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Use of Preventive Services by Children and Adults with IDD: Fiscal Years 2008 and 2009

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Fiscal Years 2008 and 2009

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February 28, 2011

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Executive Summary

This study developed out of the Iowa legislature's charge that it be determined whether the physical and dental health needs of recipients of medical assistance who are persons with intellectual and/or developmental disability (IDD) were being regularly and fully addressed. Given the progress being made in Iowa on overcoming the institutional bias of the state's service system—with more individuals with disabilities able to choose to live in the community rather than in large congregate settings—legislators wanted to know whether these individuals could access necessary preventive health and dental services. Unfortunately, the data in this report demonstrate that disparities exist and that work is needed to close the gap.

The federal *Affordable Care Act* is designed to increase access to affordable healthcare that will benefit people with disabilities, including those with intellectual and/or developmental disabilities. As an example, the new law helps make wellness and prevention services affordable and accessible by requiring health plans to cover many preventive services without charging a copayment, coinsurance, or deductible. As of September 23, 2010 health plans cannot limit or deny benefits or deny coverage for a child younger than age 19 simply because of a "preexisting condition." In 2014, the Act will prohibit insurance companies from denying coverage or charging more to any person based on their medical history. The new law improves access to medical diagnostic equipment so people with disabilities can receive routine preventive care and cancer screenings by establishing exam equipment accessibility standards. These standards will be set by the Food and Drug Administration and the Access Board.

Equally relevant to the disparities uncovered in this study, the *Affordable Care Act* improves data collection on health disparities for persons with disabilities, as well as training of health providers. Data on health status of and outcomes for people with disabilities are to be included more comprehensively in national databases. Pre-service training of health professionals must include a greater emphasis on addressing the health needs of people with disabilities. The results of this study confirm the need for these important changes.

This study provides insights into the use of preventive care services by children and adults with IDD and compares use rates for this population with those of Medicaid enrollees in the "income eligible" group and those who are disabled, but not identified as IDD for this project. For the purposes of this report, IDD refers to enrollees with Intellectual and/or Developmental Disability.

Findings

1. Children from 3-6 years old identified as having IDD are more likely to receive a DTaP than other children enrolled due to disability, but not as likely as children who are income eligible. This pattern is also evident with regard to the flu shot.

2. Young women identified as having IDD are less likely to receive the initial HPV vaccine; however, if they do receive it, they are more likely to complete the three vaccine series.
3. Colorectal and breast cancer screening rates are low among all Medicaid enrollees, but nearly non-existent for those with IDD.
4. Annual monitoring for persistent medications is the lowest for enrollees identified as having IDD.

Recommendations

1. Medicaid enrollees identified with IDD need enhanced opportunities to access preventive care services.
2. Providers require education to understand the preventive care needs of enrollees identified with IDD.
3. Further work to understand the dynamics of preventive care services from the perspectives of providers, enrollees and caregivers should be used to design and implement enhanced services.

Conclusions

The roots of this study go back to a charge from the Iowa legislature to determine whether the physical and dental health needs of recipients of medical assistance who are persons with intellectual and/or developmental disability were being regularly and fully addressed. Given the progress in Iowa on overcoming the institutional bias of the state's service system—with more individuals with disabilities having the choice to live in the community instead of in large congregate settings—legislators wanted to know whether people with intellectual and/or developmental disabilities have the access to necessary preventative health and dental services that other Iowans have. Unfortunately, the data in this report demonstrate that disparities exist and that more needs to be done to close the gap.

Fortunately, the federal *Affordable Care Act* points to a new day for accessible, affordable healthcare that will benefit people with disabilities—including those with intellectual and/or developmental disabilities. Some examples are listed below.

- The new law helps make wellness and prevention services affordable and accessible to all by requiring health plans to cover many preventive services without charging a copayment, coinsurance, or deductible.
- As of September 23, 2010, health plans cannot limit or deny benefits or deny coverage outright for a child younger than age 19 simply because the child has a “preexisting condition.” In 2014, the Act will prohibit insurance companies from denying coverage or charging more to any person based on their medical history.
- The new law improves access to medical diagnostic equipment so people with disabilities can receive routine preventive care and cancer screenings by



establishing exam equipment accessibility standards. These standards will be set by the Food and Drug Administration and the Access Board.

Equally relevant to the disparities uncovered in this study, the *Affordable Care Act* improves data collection on health disparities for persons with disabilities, as well as training of health providers. It is now expected that data on health status and outcomes of people with disabilities will be included comprehensively in national databases. Pre-service training of health professionals must include a greater emphasis on addressing the health needs of people with disabilities. In addition, Iowa needs to implement policies that support training and incentives to reduce workforce shortages and to ensure that providers are available to accept reimbursement from both public and private health care plans. The results of this study confirm the need for these important changes.

Introduction

The University of Iowa Public Policy Center (PPC) has partnered with the Iowa Medicaid Enterprise and the Center for Disabilities and Development (CDD) to investigate the use of preventive care by children and adults identified as having Intellectual and/or Developmental Disability (IDD). The first report titled *Health Care Utilization by Iowans Enrolled in Medicaid and Identified with Mental Retardation and/or Developmental Disabilities (MRDD)* was published in 2008. The report can be viewed at http://ir.uiowa.edu/ppc_health/32. In this current report, emphasis was placed on the receipt of well-person care—well child and well adult—as well as the receipt of preventive dental services.

This report uses outcomes research to determine whether children and adults are provided with preventive care as evidenced by the receipt of specific screening and monitoring activities. The preventive outcome measures have either been adapted from the NCQA HEDIS measurement set or developed by the PPC following discussion with content experts. People who were identified with IDD in the first study provide the population for this investigation. The outcomes measures are compared to two other groups: (a) people who qualify for Medicaid only because of low income (Income Eligible) and (b) those who are enrolled in Medicaid due to disability that qualifies them for Supplemental Security Income (SSI), but they do not have IDD.

Definitions

IDD	Intellectual and/or Developmental Disability. In this report, people in the IDD group were identified through a complex case-finding protocol outlined in Appendix A in SFY2005.
SSI	Supplemental Security Income. A program that provides income and Medicaid coverage for individuals who are considered both low income and blind or disabled. Although most children and adults with IDD would fall under this program, this category also includes children with disabilities that do not fall into the category of having an IDD.
Income Eligible	Individuals who are eligible for Medicaid under this specification are eligible due to financial circumstances and need not be disabled in any way.
Measurement year	The year for which the measure is calculated. SFY 2008 encompasses the period July 2007 through June 2008, while SFY2009 encompasses the period July 2008 through June 2009.

Children's Outcome Measures

Immunizations

NCQA provides protocols for over 10 different combinations of childhood immunizations to measure compliance with recommended immunization schedules. Two factors complicate the use of these protocols. First, children with IDD may not be diagnosed until after they are 2 years old, while most immunization combinations center on the immunizations required in the first 15 months of life. Second, children in Iowa may obtain vaccinations in a variety of settings that may or may not submit billing information to the Medicaid program. For example, the Vaccine for Children program in Iowa provides vaccines to participating clinics free of charge and can be administered to children in the Medicaid program or to children who have insurance plans that do not pay for immunization. Though providers are asked to submit these immunizations through the normal billing process, it is not clear that the practice is uniformly followed, since no payment will be received for submitting the bill. Children may also receive immunizations at free school-based shot clinics or public health entities that choose not to submit billing to Medicaid.

This report focuses on two types of immunizations: the influenza vaccine that should be given every year and the diphtheria, tetanus, and pertussis vaccination (DTaP) that should be given before entering school. Tables IMM1 and IMM2 provide the rates of immunization for the three study groups for the two years. To be included in the measures, children had to be eligible for the measurement year and 3-6 years of age. As influenza immunizations should be provided every year, children were counted as having had an influenza immunization if they received it during the measurement year. DTaP is to be given prior to entering school; therefore children were counted as having had a DTaP if they received it during the measurement year or the year prior.

Table IMM1. Rates of Influenza and DTaP immunization in children 4-5 years of age, SFY2008 and SFY2009

Year Study group	DTaP Percent (number)	Influenza Percent (number)
SFY2008		
IDD	32% (61)	26% (49)
SSI	29% (276)	14% (132)
Income Eligible	36% (4298)	16% (1871)
SFY2009		
IDD	30% (35)	38% (45)
SSI	22% (268)	20% (245)
Income Eligible	32% (5070)	20% (3098)

The DTaP immunization rates for children with IDD were comparable to those for children in the other groups. Overall DTaP immunization rates were higher than for influenza except for IDD children in SFY 2009, when the influenza rates were higher. The lowest rates for both immunizations are found in the SSI group. Although all immunization rates could be improved, the comparable DTaP rates and higher influenza rates are encouraging as children in the IDD group are in the high-risk group for influenza and therefore should be more likely to receive the immunization.

Immunizations usually are not given without some sort of well-child visit. In determining access to preventive services and what those services entail for the IDD group, it is important to assess how services may be bundled. Tables IMM3 and IMM4 provide the rate of immunization for children who had a well-child visit within the measurement year.

Table IMM3. Rates of Influenza and DTaP immunization in children 4-5 years of age, SFY2008 with and without a well-child visit (WCV)

Well-child visit Study group	DTaP Percent (number)	Influenza Percent (number)
Had WCV		
IDD	51% (42)	37% (30)
SSI	49% (204)	22% (93)
Income Eligible	53% (3269)	23% (1396)
Did not have WCV		
IDD	18% (19)	18% (19)
SSI	13% (72)	7% (32)
Income Eligible	18% (1029)	8% (475)

Table IMM4. Rates of Influenza and DTaP immunization in children 4-5 years of age, SFY2009 with and without a well child visit (WCV)

Well-child visit Study group	DTaP Percent (number)	Influenza Percent (number)
Had WCV		
IDD	42% (25)	48% (28)
SSI	37% (206)	31% (171)
Income Eligible	45% (3907)	27% (2388)
Did not have WCV		
IDD	16% (10)	28% (17)
SSI	9% (62)	11% (74)
Income Eligible	16% (1163)	10% (710)

Tables IMM3 and IMM4 clearly indicate that children with a well-child visit were more likely to receive a DTaP and influenza immunization than children who did not have a well-child visit. Though this is common wisdom in many respects, what may be most discouraging about these findings is the percent of children who did not receive an immunization despite a well-child visit. Further research to determine if and where these children receive immunizations may be warranted.

HPV Vaccine

The Centers for Disease Control and Prevention (CDC) recommends that young women be vaccinated for Human papillomavirus (HPV) at 11 years of age. The vaccination requires a series of 3 shots, with the second shot recommended at 30-60 days after series initiation, and the third shot recommended at 6 months after series initiation. The CDC provides a catch-up schedule for women who start late and instructions on how to immunize women who do not complete the series within the time constraints listed above. The Iowa Medicaid program has been reimbursing providers for this service since 2006.

For this analysis, the question of HPV vaccination among young women with an IDD relates to whether parents or health care providers of these young women consider this to be a preventive service of import. There may be an assumption that women with IDD will not be sexually active, eliminating the benefit of this vaccination. However, IDD is not considered an exception within the CDC guidelines, and women with IDD certainly may be sexually active.

Table HPV1 provides a summary of the women who were eligible by age and group. The smallest group of enrolled women was in the IDD group, with 834 enrolled in SFY208 and 795 enrolled in SFY2009, as compared to over 4,000 women enrolled in SSI and approximately 20,000 enrolled in Income Eligible.

Table HPV1. Women 11-18 years old by age and study group, SFY2008 and SFY2009

Age	IDD	SSI	Income Eligible
SFY2008			
11-12 years	174	732	5334
13-18 years	660	3,396	13,000
SFY2009			
11-12 years	169	767	6749
13-18 years	626	4,040	17,013

Rates were calculated for women ages 11-18 for each fiscal year to reflect both the proportion who initiated the HPV series and the proportion who completed the series at any time during the period SFY2007 through SFY2010. HPV vaccinations were identified by CPT 90649 and 90650. Women who received at least 3 shots were

considered as having “completed” the series. We did not consider whether the series was completed within the time constraints recommended by the CDC. Tables HPV2 and HPV3 indicate the rates of HPV vaccine initiation and completion by age, study group and fiscal year.

Table HPV2. Rates of HPV vaccine initiation and completion, SFY2008

Age Study group	Initiated HPV Vaccine Percent (number)	Completed HPV Vaccine Percent (number)
11-12 years		
IDD	21% (36)	33% (12)
SSI	30% (221)	41% (91)
Income Eligible	36% (1,899)	41% (770)
13-18 years		
IDD	25% (161)	55% (89)
SSI	26% (871)	44% (384)
Income Eligible	38% (4,912)	42% (2,043)

Table HPV3. Rates of HPV vaccine initiation and completion, SFY2009

Age Study group	Initiated HPV Vaccine Percent (number)	Completed HPV Vaccine Percent (number)
11-12 years		
IDD	15% (26)	35% (9)
SSI	24% (183)	31% (56)
Income Eligible	25% (1,707)	35% (594)
13-18 years		
IDD	24% (151)	52% (79)
SSI	24% (966)	45% (435)
Income Eligible	36% (6,033)	40% (2,422)

Though women with IDD were least likely to begin the HPV vaccine series, they were the most likely to complete the 3-shot series. It may be difficult to speculate on why young women with IDD are less likely to begin the series. Parents may not expect that young women with IDD will engage in sexual activity or they may anticipate that they will start much later and therefore have more time before they need to begin the shots, perhaps after they have turned 21. However, it appears that once parents and young women have made the decision to obtain the HPV vaccine, they remain more committed to completion of the series than others.

Adult's Outcome Measures

Colorectal cancer screening

Recent public education and advertising efforts have focused on colorectal cancer screening. Early detection of colorectal cancer provides the opportunity for treatment and restoration to health. Successful remission and positive long-term outcomes are enhanced when cancers are found early. The colorectal cancer screening measure includes persons 51-75 years old who have been eligible for at least 11 months in each of the measurement years and the year prior. People who had a fecal occult blood test within the past 2 years, a flexible sigmoidoscopy within the past four years, or a colonoscopy within the previous 9 years are considered to have been screened. Due to the fact that very few people remain on Medicaid for four years, let alone nine, and the need to provide measures that are useful for a broad set of enrollees, we modified this measure. Anyone who had any of the three tests in the measurement year or the year prior was included as having had a colorectal cancer screening. The results are found in Table COL1.

TableCOL1. Rates of colorectal cancer screening, SFY2008 and SFY 2009

Fiscal year Study group	Had screening Percent (number)
SFY2008	
IDD	2% (60)
SSI	6% (1300)
Income Eligible	10% (56)
SFY2009	
IDD	2% (59)
SSI	7% (1803)
Income Eligible	12% (99)

The rates of colorectal cancer screening were low for all enrollees in the study groups; however, they were the lowest for those in the IDD group. In an effort to understand more completely what may be occurring, we limited the measure to only fecal occult blood tests (FOBT). These tests are easily collected from feces as opposed to the flexible sigmoidoscopy, which requires an invasive technique, and the colonoscopy, which adds anesthetic to the invasive technique.

Table COL2 provides the percent of enrollees in the study groups who received just an FOBT. These rates were extremely low across all study groups regardless of the measurement year. The change in rate for the IDD group was very small as compared to the change in rate for the SSI and Income Eligible groups. This shows that most of

the colorectal cancer screening provided for enrollees with IDD was FOBT, while the majority of colorectal cancer screenings for the other two groups was one of the two invasive methods. This may suggest that more emphasis on FOBT for the IDD group could increase the screening rate, as these results indicate that persons with IDD are highly unlikely to undertake colorectal cancer screening by flexible sigmoidoscopy or colonoscopy.

TableCOL2. Rates of colorectal cancer screening by FOBT, SFY2008 and SFY 2009

Fiscal year Study group	Had FOBT Percent (number)
SFY2008	
IDD	1% (22)
SSI	1% (240)
Income Eligible	2% (9)
SFY2009	
IDD	1% (23)
SSI	2% (559)
Income Eligible	2% (16)

Breast cancer screening

Breast cancer screening has become a routine health screening for many women in recent years. Mammograms coupled with a manual exam by a health care provider constitute breast cancer screening. For the purposes of this measure, all women 42-69 years of age who were enrolled in the measurement year and the year prior were included. Women were considered to have had a breast cancer screen if they received a mammogram in the measurement year or the year prior. Mammograms are not an invasive test; however, there may be some discomfort as the breast is imaged. Table BCS1 provides the rates of breast cancer screening in the three study groups.

TableBCS1. Rates of breast cancer screening by group, SFY2008 and SFY 2009

Fiscal year Study group	Had Screening Percent (number)
SFY2008	
IDD	9% (241)
SSI	22% (2797)
Income Eligible	41% (558)
SFY2009	
IDD	9% (231)
SSI	21% (4366)
Income Eligible	43% (893)

The pattern of breast cancer screening is very similar to that for colorectal screening; however, the percent of enrollees screened is much higher. Enrollees within the IDD group were least likely to receive breast cancer screening, with a 9% screening rate for both years. Enrollees in Income Eligible were most likely to receive breast cancer screening with 41% and 43% receiving screening, respectively.

Annual Monitoring for Patients on Persistent Medications

Adults and children prescribed chronic medications require monitoring to assess side effects, medication effectiveness and user compliance. In addition to regular physician visits—as often as every 3 months in some instances—lab tests to determine side effects or serum drug levels are utilized to monitor chronic prescription drug use.

NCQA has developed a measure to assess the proportion of people who are on chronic medications who also received monitoring. This measure includes people who were 18 years of age or older as of the end of the measurement year. The medications include angiotensin converting enzyme (ACE) inhibitors or angiotensin receptor blockers (ARB), digoxin, diuretics, and anticonvulsants including phenobarbital, carbamazepine, phenytoin, and divalproex sodium or valproic acid. Because people with IDD may be on a number of these medications from the time they are young, the measure has been modified for our purposes to include children 5-18 years old. There are seven rates calculated with the denominator consisting of those dispensed the medication for at least 180 days during the fiscal year and the numerator consisting of those in the denominator who were monitored during the fiscal year. Tables AMP1 and AMP2 provide the rates by age, study group and fiscal year.

Table AMP1. Number of children and adolescents on persistent medications and proportion monitored by medication, study group and fiscal year SFY2008 and SFY2009

Year Medication	IDD % monitored (# on medication)	SSI % monitored (# on medication)	Income Eligible % monitored (# on medication)
SFY2008			
ACE/ARB	44% (36)	52% (69)	61% (44)
Digoxin	46% (13)	68% (22)	33% (6)
Diuretics	53% (19)	68% (19)	73% (15)
Phenobarbitol	43% (106)	50% (10)	60% (5)
Carbamazepine	76% (87)	70% (56)	83% (47)
Phenytoin	60% (15)	86% (7)	100% (2)
Divalproex sodium or Valproic acid	63% (288)	64% (266)	67% (226)
SFY2009			
ACE/ARB	44% (46)	49% (87)	63% (67)
Digoxin	27% (11)	36% (22)	33% (6)
Diuretics	46% (13)	59% (27)	65% (17)
Phenobarbitol	50% (106)	56% (16)	75% (4)
Carbamazepine	58% (106)	55% (74)	64% (58)
Phenytoin	64% (14)	60% (10)	50% (2)
Divalproex sodium or Valproic acid	64% (257)	60% (249)	62% (255)

Table AMP2. Number of adults on persistent medications and proportion monitored by medication, study group and fiscal year SFY2008 and SFY2009

Year Medication	IDD % monitored (# on medication)	SSI % monitored (# on medication)	Income Eligible % monitored (# on medication)
SFY2008			
ACE/ARB	80% (272)	84% (286)	78% (731)
Digoxin	74% (19)	89% (144)	77% (22)
Diuretics	81% (213)	87% (2100)	77% (443)
Phenobarbitol	28% (286)	19% (126)	70% (10)
Carbamazepine	74% (281)	66% (197)	64% (42)
Phenytoin	83% (120)	70% (219)	62% (29)
Divalproex sodium or Valproic acid	77% (532)	65% (524)	52% (98)
SFY2009			
ACE/ARB	80% (278)	87% (2696)	81% (735)
Digoxin	56% (18)	85% (163)	71% (21)
Diuretics	84% (230)	88% (2346)	83% (533)
Phenobarbitol	25% (289)	16% (129)	88% (12)
Carbamazepine	68% (294)	63% (215)	67% (55)
Phenytoin	86% (111)	75% (236)	76% (33)
Divalproex sodium or Valproic acid	76% (536)	65% (544)	57% (108)

It is difficult to identify a pattern in the monitoring of persistent medications. Numbers are very small in some groups, leading the percent monitored to be highly variable over time and by study group, particularly among children. Though the percent of children monitored within the Income Eligible program prescribed phenytoin is 100%, there are only 2 children within this group, a number so small as to make it nearly insignificant when calculating a percent. The percent of adults monitored never exceeds ninety, and dips as low as sixteen (adults on phenobarbitol during SFY2009). The results for all groups shows room for improvement, but perhaps even more so for the IDD group, as children and adults in this group may be more likely to be on multiple prescriptions and may require closer monitoring due to difficulty in regimens and compliance.

Appendix A

Executive Summary: First Report

Background

The first report focuses on the utilization of medical and dental services by Iowa children and adults enrolled in Medicaid who have mental retardation and/or developmental disability (MRDD). Medicaid enrollees were identified as having MRDD if they met one of four criteria: had at least one Medicaid claim with an identified MRDD diagnosis code during the period January 1, 2001 through December 31, 2005; had at least one claim for targeted case management for mental retardation or developmental disability; resided in an Intermediate Care Facility for people with Mental Retardation (ICFMR) or State facility for people with Mental Retardation (SMR); or had an enrollment exception indicator to allow special services for mental retardation or developmental disability.

Methods

We identified 18,831 Medicaid enrollees with MRDD who were eligible for at least 11 months during calendar year (CY) 2005. Fifty-six percent were male, 48% lived in a metropolitan county, 78% lived in the community, 64% had received targeted case management in the last year, and 59% were eligible for Medicaid through the HCBS waiver.

Results

Utilization of medical and dental care services were investigated utilizing measures developed by the National Committee on Quality Assurance (NCQA) termed HEDIS outcomes. We found that children from 3-6 years of age with MRDD were less likely to have had a well-child visit than those without MRDD, while younger adults with MRDD were just as likely as adults without MRDD to have had an ambulatory care visit. However, older adults with MRDD had lower rates of visits compared to other Medicaid enrollees, and rates for all adults with MRDD were not as high as for people enrolled in commercial insurance. Dental utilization in adults and children with MRDD, measured as having at least one dental visit during CY2005, varied. Children 1-3 years old with MRDD were more likely to have had a visit than children 1-3 years old without MRDD, while children 4-11 years old were less likely to have had a visit. The adult dental visit rate was high, at over 80% for all adults 18-65+ years of age, especially as compared with results in the literature, which ranged from 30% to 70%.



The results from this report primarily indicate that younger adults with MRDD are accessing medical and dental care services through the Medicaid program at or above the rate of adults without MRDD. For older adults with MRDD, especially those ages 65 and older, preventive or ambulatory care utilization lags behind those with either Medicaid or commercial insurance. However, the analyses do not account for increased need for medical or dental services that may be present in adults with MRDD. Even for those with average or higher than average rates of utilization, adults with MRDD may not be receiving the level of services required to meet their extensive health care needs. In addition, even the higher rates are not sufficient when measured against current recommendations. To meet recommendations in both medical and dental services for adults, the rates would need to approach 100%.

The results for children are varied, though the majority of children with MRDD within the study appear to be receiving fewer services than children without MRDD. There are many possible reasons for this disparity. It may be that visits to medical providers are not coded as well-child visits even when they contain aspects of preventive care because other diagnoses and procedures take precedence. Perhaps some parents do not distinguish the need for well-child visits in addition to visits to specialists and therapists. The current data do not allow us to determine all the possible reasons behind the disparities identified for either medical or dental care services.

Recommendations

1. Improve rates of well-child visits for children with MRDD to be comparable to other children in Medicaid.
2. Investigate how targeted case management can be used by all children with MRDD and be more focused on improving clinical service use.
3. Recruit and retain health care providers in the Primary Care Scarcity Areas and Health Profession Shortage Areas.
4. Enhance the training of medical and dental providers to improve their knowledge and comfort in caring for MRDD populations. The Iowa Department of Human Services and the Iowa Department of Public Health should collaborate to determine how this training could best be provided.
5. Encourage the Department of Inspections and Appeals to educate facilities on ways to improve access to preventive medical and dental care.
6. Evaluate the level of dual diagnosis (mental illness and mental retardation) in the MR population and how this complicates the ability to receive community-based services.
7. Strengthen efforts to identify and provide a Medical Home for every child and adult with MRDD within the Medicaid program.

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8. Develop a set of measurable outcomes for adults and children with MRDD that will be calculated annually to monitor the health and wellness of this population.
 9. Other states' outcome documents should be collected and compiled to understand the state of the art in this area.
 10. Prevention-specific measures such as the provision of prostate cancer screening in men over 50 or adolescent well care could be used.
 11. Periodic surveys to assess satisfaction and utilization of services that are not reflected in the claims data would be useful.
 12. Disease-specific measures such as the use of appropriate medications for people with asthma could be used.
 13. Outcomes related to specific diseases or age groups may be used to better define the utilization of medical care for adults and children.
 14. Research why children with MRDD are not utilizing preventive medical and dental care at the same rate as children without MRDD. Possible approaches include:
 - a. Conduct surveys or focus groups with parents to investigate their understanding of preventive care received by their children with MRDD.
 - b. Chart reviews of ambulatory care visits with specialists or clinics to determine what types of care were provided and identify whether the visits could be considered preventive.
 - c. Research the types of care that children with MRDD receive and the factors related to utilizing either medical or dental care.
 - d. Multivariate analyses may be performed using variables outlined in the report to assess what factors might put children with MRDD at risk for low or no utilization of dental or medical care services.
 - e. Additional variables may be created for the analyses that incorporate previous health care utilization into the multivariate analyses.
 15. Describe procedures adults receive from health care providers and the variety of diagnoses provided to understand more fully why adults access the system and what services they receive.

Appendix B

Measurement Specifications

Immunization

Denominator: Children who turn 3-6 years of age during the measurement year and are eligible for at least 11 months during the measurement year and at least 11 months the year before.

Numerator: Children within the denominator who had an influenza immunization as identified by procedure codes 90657-90660. Children within the denominator who had a DTap immunization as identified by procedure codes 90698, 90700, 90721, 90723, or 90702.

Rates: One rate is computed for each of the immunizations.

HPV Vaccine

Denominator: Females 11-18 years who were eligible for at least 11 months during the calendar year.

Numerator: Females in the denominator who received the HPV vaccine as identified by procedure codes 90649 and 90650.

Rates: Four rates are presented for this measure. The rates for initiating the 3-vaccine course and the rates for completing the course for females 11-12 and 13-18 years of age are calculated.

Colorectal cancer screening

Denominator: People 51-75 years old who have been eligible for at least 11 months in each of the measurement year and the year prior.

Numerator: People who had a colorectal cancer screening in the measurement year or the year prior identified as fecal occult blood test (82270 and 82274), flexible sigmoidoscopy (45330-45335, 45337-45342, 45345) or colonoscopy (44388-44394, 44397, 45355, 45378-45387, 45391, 45392).

Rates: Rates were complete for all screening methods and for FOBT alone.

Breast cancer screening

Denominator: Women 42-69 years of age who were enrolled in the measurement year and the year prior were included.

Numerator: Women who had a breast cancer screen as identified by procedure codes 76083 or 76090-76092.

Rates: One rate was calculated for women 42-69 years of age.

Annual monitoring for persistent medications

Denominator: People who were 5 years of age or older as of the end of the measurement year and were on any of the following prescription therapies during the measurement year: angiotensin converting enzyme (ACE) inhibitors or angiotensin receptor blockers (ARB), digoxin, diuretics, and anticonvulsants including phenobarbitol, carbamazepine, phenytoin, and divalproex sodium or valproic acid.

Numerator: People who were monitored during the measurement year. People on ACE/ARB, Digoxin or Diuretics had to have a serum potassium (84132, 80050, 80051, 80053, 80048, 80069) and either a serum sodium (82565, 80050, 80053, 80048, 80069, 82575) or a blood urea nitrogen (84520, 84525, 80050, 80053, 80048, 80069). People on Phenobarbitol, Carbamazepine, Phenytoin, or Valproic Acid/Divalproex sodium had to have a serum concentration for the medication. The procedure codes for these concentration tests are listed in Table B1.

Rates: Monitoring rates were calculated for each prescription therapy. People could appear in more than one rate.

Table B1. Procedure codes to indicate monitoring of the prescription therapy

Prescription therapy	Codes for serum concentration test
Phenobarbitol	80184
Carbamazepine	80156, 80157
Phenytoin	80185, 80186
Divalproex sodium or Valproic acid	80164