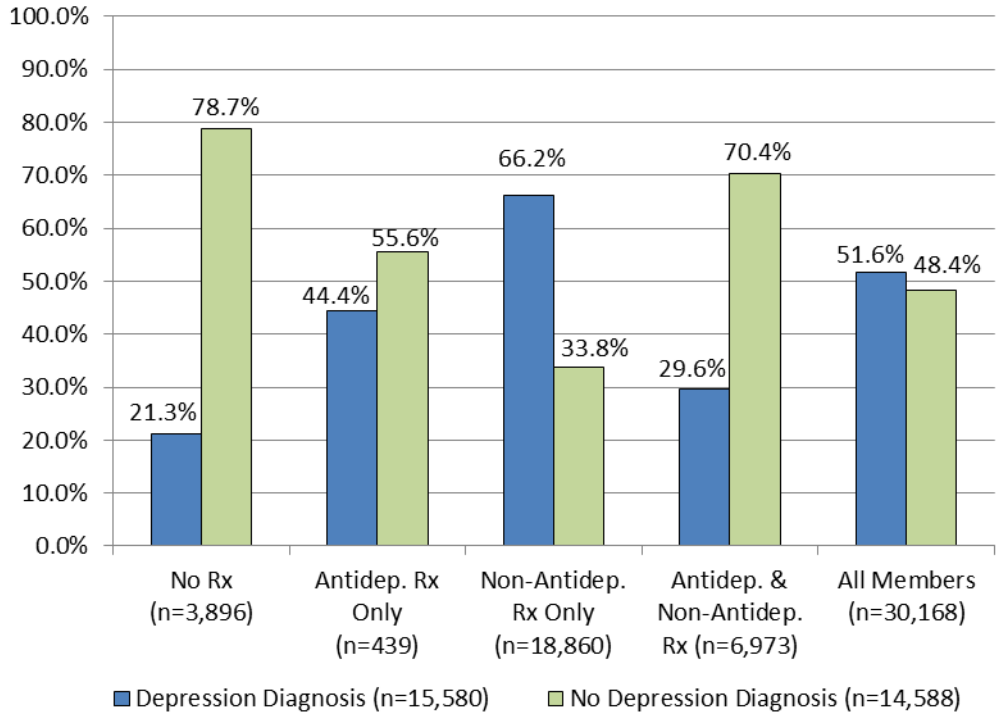
Health Indicators On and After the Index Encounter

Among the 1,408 members without physical health claims or behavioral health encounters during the year after their Index Encounter, 26.8 percent (n=377) had at least one prescription for an antidepressant medication during the 12 months after their Index Encounter. This suggests that these members were diagnosed and treated for depression without receiving medication monitoring services. Additionally, 40.8 percent (n=154) of these members were eligible for FFS and/or PCPP services for the entire year, indicating that Medicaid eligibility was not likely to have played a role in their failure to seek or receive medication monitoring services.

The following findings are associated with the 30,168 members (95.5 percent) who had at least one physical health claim and/or behavioral health encounter during the 12 months **following** their Index Encounter.

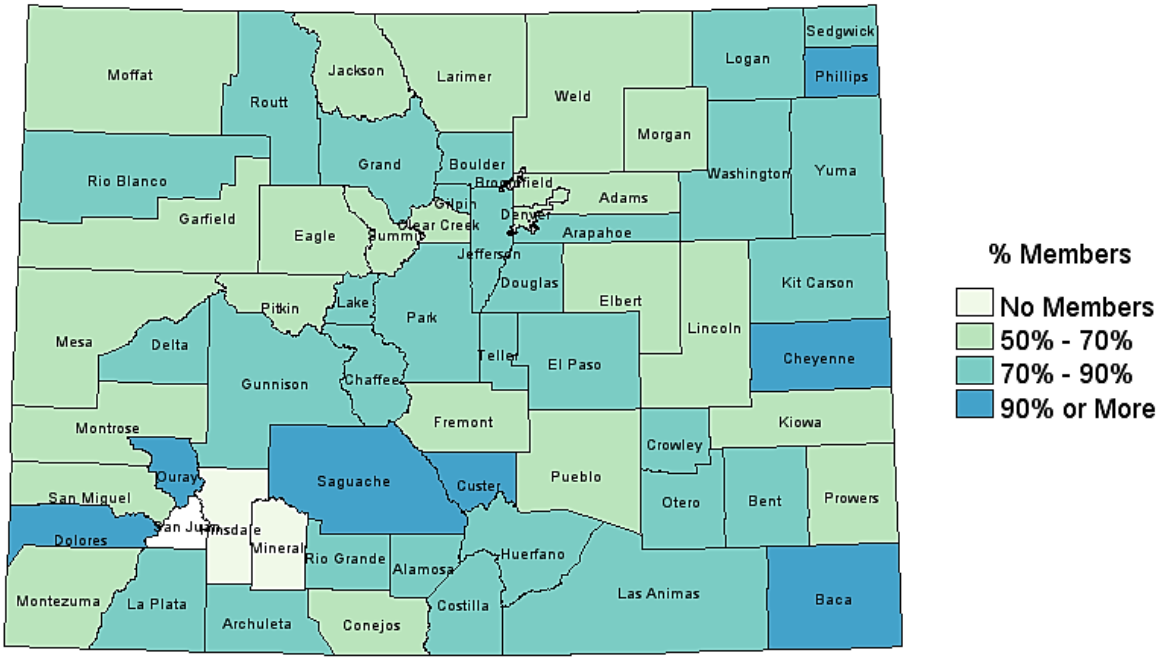
- Twenty-eight percent of members (n=8,457) had at least one visit with a PCP-type provider in an ambulatory care setting in the 12 months following their Index Encounter. Among these members, 32.2 percent (n=2,721) received a depression diagnosis from such a provider.
- Five members had a claim for a depression screening during the 12 months beginning with their Index Encounter. Reimbursement for adult depression screening was not a covered service during the study period, though the Department began offering reimbursement for adolescent depression screening in August 2011.
- Almost half of the members (48.4 percent, n=14,588) did not have a depression diagnosis during the 12 months following their Index Encounter. However, 21.9 percent of these members (n=3,195) had evidence of a visit with a PCP-type provider in an ambulatory care setting during that time period. This finding indicates that these members did not receive depression-related health care services for at least a year after their Index Encounter depression diagnosis, though they were evaluated by a PCP-type provider at least once during that time.
- More than four of every five members (87.1 percent) had at least one claim for any type of prescription. One-quarter of members (24.6 percent, n=7,412) had at least one prescription for an antidepressant, although only 30.5 percent of members with an antidepressant prescription had a depression diagnosis other than at their Index Encounter during that time period.
- Figure 9 shows the percentage of members by depression diagnoses and prescription type during the year after their Index Encounter. This figure does not include members who had a pharmacy claim but no other claims during the 12 months after their Index Encounter.

Figure 9—Members With At Least One Claim/Encounter in CY 2011 by Prescription Type and Depression Diagnosis After the Index Encounter



- Figure 10 shows the percentage of the 7,412 Colorado residents with antidepressant prescriptions in the 12 months following their Index Encounter in each county (e.g., between 70 and 90 percent of the members in Park County with antidepressant prescriptions did not have a physical health claim or behavioral health encounter with a depression diagnosis after their Index Encounter). This map shows that the percentage of members with antidepressant prescriptions and no subsequent visits for depression are distributed across the State.

Figure 10—Percentage of Colorado Residents With Antidepressant Prescriptions and No Depression Diagnosis After the Index Encounter by Colorado County of Residence



Two members without valid Colorado counties were excluded.
Data Provided by COGNOS
Map provided by Health Services Advisory Group (April 2013)

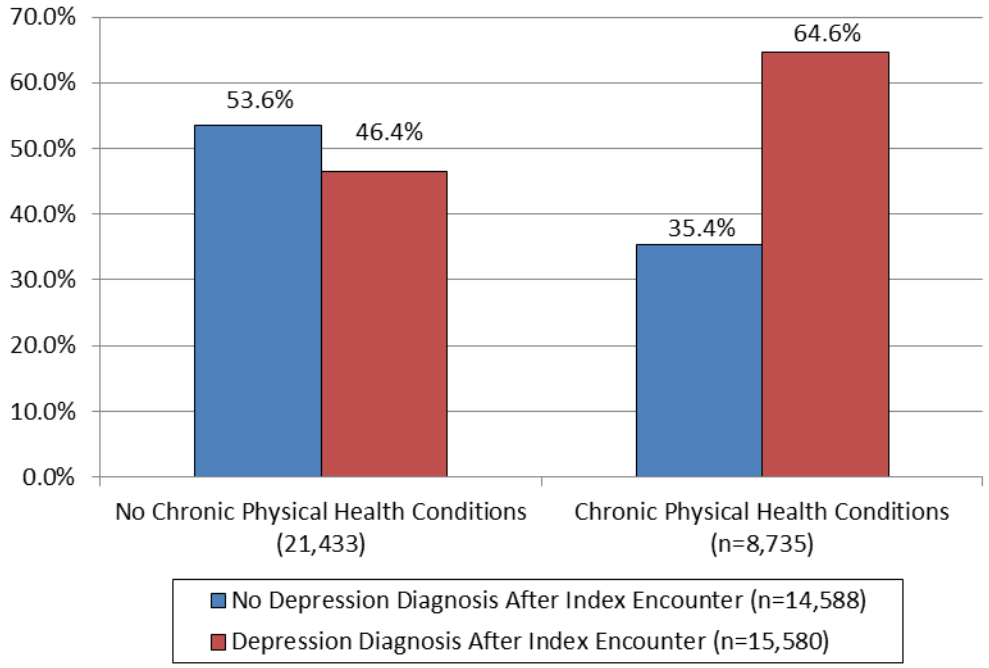
- 17.6 percent of members (n=5,296) had at least one diagnosis[4] for alcohol or drug dependence (AOD) during the 12 months beginning with their Index Encounter.
  - Two-thirds of the members (67.2 percent) with an AOD diagnosis during the later year also had at least one diagnosis of depression during the 12 months after their Index Encounter, in addition to the depression diagnosis at the Index Encounter.
  - A higher percentage of members with an AOD diagnosis had a diagnosis[5] for a chronic physical health condition than members without an AOD diagnosis and claims during the prior year (34.9 percent of members with AOD versus 27.7 percent without AOD). However, the percentage of members with multiple chronic conditions was nearly identical in both groups (36.2 percent with a chronic physical health condition and an AOD diagnosis versus 35.0 percent with a chronic physical health condition and no AOD, respectively).
- A majority of members (71.0 percent) did not have claims indicating chronic health conditions (coronary artery disease, congestive heart failure, COPD, asthma, diabetes, or hypertension), in the 12 months beginning with their Index Encounter.

[4] HEDIS 2012 specifications were used to identify members with an alcohol or drug dependence diagnosis. The following ICD-9-CM diagnosis codes were included: 291.x, 292.x, 303.00–303.02, 303.90–303.92, 304.00–304.02, 304.10–304.12, 304.20–304.22, 304.30–304.32, 304.40–304.42, 304.50–304.52, 304.60–304.62, 304.70–304.72, 304.80–304.82, 304.90–304.92, 305.00–305.02, 305.20–305.22, 305.30–305.32, 305.40–305.42, 305.50–305.52, 305.60–305.62, 305.70–305.72, 305.80–305.82, 305.90–305.92, and 535.3x, 571.1x.

[5] HEDIS 2012 specifications were used to identify adults with specific chronic health conditions.

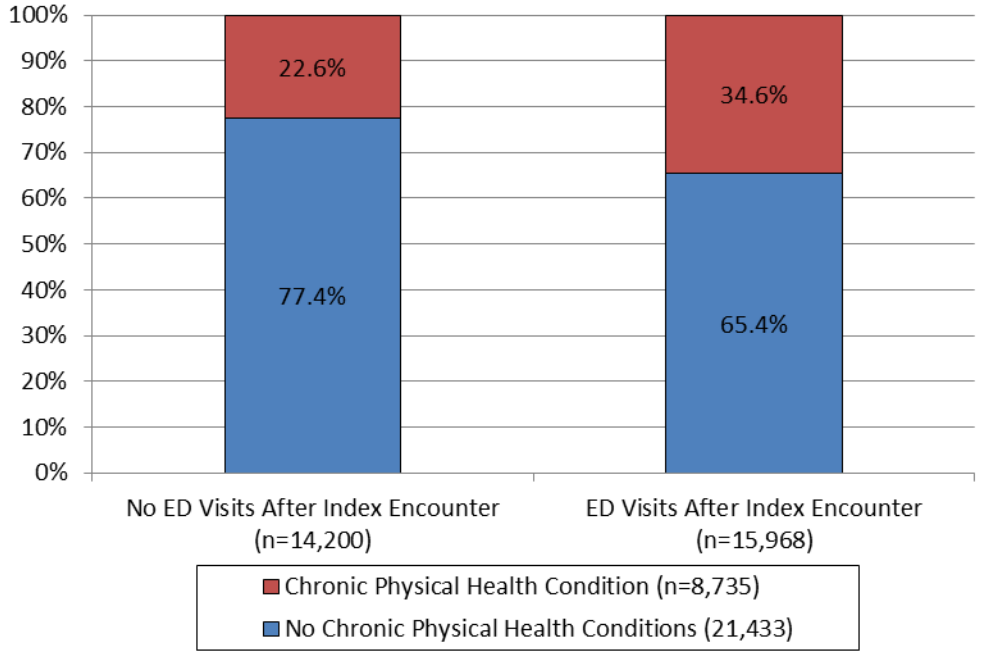
- Among the 8,735 members with a chronic health condition, 35.3 percent had more than one chronic health condition for which they sought care in the 12 months beginning with their Index Encounter.
  - Hypertension was the most common chronic condition (57.6 percent of members with chronic conditions) followed by diabetes (39.1 percent).
  - Figure 11 shows the distribution of members with physical health claims or behavioral health encounters during the 12 months following their Index Encounter by members' chronic physical health conditions and depression diagnoses. The distribution of members with post-Index Encounter depression diagnoses did not differ substantially among members with one chronic physical health condition (63.2 percent with a depression diagnosis) when compared to members with two or more chronic physical health conditions (67.2 percent with a depression diagnosis). However, the difference in the proportion of members who had a depression diagnosis following their Index Encounter by the presence of any chronic physical health conditions was statistically significant (p <0.0001). This finding indicates that members with chronic physical health conditions were more likely to have another encounter with a depression diagnosis after their Index Encounter than members who did not have a chronic physical health condition.

Figure 11—Members With At Least One Depression Diagnosis in CY 2011 by Chronic Physical Health Conditions and Depression Diagnoses After the Index Encounter (n=30,168)



- Approximately half of the members (52.9 percent, n=15,968) with claims in the year following their Index Encounter had an emergency department (ED) visit[6] during that time. Only 7.6 percent of these members (n=1,209) had an ED visit with a principal diagnosis of depression.
- Members had 56,554 ED visits in the year following their Index Encounter, for an average of 3.5 ED visits per member, with a range of 1 to 144 visits. The number of ED visits with a principal diagnosis of depression was small, only 1,387 visits, or 2.5 percent of all ED visits.
- As shown in Figure 12, about one-third (34.6 percent, n=5,519) of members with ED visits also had a chronic physical health condition identified during the 12 months following their Index Encounter. Among members without ED visits, 22.6 percent (n=3,216) of members were identified as having at least one chronic physical health condition. The difference in the proportion of members with ED visits based on their chronic physical health conditions was statistically significant (p <0.0001). This finding indicates that members with chronic physical health conditions were more likely to have an ED visit after their Index Encounter than members without chronic physical health conditions.

Figure 12—Members With At Least One Depression Diagnosis in CY 2011 by Chronic Physical Health Conditions and ED Visits After the Index Encounter (n=30,168)



[6] Emergency department visits were identified based on member ID and date of service from outpatient claims or behavioral health encounters with revenue codes 0450, 0459, or CPT codes 99281–99285. Claims with an Urgent Care revenue code (0456) or evaluation and management CPT code (99201–99205, 99211–99215) were excluded.

Analytic Activities—Provider Survey

To better understand the providers' knowledge and practices regarding depression management, HSAG used a mail- and Web-based survey to conduct structured interviews with providers to gather qualitative data on depression screening practices and provider awareness of screening resources. At the request of the Department, the survey also incorporated questions related to providers' involvement with RCCOs, and the survey was limited to PCP-type providers affiliated with the RCCOs.

Methodology

The Department worked with the RCCOs to obtain provider lists, and HSAG to develop the mailing materials, including a 17-question survey instrument, introductory cover letter, and text for reminder postcards and e-mails. Appendix A contains a copy of the survey instrument. HSAG combined and de-duplicated the provider lists to produce a single list of unique providers; if a provider practiced at multiple locations, a single location was randomly selected to receive the mailing with preference given to locations with an associated e-mail address.

The survey administration process consisted of mailing a survey questionnaire, cover letter, and business reply envelope to each unique provider identified from the RCCOs' provider lists. The term "survey field" is used in the remainder of this report to refer to the time during which the survey was active. A reminder postcard was mailed to non-respondents approximately one week after the first survey was mailed to providers. Providers also received reminders via e-mail, with one e-mail sent concurrently with the reminder postcard and a second e-mail reminder sent to non-respondents 10 days before the survey field closed.

Providers were given three options by which they could complete the surveys: (1) complete the paper-based survey and return it using the pre-addressed, postage-paid return envelope; (2) complete the paper-based survey and return it via facsimile; or (3) complete the Web-based survey by logging on to the survey Web site with a designated provider-specific login.

Findings

Mailings were sent to 2,076 providers on April 15, 2013, and 423 surveys were completed at the time the survey field closed on May 17, 2013. Two-thirds of responding providers (66.4 percent) completed the survey by mail, and 31.0 percent completed the survey via the Internet. The overall response rate of 21.5 percent was calculated by dividing the total number of completed surveys divided by the number of eligible providers within the sample. Eligible providers included the entire mailing list of providers minus 105 ineligible surveys, such as those sent to providers that could not be surveyed due to incorrect or incomplete contact information or that were no longer practicing in Colorado or seeing adult patients.

Among the 423 providers responding to the survey, 76.6 percent of providers (n=324) were practicing medicine in Colorado and seeing adult patients (ages 21 years and older). The remainder

of this analysis will focus on the responses provided by these providers. Among the 324 responding providers:

- Nearly all (91.7 percent, n=297) noted that they have screened at least one adult patient for depression in the 12 months prior to the survey.
- More than three-quarters of providers who screened at least one adult patient (77.4 percent, n=230) indicated that they use a screening tool when screening adult Medicaid patients for depression. Table 2 shows the depression screening tools noted by the respondents; providers were able to select all applicable tools.

Table 2—Adult Depression Screening Tools Used by Survey Respondents

Depression Screening Tool	Number of Respondents	Percent of Respondents Using a Screening Tool
Beck Depression Inventory	31	13.5%
Center for Epidemiological Studies Depression Scale (CES-D)	0	0.0%
Edinburgh Postnatal Depression Rating Scale (EPDS)	30	13.0%
Hamilton Depression Rating Scale (HAM-D)	4	1.7%
Postpartum Depression Screening Scale (PDSS)	11	4.8%
Patient Health Questionnaire 2 (PHQ-2)	67	29.1%
Patient Health Questionnaire 9 (PHQ-9)	171	74.3%
Zung self-rating depression scale	7	3.0%
A tool developed by their practice	10	4.3%
Another screening tool	9	3.9%

Other depression screening tools noted by the respondents included the Mood Disorder Questionnaire, the Geriatric Depression Scale, and the SIGECAPS verbal screening tool.[7]

- Two hundred thirty-three providers indicated that they screen adult patients for depression by asking questions while taking the patient's clinical history. Questions fell into two major categories: (1) those asking directly about anxiety, depression, or suicide; and (2) those asking about general lifestyle changes (e.g., asking about sleep habits, appetites, enjoyment of usual activities).
  - Many questions mirror those asked in the PHQ-2 and PHQ-9 screening tools or follow the SIGECAPS mnemonic, and some providers noted that they simply ask the questions from the PHQ-2 or PHQ-9 tools.
  - One provider noted that its practice created a tool which incorporates the PHQ-2, substance use screening questions, and domestic violence screening questions. Patients are asked to

[7] SIGECAPS is not a validated depression screening tool; it is a mnemonic for the eight neurovegetative symptoms of depression. The acronym prompts clinicians to remember to ask patients about Sleep disorders, Interest deficit (anhedonia), Guilt, Energy deficit, Concentration deficit, Appetite disorder, Psychomotor retardation or agitation, and Suicidality. Patients indicating anhedonia and at least four other symptoms for at least two weeks meet the diagnosis criteria for major depression.

complete the questionnaire every six months, and positive responses to certain questions prompt further screening by the medical assistant and provider.

- Most providers who had screened at least one adult Medicaid patient in the year prior to the survey indicated that they screened when clinically indicated (73.4 percent), but fewer than half of providers indicated that they screened either during a patient's initial visit or the patient's annual preventive visit (34.0 percent and 40.7 percent, respectively). Table 3 shows the frequency with which providers indicated they screen their adult patients for depression. Providers were able to select all applicable responses, and many indicated that the frequency of screening varied based on patients' clinical needs.

Table 3—Adult Depression Screening Frequency Reported by Survey Respondents

Screening Frequency	Number of Respondents	Percent of Respondents Screening for Depression
During the initial visit	101	34.0%
During the annual preventive visit	121	40.7%
During every visit, regardless of the reason for the visit	37	12.5%
When clinically indicated	218	73.4%
When requested by the patient	84	28.3%
Another frequency	32	10.8%

Responses among the providers indicated screening under other conditions varied. Some providers indicated that all pregnant or postpartum patients received a depression screening, and more than one provider indicated that screening was done for patients with chronic pain or during visits for a patient's chronic disease. One provider responded that screening frequency was determined by a "computer-generated algorithm based on past diagnostic codes and replies."

- When all responding providers were asked to consider the circumstances surrounding those adult patients who did not receive a depression screening during the 12 months prior to the survey, 23.5 percent (n=76) responded that they screen all adult Medicaid patients for depression. Only three providers responded that depression screening was outside their scope of care, and 10 providers indicated that the lack of screening was related to the lack of Medicaid reimbursement. Other key findings from responding providers regarding those patients who did not receive a depression screening include:
  - One-third of providers (n=108) indicated that a patient was not screened because there was not enough time during the visit.
  - Nine providers indicated that no referral information was available in the event of a positive screening, and 15 providers noted that they were unfamiliar with the Medicaid protocol for referring patients with a positive depression screening.
  - Five providers indicated that a screening tool was not available.

- Only 28 providers reported that screening was not conducted because the patient declined the screening, and 41.7 percent of providers responded that a patient was not screened because it was not clinically indicated.
- Providers also shared the following insights regarding their reasons for not screening certain adult Medicaid patients for depression. The comments are presented verbatim and have not been edited.
  - "I don't personally screen pts-we have behav. health who does."
  - "This is a medical clinic inside a mental health clinic. All depression screenings are accomplished by them."
  - "If medical assistant forgot to do the screening when rooming the patient, I can sometimes forget to do it myself. This could be termed a breakdown in the systems process to conduct screening."
  - "Lack of a systematic way to care for patients screening positive in our clinic."
  - "Not co-located services. Must refer to local community mental health agency."
  - "Don't always screen with tools-some pts are functionally illiterate and other don't understand the questions even when read to them."
  - "Unsure of resources for patients who speak uncommon languages."

- Of the responding providers, 64.5 percent (n=209) indicated they were familiar with the United States Public Health Service (USPHS) Task Force recommendations for depression screening among adults, and 46.6 percent (n=151) indicated they were familiar with the clinical guidelines and resources available through HealthTeamWorks for use in diagnosing and managing patients with depression.

Other Supplemental Activities

Key Informant Interview: Federally Qualified Health Center (FQHC) Data

HSAG communicated with the Department's FQHC liaison during May 2013 to discuss the data submission requirements for FQHCs and how these requirements may impact the data findings for adults with depression. This conversation was also used to assess the viability of using FQHC data to supplement standard administrative data sources. HSAG identified the following key findings from these conversations:

- FQHCs are identified in claims using provider type "32," and 16 FQHCs were identified by the Department during CY 2012 as serving the Medicaid population.
- While all FQHCs submit their claims using electronic systems, the underlying reporting requirements only call for submission of the first procedure line of a claim using the institutional claim form. FQHCs are allowed to report more than one procedure code per claim, and on average, approximately two lines are reported per claim.
- FQHCs serving Colorado Medicaid members are paid using a prospective payment model with encounter rates specific to each FQHC. Encounter rates are set annually by the Department using the FQHCs' cost reports.

- If an encounter consists entirely of services covered by the BHO carve-out, these services are billed to the BHO rather than the Department's billing system (the MMIS). If the encounter involved both behavioral health and other services, however, it will be billed to the Department's billing system and the behavioral health service may not be recorded with either the BHO encounter data or the Department's medical claims data.

Based on these findings, HSAG has identified challenges to the completeness of FQHC data in the areas of data coding and submission. Specifically, FQHCs may choose not to submit all claim lines for a given encounter, resulting in the appearance of a lack of services. Without receiving a complete data extract from the FQHC or reviewing medical records, it is not possible to use existing administrative data to determine members' receipt of specific services. In the context of the CPMD data mining activities, this may result in a lower rate of appropriate services among members with depression. As an example, many members were identified as having filled prescriptions for antidepressants in the 12 months following their earliest CY 2011 depression diagnosis, but some eligible members did not have any further behavioral health or medical encounters for their depression. Based on the current FQHC data process, it is possible that these members received follow-up care for depression at an FQHC, but the service was not submitted to the Department's data system and was therefore not available among the administrative data analyzed.

The conversation was helpful in understanding the current and near-term plans for data from FQHCs, and it highlighted an ongoing concern for the calculation of quality measures. FQHCs submit encounters for payment using an institutional claim form for physician-type services, rather than the claim form used by physicians. However, the physicians' claim form contains additional information regarding the specific provider who rendered the services. This information is not available from the institutional claim form; therefore, even FQHCs who report all available claim lines will continue to miss selected data elements that play a role in calculating quality measures (e.g., rendering provider). Since this caveat stems from the current FQHC data structure, thorough understanding and ongoing communication with the Department is key to designing quality activities and interventions that make the most appropriate use of FQHC data while acknowledging potential limitations.

Desk Review: Adult Depression Screening Payment Policies

To provide information on the role of reimbursement policies on adult depression screening practices, HSAG conducted a desk review of available information on adult depression screening reimbursement practices. In Colorado, the Current Procedural Terminology (CPT) code 99420 accompanied by a diagnosis code of V40.9 (positive screen) or V79.8 (negative screen) is used for reimbursement of depression screening services among adolescents (ages 11 through 20 years), but depression screening is not currently a reimbursable service for adults under Colorado Medicaid.

Among the 12 states reviewed, depression screening among adults was subject to coding differences. While none of the reviewed states reimburse for adult depression screening as a standalone service, it may be captured in administrative data using a variety of codes, and may also be reimbursed as a bundled clinic service or rehabilitative service. A search of Medicaid fee schedules from selected states for codes that may include adult depression screenings revealed that most states included physician codes for psychiatric interviews (e.g., 90791—Psychiatric diagnostic

evaluation, and 90801—Psychiatric diagnostic interview), and some states include codes for mental health assessments by non-physicians (e.g., H0031—Mental health assessment by non-physician).

Because pregnancy and the postpartum period present a clinical risk factor for depression, at least two states were identified in which financial incentives for adult depression screening were focused on adult depression screening during the postpartum period. Specifically, North Carolina offered obstetric practitioners a financial incentive for completing a prenatal risk assessment that included depression as a risk factor. Providers were instructed to bill using the code "S0280–medical home comprehensive care coordination and planning- initial." Additionally, North Dakota encouraged pediatricians to use CPT code "99420 – Administration and interpretation of health risk assessment instrument (health hazard appraisal)" to report maternal postpartum depression screenings administered as part of a routine newborn check. These screenings were billed under the baby's name, which could confuse efforts to calculate adult depression screening rates.

Medicare recently added adult depression screening as a covered preventive service under Part B, effective for dates of service on or after October 14, 2011, using the Healthcare Common Procedure Coding System (HCPCS) code G0444 to report screenings.[8] One annual depression screening in a primary care setting[9] will be covered for Medicare beneficiaries, provided staff-assisted supports are in place to ensure appropriate effective treatment and follow-up care. The screening is billed as a standalone service, although it may be conducted at the same time as a preventive physical examination or annual wellness visit. The Centers for Medicare & Medicaid Services (CMS) did not specify that a validated screening instrument should be employed, and physicians may choose which screening instrument, if any, to use.

As adult depression screening is a covered service under Medicare, it is possible that Colorado residents eligible for both Medicare and Medicaid (dual-eligible members) may receive an annual depression screening that is not reflected in the Medicaid administrative claims data. The Department may consider future tasks in which medical record review among dual-eligible members diagnosed with depression is used to determine the prevalence of depression screening and the utility of medical record review as a methodology for calculating adult depression screening measures. Similar medical record review tasks will be conducted as a component of the CMS Adult Quality Performance Measure Grant during SFY 2014.

Because adult depression screenings may be reimbursed under one of several general health evaluation codes or as a clinically specific condition (i.e., billed under Medicare or as part of a postpartum or newborn visit), it is difficult to measure the precise impact that reimbursement plays in a provider's non-clinical decision-making regarding adult depression screenings. An exploration of medical records using these reimbursement codes would be necessary to determine the frequency with which an adult depression screening is "bundled" under a specific general health evaluation code.

[8] "Screening for Depression". Department of Health and Human Services, Centers for Medicare & Medicaid Services, Medicare Learning Network. Published June 2012. Available at: http://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNProducts/Downloads/Screening-for-Depression-Booklet-ICN907799.pdf. Accessed on: June 4, 2013.

[9] Primary care settings include physician offices, outpatient hospitals, independent clinics, and state or local public health clinics.

Conclusions

HSAG used data mining techniques on administrative health care claims data and behavioral health encounter data to develop a clinical profile for adult Medicaid members with depression. To provide context for the data mining findings and identify potential limitations and future quality activities, HSAG conducted three supplemental activities, including a survey of PCP-type providers, a discussion with the Department regarding FQHC data, and a desk review of adult depression screening reimbursement considerations among other states.

Data mining identified 31,576 Colorado Medicaid members with a diagnosis of depression during CY 2011, and most members had at least one physical health claim or behavioral health encounter in the 12 months before and 12 months after their Index Encounter. While many members were evaluated by a PCP-type provider during the study period, relatively few members received their depression diagnosis from a PCP. Key differences in subsequent depression diagnoses and ED utilization were noted based on the presence of selected chronic physical health conditions among members. Additionally, evidence from data mining suggests that members receiving antidepressant prescriptions may not be receiving appropriate clinical follow-up for this pharmacotherapy.

Of the 2,076 providers who were sent a survey regarding depression screening practices among their adult Medicaid patients, 423 responded to the survey; and of those, 324 providers continued to practice medicine in Colorado and see adult patients. The PHQ-2 and PHQ-9 were the most commonly cited depression screening tools, and most providers noted that they screened patients when clinically indicated. Respondents did not identify lack of reimbursement as a reason for failure to screen for depression, but a few providers did note a lack of familiarity with depression screening tools and referral procedures for Colorado Medicaid patients. While most providers screened at least one patient and provided information on the tools or questions used for screening, only two-thirds (64.5 percent) claimed familiarity with the USPHS Task Force recommendations for depression screening among adults, and less than half (46.6 percent) were familiar with the clinical guidelines and resources available through HealthTeamWorks for use in diagnosing and managing patients with depression. This finding represents an area for provider education, as well-documented clinical resources and validated screening tools are widely available.

Recommendations

Based on the results presented in this report, HSAG recommends the Department consider further exploration of the following topics for future quality activities or areas of focus for RCCO intervention:

- Given the percentage of members with antidepressant prescriptions in the absence of other medical services, and that 35.3 percent of members with no depression diagnosis in the 12 months following their Index Encounter filled a prescription for an antidepressant, outreach to physicians could focus on the Colorado HealthTeamWorks Depression Guidelines[10] for monitoring members with depression through the initiation and maintenance stages of treatment.

[10] HealthTeamWorks Depression Guidelines (January 2011). Available at: http://www.healthteamworks.org/guidelines/depression.html. Accessed on: November 26, 2012.

- With a little more than one-quarter (28.6 percent) of members receiving a depression diagnosis from a PCP-type provider in an ambulatory setting, providers should be surveyed to determine if providers require additional information to feel confident managing depression in a primary care environment.
- Approximately 25 percent of members had a claims history suggesting a chronic health condition, and these members used ED services at a greater rate than members without a chronic health condition. Care coordination, including reminders about the availability of BHO services, may help members manage their depression in conjunction with their chronic health condition(s).
- With publicly available clinical resources for adult depression screening and less than half of responding providers noting familiarity with these resources, provider education to raise awareness of the HealthTeamWorks depression screening guidelines and resources could improve providers' ability to identify and manage patients with depression.

Appendix A. Provider Survey Instrument

This appendix contains a copy of the survey instrument used during the CPMD project.

2013 COLORADO RCCO PROVIDER SURVEY

1. **This survey is for [PROVIDER NAME]. Is this provider still practicing medicine in Colorado?**
   - ○ Yes
   - ○ No ➔ ***Thank you. We appreciate your time. You may return the completed survey via mail or fax.***

2. **How many licensed providers practice at this location/clinic? Please include MDs, DOs, and NPs.**
   - ○ 1 provider
   - ○ 2-3
   - ○ 4-5
   - ○ 6-9
   - ○ 10 or more providers

3. **Are you still serving adult patients 21 years of age and older?**
   - ○ Yes
   - ○ No ➔ ***Thank you. We appreciate your time. You may return the completed survey via mail or fax.***

3a. **What percentage of your patient population is 21 years of age or older?**
   - ○ 0 - 25 percent
   - ○ 26 - 50
   - ○ 51 - 75
   - ○ 76 - 100 percent
   - ○ Don't know

4. **What percentage of your patient population has Medicare as their primary payer? If you do not see Medicare beneficiaries, please select "N/A."**
   - ○ 0 - 25 percent
   - ○ 26 - 50
   - ○ 51 - 75
   - ○ 76 - 100 percent
   - ○ Don't know
   - ○ N/A

For questions 5 through 9, think about the services you provided to Colorado Medicaid recipients during the previous 12 months.

5. **During the previous 12 months, did you screen at least one adult Medicaid patient for depression?**
   - ○ Yes ➔ ***Go to Question 6***
   - ○ No ➔ ***Go to Question 9***

6. **Did you use a screening tool to screen your adult Medicaid patients for depression?**
   - ○ Yes ➔ ***Go to Question 6a***
   - ○ No ➔ ***Go to Question 7***

6a. **Which of the following screening tools did you use? (Mark all that apply)**
   - ○ Beck Depression Inventory
   - ○ Center for Epidemiological Studies Depression Scale (CES-D)
   - ○ Edinburgh Postnatal Depression Scale (EPDS)
   - ○ Hamilton Depression Rating Scale (HAM-D)
   - ○ Postpartum Depression Screening Scale (PDSS)
   - ○ PHQ-2 «ptseq»
   - ○ PHQ-9
   - ○ Zung self-rating depression scale
   - ○ A tool developed by my practice «b2d1e_f»
   - ○ Another screening tool: (Write in) _____

363 01 CTD

7. **Did you screen your adult Medicaid patients for depression by asking questions when taking a patient's clinical history?**
   - ○ Yes ➔ *Go to Question 7a*
   - ○ No ➔ *Go to Question 8*

7a. **Please write in the questions you used below.**

_____

_____

_____

_____

8. **How frequently did you screen your adult Medicaid patients for depression? (Mark all that apply)**
   - ○ During their initial visit
   - ○ During their annual preventive visit
   - ○ During every visit, regardless of the reason for the visit
   - ○ When clinically indicated
   - ○ When requested by the patient
   - ○ Other: (Write in)

     _____

9. **Among the adult Medicaid patients not screened for depression in the previous 12 months, what are the reasons you did not screen these patients? (Mark all the apply)**
   - ○ Not applicable, I screen all adult Medicaid patients for depression
   - ○ Depression screening is outside my scope of care
   - ○ Don't know how to bill for depression screening
   - ○ No reimbursement for depression screening
   - ○ No referral information available in case of a positive screening
   - ○ No screening tool available
   - ○ Not enough time during the appointment
   - ○ Patient declined screening
   - ○ Screening was not indicated
   - ○ Unfamiliar with Medicaid protocol for adult depression screening
   - ○ Unfamiliar with Medicaid protocol for referring patients with a positive depression screen
   - ○ Other: (Write in)

     _____

Questions 10 and 11 ask about your knowledge of existing information pertaining to adult depression screening.

10. **Do you know about the USPS Task Force recommendations for depression screening among adults?**
    - ○ Yes
    - ○ No

11. **Are you aware of the depression clinical guidelines and other resources available through HealthTeamWorks?**
    - ○ Yes
    - ○ No

Questions 12 through 17 ask for your input on the Accountable Care Collaborative (ACC) and Regional Care Collaborative Organizations (RCCOs).

12. **Does your practice provide care coordination for your ACC/RCCO patients?**
    - ○ Yes, I'm a care coordinator under a delegated agreement «ptseq»
    - ○ Yes, I'm a care coordinator not under a delegated agreement
    - ○ I'm not sure if I'm a care coordinator
    - ○ No «b2d1e_f»

363 02 CTD

13. **Who (else) provides care coordination for your ACC/RCCO clients? (Mark all that apply)**
    - ○ The RCCO provides care coordination
    - ○ Care coordination is provided through a combined effort between the RCCO and my practice
    - ○ Community Based Care Teams provide care coordination

14. **How satisfied are you with the level of support that the RCCO provides regarding practice transformation and care coordination?**
    - ○ Very Satisfied
    - ○ Somewhat Satisfied
    - ○ Neutral
    - ○ Somewhat Dissatisfied
    - ○ Very Dissatisfied

15. **In which areas could the RCCO provide more support or collaboration? (Mark all that apply)**
    - ○ Connecting with specialists
    - ○ Connecting with behavioral health services
    - ○ Communication with hospitals
    - ○ Connecting with community-based services
    - ○ I don't need more support or collaboration
    - ○ Other: (Write in) _____

16. **Do you access the State Data Analytics Contractor (SDAC)?**
    - ○ Yes ➔ ***Go to question 16a.***
    - ○ No ➔ ***Thank you. We appreciate your time. You may return the completed survey via mail or fax.***

16a. **What do you use the State Data Analytics Contractor (SDAC) for? (Mark all that apply)**
    - ○ Cost information
    - ○ Patient care coordination
    - ○ Identify patients to target to reduce potentially preventable events
    - ○ Prescription utilization information
    - ○ Other: (Write in) _____

17. **In thinking about the tools available when you log into the SDAC, please indicate how useful you find each of the following tools:**

	Not at all useful	Not very useful	Somewhat useful	Very useful	Extremely useful	I do not use this tool
17a. Population management reports	○	○	○	○	○	○
17b. Patient profile	○	○	○	○	○	○
17c. Key Performance Indicators (KPI) statistics	○	○	○	○	○	○

Thank you for sharing your experience and opinions! Your answers are greatly appreciated.

For your convenience you may return the completed survey via mail or fax.

To submit the survey via mail, please use the enclosed postage-paid envelope to mail the survey to:

DataStat, 3975 Research Park Drive, Ann Arbor, MI 48108

To submit the survey via fax, please fax to: 734-663-9084.

«ptseq» «b2d1e_f»

363 03 CTD