Issue Brief

Vision Services for Children on Medicaid
A Review of EPSDT Services

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A significant number of children in the United States are living with undiagnosed vision problems, and low-income children and children of color are disproportionately affected. This need not be the case. Most low-income children qualify for health insurance through their state's Medicaid program. Medicaid offers enrolled children a comprehensive preventive, diagnostic, and treatment benefit, called Early and Periodic Screening, Diagnostic and Treatment (EPSDT). Federal laws place affirmative obligations on states to make sure that Medicaid-eligible children and their families are aware of EPSDT and have access to required screening and necessary treatment services. At a minimum, EPSDT must include age-appropriate vision assessment and services to correct or ameliorate vision problems, including eyeglasses. As explained in this issue brief, states' coverage of vision services through EPSDT is uneven.

After discussing the scope of the problem, we will describe the EPSDT benefit and some of the policies states are using to ensure that vision services are provided through EPSDT. We conclude by offering recommendations for EPSDT coverage so that the range of children's eye problems can be identified early and addressed before they become more advanced, the health and social consequences more pronounced, and treatment more difficult and costly.

I. Vision Loss in Children – The Scope of the Problem

A. Background

An estimated 25 percent of all school children in the United States have some type of vision problem significant enough to affect daily life and performance in school.[2] Vision problems in

[1] Sarah Grusin, a recent graduate of Yale Law School, provided invaluable assistance with this Issue Brief.
[2] Joel N. Zaba, *Children's Vision Care in the 21st Century & Its Impact of Education, Literacy, Social Issues, & the Workplace: A Call to Action*, 22 J. OF BEHAVIORAL OPTOMETRY 39 (2011), *available at* http://www.oepf.org/sites/default/files/journals/jbo-volume-22-issue-2/22-2%20Zaba.pdf (last visited Nov. 17,

children are diverse in nature and severity and present with many different symptoms. Many conditions affect "visual acuity" (or the clarity of vision) at certain distances. The most common visual acuity problems among children are refractive errors, often nearsightedness (myopia).[3]

Amblyopia (diminished vision, usually in one eye) is one of the more severe vision problems. Amblyopia occurs when visual images are abnormally processed by a young child's developing brain. It is associated with other conditions that interfere with normal binocular vision, including strabismus (ocular misalignment), anisometropia (a large difference in the refractive power between the eyes, which causes images to be suppressed in one eye), and cataracts (lens opacity). According to the American Academy of Pediatrics (AAP) and the United States Preventive Services Task Force (USPSTF), "[a]mblyopia is regarded as a disease of childhood [affecting two to four percent of children] however, its effects are irreversible if left untreated, and it is the most common cause of monocular vision loss among adults 20 to 70 years of age."[4] Amblyopia can usually be addressed by early detection and intervention (*e.g.*, patching, eyeglasses).[5] However, the effectiveness of treatment decreases with age and is less successful after age 12.[6]

Other vision problems include ocular pathology (*e.g.*, astigmatism or retinoblastoma—a type of ocular cancer), binocular disorders (*e.g.*, convergence insufficiency), and color disorders.

2014); *see also*, *e.g.*, Edwin C. Marshall et al., *Through Our Children's Eyes*: *The Public Health Impact of the Vision Screening Requirements for Indiana School Children*, 81 OPTOMETRY 71, 72 (2010) (reporting that 20% of kindergarten students have a vision problem that can affect school performance and self-development), *available at* http://download.journals.elsevierhealth.com/pdfs/journals/1529-1839/PIIS152918390900445X.pdf (last visited Nov. 17,2014).

[3] Charles E. Basch, *Vision and the Achievement Gap among Urban Minority Youth*, 81 J. SCHOOL HEALTH 599, 599 (Oct. 2011).

[4] U.S. Preventative Services Task Force, *Vision Screening for Children 1 to 5 Years of Age: US Preventive Services Task Force Recommendation Statement*, 127 PEDIATRICS 340, 341, 343 (2011) (hereinafter *USPSTF Guidelines*), *available at* http://pediatrics.aappublications.org/content/127/2/340.full.pdf+html (last visited Nov. 17, 2014); *see also*, *e.g.*, Sean P. Donahue et al. *Guidelines for Automated Preschool Vision Screening: A 10-Year, Evidence-Based Update*, 17 J. AM. OF ASS'N PED. OPHTHAL. & STRABISMUS 4, 4 (2013).

[5] *USPSTF Guidelines*, *supra* note 4, at 341-42; *see also*, *e.g.*, Alex R. Kemper, M.D. et al., *Vision Screening Among Children Aged <6 Years—Medical Expenditure Panel Survey, United States, 2009-2010*, 63 CDC MORBIDITY & MORTALITY WEEKLY RPT. 43 (Sept. 12, 2014).

[6] Alex R. Kemper, *supra* note 5, at 43.

Table 1: Common eye conditions[7]

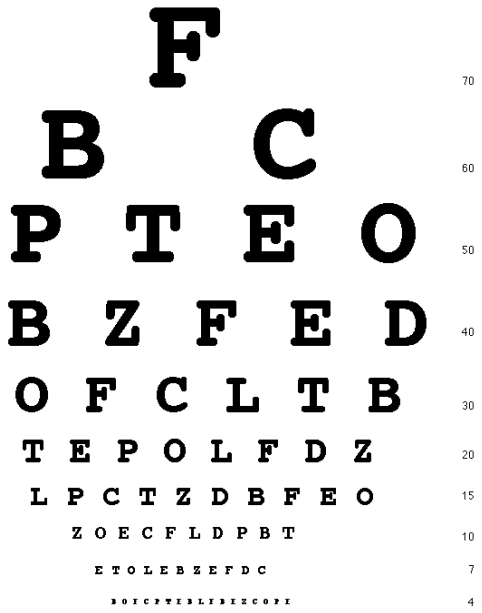
Amblyopia	Poor vision in an otherwise normal appearing eye that occurs when the brain does not fully recognize sight from that eye. Common causes: strabismus and refractive errors.
Strabismus	Misalignment of the eyes in any direction, including the inability to direct the two eyes in the same direction.
Refractive errors	The most common vision problem of childhood, often nearsightedness (poor distance vision) and/or astigmatism (imperfect curvature of the front surface of the eye).
Binocular vision disorders	These include convergence insufficiency and ill-sustained accommodation.

Treatments for many of these vision problems are successful and cost effective. However, early detection is critical.[8] While there is a lack of good data on the proportion of children who receive high quality vision assessments, it is clear that too few children are adequately screened, and visual impairments go undetected throughout childhood.[9] The National Commission on Vision & Health reported on children, aged 5-17, who visited an eye care professional and found that 79 percent of these children had not visited an eye care provider within the last year, and 35 percent had never seen an eye care professional.[10] Another study of 12-19 year olds found that 90 percent of the visual impairment in the group was due to uncorrected refractive error.[11] Similarly, a study of children aged 9-15 found that 20 percent needed eyeglasses but only 10 percent of those children had them.[12] The lack of early vision assessment and care contributes to the rise in rates of vision problems as children get older.[13]

Several factors contribute to the under-detection and under-treatment of vision problems in children. First, many primary care providers do not routinely perform a vision screening during the well-child visit. Reports have suggested that as many as 60 percent of primary care

[7] *See* Am. Acad. of Ophthalmology, *Joint Policy Statement-Vision Screening for Infants and Children* (2013); Dominick M. Maino, *The Binocular Vision Dysfunction Pandemic*, 41 OPTOMETRY & VISION DEV. 6 (2010) (editorial).
[8] *See, e.g.*, Michael L. Ganz et al., *Prevalence and Correlates of Children's Diagnosed Eye and Vision Conditions*, 113 OPHTHALMOLOGY 2298, 2298-99 (Dec. 2006).
[9] Telephone conversation with Alex R. Kemper, M.D., Duke Clinical Research Institute and Department of Pediatrics, Durham, N.C. (Nov. 19, 2014); *see also* Alex R. Kemper, *supra* note 5, at 45, 46.
[10] National Comm'n on Vision & Health, *Vision Exams for children Prior to Entering School* (undated), http://www.visionandhealth.org/documents/FactsheetVisionexams123008MAS26.pdf (last visited Nov. 6, 2014).
[11] Charles E. Basch, *supra* note 3, at 600.
[12] Joel N. Zaba, *supra* note 2, at 40 (noting that, thus, 90% of those children needing eyeglasses were not wearing them).
[13] ANNETTE FEREBEE, THE CENTER FOR HEALTH AND HEALTH CARE IN SCHOOLS, CHILDHOOD VISION: PUBLIC CHALLENGES & OPPORTUNITIES A POLICY BRIEF 3 (Nov. 2004).

physicians do not perform preschool vision screening, even after receiving training intended to increase screenings.[14] Second, when vision screening does occur, it often relies on testing using the familiar Snellen eye chart, illustrated below.[15]



The Snellen eye chart, introduced in 1899, was modified in 1938 and has remained essentially unchanged since then.[16] The Snellen chart only measures distance visual acuity. As a result, the Snellen chart fails to capture many childhood vision problems, including amblyopia, other binocular problems, ocular disease, or cancer.[17] The Snellen chart also does not measure visual functioning at near distance; which is vital for computing, reading and writing.[18] The Snellen test has been reported to have "sensitivity" as low as 27 percent, which means that it can miss as many as 73 percent of children with vision impairments.[19]

Finally, when a screening assessment does positively identify a potential visual problem, many children never receive the necessary follow-up diagnostic examination or treatment. In one study of children who were treated by an eye doctor, 80-86 percent had seen a pediatrician or family physician in the last year, but only 18-26 percent of those children had been referred to

[14] Edwin C. Marshall, *supra* note 2, at 73.
[15] Joel N. Zaba, *supra* note 2, at 40.
[16] Annette Ferebee, *supra* note 13, at 3.
[17] Shelley Hopkins et al, *Review of Guidelines for Children's Vision Screenings*, CLINICAL & EXPER. OPTOMETRY 1, 3 (2013); Zaba, *supra* note 2, at 3. *See also* Wanda Vaughn et al., *The Association Between Vision Quality of Life and Academics as Measured by the College of Optometrists in Vision Development Quality of Life Questionnaire*, 77 OPTOMETRY 116, 117 (Mar. 2006) ("Children who pass an eyesight screening may have visual skills or information processing problems that often are overlooked with screenings").
[18] Shelley Hopkins, *supra* note 17, at 3.
[19] Edwin C. Marshall, *supra* note 2, at 73.

an eye care provider for an eye examination.[20] Another study estimated that, when vision problems are identified during a school screen, 40-67 percent of screened children do not receive the recommended follow-up care from an eye doctor.[21]

B. Prevalence of Vision Loss Among Low-Income and Minority Children

The rates of uncorrected vision problems are worse among racial and ethnic minority, low-income, and uninsured children. One study found that children whose families have incomes below the Federal Poverty Level (FPL) are nearly twice as likely to have visual impairments as children from families whose incomes were equal to, or greater, than 200 percent of FPL.[22] Despite higher rates of visual impairment, children from lower income families are less likely to have a diagnosed eye condition than children living in higher income families.[23] They are less likely to visit an eye care provider than children from higher income families.[24] Even among children with a diagnosed eye condition, children from families with incomes below 400 percent of FPL receive fewer and less intensive services.[25] Furthermore, the rate of youths reporting wearing eyeglasses is higher among those with private insurance than among children with public insurance or no insurance.[26] Uninsured children are three times as likely to go without eyeglasses when they are needed.[27]

Studies also highlight that "[v]ision problems are highly and disproportionately prevalent among school-aged urban minority youth."[28] One study reported that Asian, Hispanic, and Black children are significantly less likely than non-Hispanic White children to have visited an eye care provider during the preceding 12 months.[29] Another study of children with special health care needs indicated that Black, Hispanic, and multiracial children are two to three times more likely than white children to have unmet vision care needs.[30]

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[20] *Id.*
[21] Joel N. Zaba, *supra* note 2, at 40.
[22] Edwin C. Marshall, *supra* note 2, at 72.
[23] Michael L. Ganz, *supra* note 8, at 2301-03.
[24] *Id.*
[25] Michael L. Ganz et al., *Patterns of Eye Care Use and Expenditures Among Children with Diagnosed Eye Conditions*, 11 J. AM. ASS'N FOR PED. OPHTHALMOL. & STRABISMUS 480 (2007).
[26] Alex R. Kemper et al., *Use of Corrective Lenses Among Adolescents: Findings from the National Health and Nutrition Examination Survey*, 44 J. AM. ASS'N FOR PED. OPHTHALMOL. & STRABISMUS 356, 360 (2007), *available at* http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2132442/pdf/nihms-21567.pdf (last visited Nov. 17, 2014).
[27] National Commission on Vision & Health, *Vision Exams for Children Prior to Entering School* (undated), http://www.visionandhealth.org/documents/FactsheetVisionexams123008MAS26.pdf (last visited Nov. 6, 2014).
[28] Charles E. Basch, *supra* note 3, at 599; *see also* Joel N. Zaba, *supra* note 2, at 39 ("Children from poor urban areas, many of whom are ethnic minorities, experience more than twice the normal rate of vision problems.").
[29] Edwin C. Marshall, *supra* note 2, at 72.
[30] Kevin C. Heslin et al., *Racial and Ethnic Differences in Unmet Need for Vision Care Among Children With Special Health Care Needs*, 124 ARCHIVES OF OPHTHAL. 895 (June 2002).

C. Developmental Consequences of Untreated Vision Loss

The consequences of undetected and untreated vision problems are far-reaching and long lasting. A child suffering from untreated vision problems is at a greater risk for poor academic performance, emotional and social problems, and permanent vision loss in adulthood.

It has been estimated that 80 percent of what we learn comes through visual processing of information.[31] Indeed, a wide range of visual skills are essential to academic performance. These include tracking (*i.e.*, ability to move across a line of text when reading), teaming or binocularity (*i.e.*, communication between the eyes and the brain), and focusing (*i.e.*, ability to focus accurately at various distances, change focus quickly, and maintain focus).[32] When visual symptoms develop, children with undetected vision impairments may develop behaviors to avoid the symptoms. This behavior can be misinterpreted as evidence of a learning disability or attention deficit disorder. Failure to detect and correct visual impairments specifically related to learning increases the possibility of poor academic performance and dropout.[33]

Furthermore, students with undiagnosed visual problems are more likely to become demoralized, fatigued, and avoid learning tasks that require good eyesight.[34] This can result in students becoming withdrawn and disconnected from their classmates. The result is that "a child with an undetected or untreated vision problem is more likely to develop social or emotional problems."[35] By contrast, simple interventions of reading glasses and vision therapy correlate with improvements in teacher-generated grades, percentiles, and grade equivalents on standardized tests in reading and math.[36]

In addition to ensuring successful performance in school, early vision screening is needed for good child health—to address vision problems and prevent permanent impairment. The visual system continues to develop throughout childhood and uncorrected visual impairment can interfere with the development of the system, resulting in lifelong vision impairment.[37] The most active period of change is during the first four years of life.[38] It is particularly important to identify amblyopia early in childhood. If the misalignment and difference in visual acuity is constant throughout childhood development, the child's developing brain will permanently

[31] Joel N. Zaba, *supra* note 2, at 39.
[32] Charles E. Basch, *supra* note 3, at 601.
[33] Edwin C. Marshall, *supra* note 2, at 72; *see also* Wanda Vaughn et al., *The association between vision quality of life and academics as measured by the College of Optometrists in Vision Development Quality of Life questionnaire*, 77 OPTOMETRY 116, 116-117 (Mar. 2006).
[34] Charles E. Basch, *supra* note 3, at 601.
[35] *Id.* at 602. *See also* Joel N. Zaba, *Social, Emotional, & Educational Consequences of Undetected Children's Vision Problems*, 12 J. BEHAV. OPTOMETRY 66 (2001).
[36] Edwin C. Marshall, *supra* note 2, at 72.
[37] *Id.*
[38] Wanda Vaughn, *supra* note 33, at 117.

ignore input from the weaker eye.[39] The results of untreated amblyopia include poor vision throughout life, increased risk of injury to the sound eye, and significantly reduced quality of life.[40] Treatment for amblyopia is highly effective, but only if it is delivered within the critical period of visual development.[41] As noted, untreated amblyopia is the leading cause of vision loss among adults ages 20 to 70.[42]

In sum, many low-income children are living with undetected and untreated eye problems. The continued prevalence of undetected vision disorders has led one researcher to conclude that the "lack of preventive eye and vision care for children represents a missed opportunity for prevention, early detection, and treatment of health and developmental problems, particularly for children most at risk visually, educationally, and socially."[43]

State Medicaid agencies and their partners, including managed care organizations and Medicaid-participating health care providers, need to pay attention to this problem. The first step is to increase their awareness by providing them with helpful background information.[44]

II. Standards and Recommendations for Screening Children for Vision Loss

Child health experts have developed standards and recommendations for providers who screen children for vision loss. When discussing EPSDT, Congress and CMS have referred to the standards endorsed by the American Academy of Pediatrics (AAP), so these receive particular emphasis below.[45]

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[39] Gary L. Rogers & Catherine Olson Jordan, *Pediatric Vision Screening*, 34 PEDIATRICS IN REV. 126, 127 (2013).
[40] Ronald G. Teed et al., *Amblyopia Therapy in Children Identified by Photoscreening*, 117 OPHTHALMOLOGY 159 (Jan. 2010).
[41] *Id.*
[42] *USPSTF Guidelines*, *supra* note 4, at 343.
[43] Edwin C. Marshall, *supra* note 2, at 72.
[44] In addition to the American Academy of Pediatrics (as discussed in Section II, *infra*), a number of entities provide helpful information, including the National Commission on Vision & Health, *e.g.*, National Commission on Vision & Health, *Vision Exams for Children Prior to Entering School* (undated), http://www.visionandhealth.org/documents/FactsheetVisionexams123008MAS26.pdf (last visited Nov. 6, 2014) (two-page fact sheet with Commission's recommendations for children to have access to comprehensive eye exams); HRSA, *Vision Screening*, http://www.mchb.hrsa.gov/programs/visionscreening/index.html (last visited Nov. 17, 2014); and the National Center for Children's Vision & Eye Health at Prevent Blindness, http://nationalcenter.preventblindness.org (last visited Nov. 17, 2014).
[45] *See* H.R. REP. NO. 101-247, at 399 (1989); CMS, EPSDT-A GUIDE FOR STATES: COVERAGE IN THE MEDICAID BENEFIT FOR CHILDREN AND ADOLESCENTS 4 (June 2014), http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Benefits/Downloads/EPSDT_Coverage_Guide.pdf (last visited Nov. 7, 2014). For the AAP standards and recommendations, *see* BRIGHT FUTURES/AMERICAN ACADEMY OF PEDIATRICS, 2014 PERIODICITY SCHEDULE RECOMMENDATIONS FOR PREVENTIVE PEDIATRIC HEALTH CARE (2014), *available at* http://www.aap.org/en-us/professional-resources/practice-support/Periodicity/Periodicity%20Schedule_FINAL.pdf.; *see also* Am. Acad. of Ped., *Bright Futures Guidelines for Health Supervision of Infants, Children and Adolescents* (3d ed. 2008), http://brightfutures.aap.org/pdfs/guidelines_pdf/1-bf-introduction.pdf (introduction) and

A. When to Conduct a Vision Screening – Periodicity Schedule

The goal of screening is to identify children at risk for the full range of potential vision problems. Screening is the first step in determining which children should be referred for additional diagnosis and follow-up care with eye care professionals.[46]

The AAP's *Bright Futures Guidelines for Health Supervision of Infants, Children and Adolescents* (*Bright Futures*)—the most influential and recognized pediatric guidelines—recommend that children be assessed for eye problems beginning at birth and at all subsequent periodic visits (*i.e.*, newborn, 3-5 days, by 1mo., 2 mo., 4 mo., 6 mo., 9 mo., 12 mo., 15 mo., 18mo., 24 mo., 30 mo., and annually from 3-21 yrs.).[47]

It is particularly important to screen young children. Prevent Blindness America has noted that "the greatest challenge in meeting the needs related to children's vision is ensuring that they receive optimum vision screening with essential follow-up or comprehensive eye examinations within the first 5 years of life when serious eye problems are easiest to correct."[48] One longitudinal study of very young children found that vision screening (at ages 8, 12, 18, 25, and 31 months) was nearly twice as effective at identifying vision problems as a program that screened only at 8 and 18 months.[49]

B. Specifying the Components of the Vision Screen

According to pediatric vision experts, vision evolves as the child ages, and vision assessment needs to evolve with the child. From birth to age 3, the eye evaluation should include an ocular history, which is obtained by asking questions such as: Does your child hold objects close to his face when trying to focus? Do your child's eyes appear straight or do they seem to cross or drift or seem lazy? Have your child's eyes ever been injured? From birth to age 3, the provider should also inspect the eyes externally, assess ocular motility and the pupils and perform a red reflex test.[50]

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https://brightfutures.aap.org/pdfs/Guidelines_PDF/13-Rationale_and_Evidence.pdf (rationale and evidence) (hereinafter collectively referred to as *Bright Futures*).

[46] Annette Ferebee, *supra* note 13, at 4 (Nov. 2004); Charles E. Basch, *supra* note 3, at 602.

[47] *Bright Futures*, *supra* note 45.

[48] PREVENT BLINDNESS AMERICA AND NATIONAL ASSOCIATION OF CHRONIC DISEASE DIRECTORS, A PLAN FOR THE DEVELOPMENT OF STATE BASED VISION PRESERVATION PROGRAMS: SUMMARY OF A RETREAT ON PUBLIC HEALTH VISION PRESERVATION 11-12 (2005) *available at* http://www.preventblindness.net/site/DocServer/State_Based_Vision_Screening_Programs.pdf?docID=1341 (last visited Nov. 18, 2014).

[49] Donahue et al. *Guidelines for Automated Preschool Vision Screening: A 10-Year, Evidence-Based Update*, 17 J. OF AAPOS 4, 5 (2013).

[50] *Bright Futures*, *supra* note 45 (Rationale and Evidence), at 231.

The red reflex test is an objective screening method that has been labelled "the single most important [vision] screening tool for infants and young children."[51] The AAP recommends that all neonates, infants and children have an examination of the red reflex of the eyes performed by a primary care provider trained in this examination technique before discharge from the neonatal nursery and during all subsequent routine health supervision visits.[52] The test evaluates the alignment of the eyes, the presence of refractive errors, as well as ocular diseases, such as retinoblastoma (ocular cancer), retinal detachment, or cataract. The test is performed by the screening provider using an ophthalmoscope, and depending on the results, the child should be referred to an ophthalmologist for follow-up.[53]

In addition, the USPSTF and AAP recommend vision screening for all children, between the ages of 3 and 5 years, to detect the presence of amblyopia or its risk factors.[54] As described above, amblyopia is an alteration in the visual neural pathway to the child's developing brain that can lead to permanent vision loss. A variety of screening tests can be used, including visual acuity tests (*e.g.*, a cover-uncover test) and instrument-based testing (*e.g.*, a photoscreener).[55] For younger children, it is difficult to reliably determine vision problems using a vision chart; thus, instrument-based detection of risk factors for amblyopia is preferred—primarily photoscreening and autorefraction.[56]

As the child ages, the vision assessment should include the most age-appropriate visual acuity test. In addition to the Snellen chart, which measures distance acuity, a number of other vision charts detect other problems. For example, visual acuity can be measured for children aged 3-5 using pictures (*e.g.*, charts of heart, house, circle and square) and smaller ranges of letters. When using a chart to assess visual acuity, the screen should employ the most cognitively difficult chart that the child is able to use. This ensures that the test is capturing vision and not the child's cognitive ability. Recommended tools for ocular alignment and stereovision measurement include the cross cover test and the random dot E stereotest.[57]

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[51] Gary L. Rogers & Catherine Olson Jordan, *Pediatric Vision Screening*, 34 PEDIATRICS IN REV. 126, 128 (2013).
[52] Am. Acad. of Ped. et al., *Red Reflex Examination in Neonates, Infants, and Children*, 122 PEDIATRICS 1401, 1403 (2008), *available at* http://pediatrics.aappublications.org/content/122/6/1401.full.pdf+html (last visited Nov. 18, 2014).
[53] *Id.*
[54] *USPSTF Guidelines*, *supra* note 4, at 341; *see also Bright Futures*, *supra* note 45 (Rationale and Evidence), at 227, 240 (recommending screening for amblyopia, strabismus, and defects in visual acuity by age 5).
[55] Alex R. Kemper, *supra* note 5.
[56] Am. Acad. of Ped. et al., *Instrument-Based Pediatric Vision Screening Policy Statement*, 130 PEDIATRICS 983 (Nov. 2012).
[57] Am. Acad. of Ped., *Eye Examination in Infants, Children, and Young Adults by Pediatricians*, 111 PEDIATRICS 902, 903-04 (Apr. 2003), *available at* http://pediatrics.aappublications.org/content/111/4/902.full.pdf+html, reaffirmed May 2007, http://pediatrics.aappublications.org/content/120/3/683.full. (last visited Nov. 17, 2014); *see also Bright Futures*, *supra* note 45 (Rationale and Evidence), at 227, 231.

It must be emphasized that the same test will have different sensitivities when used to screen for different conditions. Therefore, using only one screening tool is unlikely to achieve sufficient sensitivity for all major vision problems.[58] While not specifying particular tests, the USPSTF indicates that "[c]ombinations of tests were generally associated with greater diagnostic accuracy, compared with single tests of visual acuity, stereoacuity, or ocular alignment…." [59]

Infants and children with a high risk of vision problems should be referred to an ophthalmologist experienced in treating children for an initial eye examination. These include very premature children, children with family histories of congenital eye problems or genetic diseases, children with developmental delay, and those with a systemic disease associated with eye abnormalities.[60] Children who have pediatric diabetes must be referred to and cared for by an ophthalmologist.[61] In addition, any child who is unable to be tested after two attempts or in whom an abnormality is suspected or detected should be referred for an initial eye examination to an ophthalmologist with experience caring for children.[62]

III. Medicaid Requirements for Screening and Treating Children for Vision Loss

Medicaid is a federal-state partnership program intended to make health care accessible and affordable to low-income individuals.[63] States are not required to participate in the Medicaid program, but all do. A critical element of the partnership is significant federal funding, which can vary from 50 to 83 cents of each dollar spent on Medicaid services, with more federal funding going to poorer states.[64]

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[58] The Vision in Preschoolers Study Group, *Comparison of Preschool Vision Screening Tests as Administered by Licensed Eye Care Professionals in the Vision in Preschoolers Study*, 111 OPHTHALMOLOGY 637, 644-645 (2004).
[59] *USPSTF Guidelines*, *supra* note 4, at 344. *See also, e.g.*, Am. Acad. of Ped., *pediatric care online—Pediatric Vision Screening* (power point presentation by David Granet, MD, & James Ruben, MD, describing various testing).
[60] Am. Acad. of Ped., *Eye Examination in Infants, Children, and Young Adults*, *supra* note 57, at 902 (discussing photoscreening and autorefraction as screening systems that are quick and require little cooperation from the child).
[61] *See* Nat'l Diabetes Educ. Initiative, *Diabetes Management Guidelines* (undated) (discussing AAP recommendations), http://www.ndei.org/AAP-type-2-diabetes-children-adolescents-2013.aspx#retinopathy (last visited Nov. 17, 2014).
[62] Am. Acad. of Ped. *Eye Examination in Infants, Children, and Young Adults*, *supra* note 57, at 902.
[63] *See* 42 U.S.C. §§ 1396-1396w-5. For in-depth information, see NATIONAL HEALTH LAW PROGRAM, THE ADVOCATE'S GUIDE TO THE MEDICAID PROGRAM (Supp. Oct. 2012) (information available at www.healthlaw.org).
[64] 42 U.S.C. § 1396b. For Fiscal Year 2015, the federal matching rates range from 50 percent to 73.58 percent. See Federal Financial Participation in State Assistance Expenditures; Federal Matching Shares in Medicaid, 79 Fed. Reg. 3385, 3387 (Jan. 21, 2014) (Notice).

To receive the federal funding, states must comply with the Medicaid Act and implementing rules.[65] For example, with respect to eligibility, states must provide Medicaid coverage to certain groups of children, including children under age 19 whose household income is less than 133 percent of the federal poverty level.[66] States have the option to cover other categories of children.[67]

With respect to services, states must provide a comprehensive array of benefits for Medicaid-eligible children and youth under age 21, called Early and Periodic, Screening, Diagnostic and Treatment (EPSDT).[68] As the Centers for Medicare & Medicaid Services (CMS, which sets federal Medicaid policy) notes:

> The EPSDT benefit is more robust than the Medicaid benefit for adults and is designed to assure that children receive early detection and care, so that health problems are averted or diagnosed and treated as early as possible, The goal of EPSDT is to assure that individual children get the health care they need when they need it—the right care to the right child at the right time in the right setting.[69]

EPSDT begins with informing. The Medicaid Act requires states to inform children and their families of EPSDT, how to obtain EPSDT services, and the importance of preventive care.[70] In addition, states must routinely offer children and their families support to help them use EPSDT, including appointment scheduling and transportation assistance.[71]

[65] *See, e.g.*, *Wilder v. Virginia Hosp. Ass'n.*, 496 U.S. 498 (1990).
[66] 42 U.S.C. §§ 1396a(a)(10)(A)(i), 1396a(l).
[67] *Id.* § 1396a(a)(10)(A)(ii). For detailed information about Medicaid eligibility criteria, *see* NAT'L HEALTH LAW PROGRAM, THE ADVOCATE'S GUIDE TO THE MEDICAID PROGRAM 3.1-3.29 .
[68] 42 USC §§ 1396a(a)(10)(a), 1396a(a)(43), 1396d(a)(4)(B), 1396d(r). The Children's Health Insurance Program (CHIP) is another important source of child health coverage. CHIP covers children in limited-income families whose incomes are not low enough to qualify for Medicaid. States can implement CHIP by expanding their Medicaid programs (and, thus, EPSDT), or by establishing a separate CHIP. Thus, CHIP benefits for children "can vary significantly from state to state in coverage of vision care services. In general, only Alabama, Arkansas, Colorado, Maine and West Virginia specifically mandate direct access to eye care professionals." See Peter Shin and Brad Finnegan, George Washington Univ. Dep't of Health Pol., *Policy Brief – Assessing the Need for On-Site Eye Care Professionals at Community Health Centers*, 17 (Feb. 2009).
[69] CENTERS FOR MEDICARE & MEDICAID SERVICES, EPSDT – A GUIDE FOR STATES: COVERAGE IN THE MEDICAID BENEFIT FOR CHILDREN AND ADOLESCENTS, 1 (June 2014), http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Benefits/Early-and-Periodic-Screening-Diagnostic-and-Treatment.html.
[70] 42 U.S.C. § 1396a(a)(43)(A).
[71] *Id.* at § 1396a(a)(43)(B).

Early and periodic health assessments are the heart of EPSDT. The Medicaid Act requires states to provide Medicaid-enrolled children with four separate types of screening: medical, dental, hearing, and vision.[72] These screens are sometimes called well-child exams or check-ups.

States must establish a separate schedule of pre-set, periodic intervals for each type of screen, called a "periodicity schedule." The periodicity schedule must "meet reasonable standards of medical practice, as determined by the state after consultation with recognized medical organizations involved in child health care."[73] CMS has instructed states to consult with ophthalmologists and optometrists to determine the types of procedures to use during vision assessments and the criteria for determining when a child should be referred for further diagnosis and treatment.[74]

In addition to periodic exams, states must cover "interperiodic" screens any time a condition or illness is suspected, even if it is not time for the child's periodic screen.[75] CMS has provided this example of an interperiodic screen:

> [A] child is screened at age 5 according to your periodicity schedule for vision services and is found to have no abnormalities. At age 6, the child is referred to the school nurse by a teacher who suspects the child has a vision problem. The screening indicates a problem may exist. If the child is referred to a qualified provider of vision care, the services must be covered even though under your periodicity schedule vision services may not be required until the child reaches age 7.[76]

In addition to vision screening, the Medicaid Act requires states to cover vision services. These services must "at a minimum include diagnosis and treatment for defects in vision, including eyeglasses."[77] While the scope of EPSDT is broad, the Medicaid Act does not establish specific vision assessment and treatment protocols. For the most part, this is left to CMS and state Medicaid programs.

More broadly, EPSDT entitles enrolled children to any treatment or procedure that fits within any of the categories of Medicaid-covered services listed in section 1396d(a) of the Medicaid Act if that treatment or service is needed to "correct or ameliorate" the child's condition.[78] The Act currently lists 27 different covered services, including case management, physician and

[72] *Id.* at § 1396d(r)(1)-(4).
[73] *Id.* at § 1396d(r)(2)(A)(i).
[74] CMS, STATE MEDICAID MANUAL § 5132.2.F.1.
[75] 42 U.S.C. § 1396d(r)(2)(A)(ii).
[76] CMS, STATE MEDICAID MANUAL § 5140.B.
[77] 42 U.S.C. § 1396d(r)(2)(B); see also CMS, STATE MEDICAID MANUAL § 5122.B.
[78] 42 U.S.C. §§ 1396a(a)(43)(C), 1396d(r)(5).

mid-level practitioner services, prescription drugs, speech/language and related therapies, prosthetic devices, and home health services, including medical equipment and supplies.[79]

Federal regulations require state Medicaid programs to coordinate the EPSDT benefit with other child-serving entities. These include Title V grantees (maternal and child health services), public health programs, and educational programs including Head Start.[80]

Finally, the Medicaid Act requires states to report annually on their success in providing EPSDT. States use a reporting form called the Form-416. Before 1998, the Form required states to report on the extent to which Medicaid-enrolled children obtained vision assessments. However, CMS amended the Form-416 to *stop* collecting this data.[81] The loss of this information makes it more difficult to monitor states' vision-screening activities and ensure that children are receiving appropriate care.

IV. State Implementation of EPSDT Vision Requirements

A. Methodology

We assessed the degree to which each state's Medicaid laws and policies address the provision of effective vision screening services to Medicaid-eligible children. Working with a team of attorneys from the law firm of Holland & Knight, we conducted a document review of all 50 states' and the District of Columbia's policies. Using a uniform assessment tool, we reviewed state statutes, regulations, and EPSDT manuals to determine if state EPSDT coverage includes: (1) a separate periodicity schedule for vision screening; (2) guidelines for the content of a vision screening; (3) provider qualifications; and (4) a system for monitoring vision screening services. We also determined the extent to which written policies direct state Medicaid agencies to coordinate with other state agencies to implement EPSDT vision requirements. The review was conducted during 2012-2013, and the results were verified in 2014. The findings are summarized below.

B. Vision Screening Periodicity Schedules

As noted, federal law requires states to develop a separate EPSDT vision screening schedule and keep it up-to-date. Reliance on the schedule for medical check-ups is not appropriate.

[79] *Id.*
[80] 42 C.F.R. § 431.61(c).
[81] NATIONAL HEALTH LAW PROGRAM, MEASURING PREVENTIVE HEALTH PERFORMANCE: A PRIMER FOR CHILD ADVOCATES ON THE MEDICAID EPSDT REPORTING FORM (Oct. 2003) (on file with authors) (explaining the 1999 revisions).

Most state Medicaid programs have established separate EPSDT periodicity schedules for vision screening. Approximately one-third of the states have issued EPSDT policies that refer to the recommendations set forth in the AAP's *Bright Futures*. Wisconsin's periodicity schedule provides a good example of a comprehensive vision-screening schedule with a strong emphasis on regularly screening children aged 0-5. Wisconsin requires screenings at 1, 2, 4, 6, 9, 12, 15, 18, 24 and 30 months old, and at the following ages: 3, 4, 5, 6-7, 8-9, 10-11, 12-13, 14-15, 16-17, 18-19 and 20-21.[82]

C. Specifying the Components of the Vision Screen

While a number of vision screening methods and tools can be used, there is consensus around the factors needed for effective vision screening: (1) appropriate age-based variation in screening; (2) assessment with sufficient sensitivity to identify major vision problems; and (3) clear referral criteria to ensure children are consistently and timely referred to eye doctors for necessary examinations and follow-up care.

1. Appropriate Age-Based Content for Vision Screening

The medical literature clearly indicates that vision screening protocols should vary in important ways as a child ages. Nearly all states include some variations in the EPSDT screening method based on the age of the child. Most frequently, states simply shift from requiring subjective screening for very young children (assessing parental concern and patient history) to objective assessment (use of a standardized assessment tool) as the child ages. However, many states are not implementing appropriate objective screening before age three or focusing on using appropriate visual acuity tools for older children. Only a handful of states (*e.g.*, Illinois, Indiana, Kentucky, Louisiana, Tennessee, Utah, Wisconsin, and Wyoming) specifically mention the need to screen for amblyopia in their EPSDT materials.

As noted above, the red reflex test is an important objective screening method. Approximately one-third of states expressly call for EPSDT screening of infants and children using the red reflex test.

[82] Forward Health (WI), Covered and Noncovered Services: Covered Services and Requirements Topic #2394: Periodicity Schedule, https://www.forwardhealth.wi.gov/WIPortal/Online%20Handbooks/Display/tabid/152/Default.aspx?ia=1&p=1&sa=24&s=2&c=61&nt=Periodicity%20Schedule&adv=Y (last visited Nov. 10, 2014).

For older children, a variety of visual acuity tools are available and needed.[83] Unfortunately, nearly one-third of states do not discuss the components of EPSDT vision screening in their policies, thus leaving the matter to the individual physician (even as studies show up to 60 percent of physicians not performing a vision screening). Other state's EPSDT provisions, if they mention visual acuity tools, refer only to the Snellen chart.

However, other states, including Illinois, Kansas, and Utah, have promulgated EPSDT policies that specify various vision assessment tools that can be used during an EPSDT screen for children at various ages. [84] The District of Columbia lists a range of visual acuity charts that providers are authorized to use and then specifically states that "the test with the highest difficulty that the child is capable of performing should be used."[85]

Indeed, states are using various approaches to address the use of age-appropriate EPSDT vision screens. Several states have adopted policies that specify the vision problems that should be targeted during the screen. For example, Louisiana states in its Provider Training Packet that "the purpose of the vision screening is to detect potentially blinding diseases and visual impairments, such as congenital abnormalities and malfunctions, eye disorders, strabismus, amblyopia, refractive errors, and color blindness."[86] Nevada similarly defines the purpose of a vision screening as the detection of "potentially blinding diseases and visual impairments, such as congenital abnormalities and malformations, eye diseases, color blindness and refractive errors. The screening should include distance visual acuity, color perception and ocular alignment tests."[87]

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[83] *See* Section II.B. *supra*. *See also*, *e.g.*, Shelley Hopkins et al., *Review of Guidelines for Children's Vision Screenings*, 96 CLINICAL & EXPERIMENTAL OPTOMETRY 443 (2013); Charles E. Basch, *supra* note 3, at 603 ("an ideal screening protocol would address a full range of ocular factors including binocularity, visual-motor functioning, and other aspects of vision skills").

[84] See ILL. DEP'T OF HEALTHCARE AND FAMILY SERVS., HANDBOOK FOR PROVIDERS OF HEALTHY KIDS SERVICES, CHAPTER HK-200 §203.7.1 (2008), *available at* http://www2.illinois.gov/hfs/SiteCollectionDocuments/hk200.pdf (last visited Nov. 24, 2014); UTAH DIV. OF MEDICAID AND HEALTH FIN., UTAH MEDICAID PROVIDER MANUAL, SECTION 2: CHILD HEALTH EVALUATION AND CARE SERVICES 6 (updated Oct. 2014), *available at* *https://medicaid.utah.gov/Documents/manuals/pdfs/Medicaid%20Provider%20Manuals/Child%20Health%20Evaluation%20And%20Care%20%28CHEC%29/CHEC10-14.pdf* (last visited Nov. 24, 2014); KAN. MEDICAL ASSISTANCE PROGRAM, KAN BE HEALTHY PROVIDER MANUAL, § 8000 8-11 - 8-12 (updated Oct. 2014) *available at* https://www.kmap-state-eks.us/Documents/Content/Provider%20Manuals/KBH_12212012_12114.pdf (last visited Nov. 24, 2014).

[85] D.C. DEP'T OF HEALTH CARE FIN. & GEORGETOWN UNIV., HEALTHCHECK MEDICAL ASSISTANCE ADMINISTRATION MANUAL § 4.5.2 *available at* http://www.dchealthcheck.net/resources/healthcheck/manual/HCmanual.pdf (last visited Nov. 8, 2014).

[86] LA. MEDICAID PROGRAM, DEP'T OF HEALTH AND HOSPITALS, BUREAU OF HEALTH SERVS. FIN., LOUISIANA KIDMED PROVIDER TRAINING PACKET, 7 (2007) *available at* http://www.lmmis.com/provweb1/ProviderTraining/packets/2007ProviderTrainingMaterials/20071015_20KIDMED_20Provider_20Training.pdf (last visited Nov. 24, 2014).

[87] NEV. DEP'T OF HEALTH AND HUMAN SERVS., DIV. OF HEALTH CARE FIN. & POLICY, MEDICAID SERVICES MANUAL § 1503.3A(1)(g) (2014), *available at* https://dhcfp.nv.gov/MSM/CH1500/MSM%20Ch%201500%20Packet%2011-01-14.pdf (last visited Nov. 24, 2014).

Another approach is to address the assessment tools that Medicaid-participating managed care organizations and participating providers should use. Some of these states specify the use of "objective," "standard," or "age-appropriate" tools but do not provide any specifics. By contrast, Illinois and Kansas have issued especially comprehensive EPSDT policies.[88] (As noted above, some states' policies refer only to the Snellen eye chart, which does not reveal the range of vision problems.[89])

Finally, some states combine the two approaches. For example, EPSDT policies in Kentucky identify the various conditions that providers should screen for and list acceptable methods of screening for those conditions.[90] Because several screening tools can be used to test for multiple conditions, with different levels of success, this approach has an added advantage of giving providers guidance on what they should be looking for with each screening procedure. Wisconsin requires screening all children for appropriate visual acuity, strabismus, abnormal disc reflex (under age 1 year), response to cover test, amblyopia, and color blindness and provides that vision charts must be used to measure visual acuity beginning at age four.[91]

D. Referral For Follow-Up Diagnosis and Treatment

A review of EPSDT vision screening programs in 1981 found that "states with referral criteria had a higher percentage of referrals for vision than those without criteria."[92] Yet, few states have clear referral policies, and the policies that do exist do not always reflect the current standards of care. For example, South Dakota has adopted the AAP guidelines for pediatric preventive screening, [93] but its Professional Services Manual informs screening providers that

[88] ILL. DEP'T OF HEALTHCARE AND FAMILY SERVS., HANDBOOK FOR PROVIDERS OF HEALTHY KID SERVICES: CHAPTER HK-200 § 203.7.1 (Mar. 2008) *available at* http://www.hfs.illinois.gov/assets/hk200.pdf (last visited Nov. 24, 2014); KAN. MEDICAL ASSISTANCE PROGRAM, KAN BE HEALTHY PROVIDER MANUAL, § 8000, 8-11 (updated Oct. 2014), *available at* https://www.kmap-state-ks.us/Documents/Content/Provider%20Manuals/KBH_10312014_14161.pdf (last visited Nov. 24, 2014).

[89] Gary L. Rogers and Catherine Olson Jordan, *Pediatric Vision Screening*, 34 PEDIATRICS IN REV. 126, 127 (2013).

[90] KY. DEP'T FOR MEDICAID SERVICES, EPSDT SCREENING SERVICES AND EPSDT SPECIAL SERVICES MANUAL, APPENDIX IV (no date given) *available at* http://chfs.ky.gov/NR/rdonlyres/64EFF098-5C67-48B4-8B8B-97EE2E9005BF/0/1034.pdf) (last visited Nov. 24, 2014).

[91] Wisconsin, Forward Health HealthCheck (EPSDT) at Topic #3544-Description of Required Components of a HealthCheck Screening, *available at* https://www.forwardhealth.wi.gov/WIPortal/Online%20Handbooks/Print/tabid/154/Default.aspx?ia=1&p=1&sa=24&s=2&c=61&nt= (last visited Nov. 7, 2014).

[92] M. Cristina Leske et al., *Vision Screening Requirements Under 52 Early and Periodic Screening Diagnosis and Treatment (EPSDT) Programs*. 96 PUB. HEALTH REP. 404, 407 (1981).

[93] S.D. Admin R. § 67:16:11:04.01.

they may refer the child for a thorough, age appropriate vision exam *beginning* at age 5 (even though there are numerous reasons to refer children at an earlier date, for example if the screening provider does not test for amblyopia or binocular vision disorders.[94]

Several states have implemented clear referral criteria to guide providers conducting the screen and help identify when there is a potential problem that requires follow-up. Illinois, Mississippi and Utah provide quantitative referral criteria for visual acuity screening (*e.g.*, refer if child's visual acuity is less than 20/30 or 20/40).[95] Some states provide more qualitative guidelines. For example, in addition to providing quantitative referral guidelines, Illinois provides referral guidelines for color vision tests and tests of binocular function and further outlines guidelines for referral based on failure of a child to hit certain developmental milestones (such as fixing on and following objects by 3 months) or whenever a physician observes an abnormality.[96] Indiana's provider manual provides a chronology of age-appropriate vision development from birth to age 4 and instructs providers to "[r]efer to an appropriate vision or eye specialist any patient exhibiting a marked deviation from the chronology…."[97]

E. Coordination With Other Child-Serving Entities

Federal law anticipates that states will coordinate their EPSDT benefits with other child-serving entities, such as schools and other educational facilities. According to the National Commission on Vision & Health, as of 2007, 35 states (including the District of Columbia) required children to receive some sort of vision assessment as they enter school or during the school year.[98] These requirements differ from state-to-state. In addition to the vision

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[94] S.D. MEDICAL ASSISTANCE PROGRAM, PROFESSIONAL SERVICES BILLING MANUAL 34 (Nov. 2014), *available at* http://dss.sd.gov/sdmedx/includes/providers/billingmanuals/docs/Professional11.06.14.pdf (last visited Nov. 24, 2014) (emphasis added). *Cf.* Gary L. Rogers & Catherine Olson Jordan, *Pediatric Vision Screening*, 34 PEDIATRICS IN REV. 126, 131 (2013) (recommending comprehensive vision screening from infancy in order to detect amblyopia, refractive error and ocular disease).

[95] MISS. DIV. OF MEDICAID, MISSISSIPPI MEDICAID PROVIDER REFERENCE GUIDE FOR PART 223: EPSDT 11 (updated Mar. 2014), *available at* http://www.medicaid.ms.gov/wp-content/uploads/2014/01/Provider-Reference-Guide-223.pdf (last visited Nov. 24, 2014); UTAH DEP'T OF HEALTH, DIV. OF MEDICAID AND HEALTH FINANCING, MEDICAID PROVIDER MANUAL, SECTION 2: CHEC SERVICES 6 (updated Oct. 2014), *available at* https://medicaid.utah.gov/Documents/manuals/pdfs/Medicaid%20Provider%20Manuals/Child%20Health%20Evaluation%20And%20Care%20%28CHEC%29/CHEC10-14.pdf (last visited Nov. 24, 2014); ILL. DEP'T OF HEALTHCARE AND FAMILY SERVS., *supra* note 88.

[96] ILL. DEP'T OF HEALTHCARE AND FAMILY SERVS., *supra* note 88.

[97] INDIANA WATCH, EARLY AND PERIODIC SCREENING, DIAGNOSTIC AND TREATMENT PROVIDER MANUAL 6-4-6-5 (Aug. 28, 2014), *available at* http://provider.indianamedicaid.com/ihcp/manuals/epsdt_healthwatch.pdf (last visited Nov. 7, 2014).

[98] Nat'l Commission on Vision & Health, *Vision Exams for Children Prior to Entering School* (undated), http://www.visionandhealth.org/documents/FactsheetVisionexams123008MAS26.pdf (stating that as of 2007, the following states do not require any vision assessment for school-age children: AZ, AL, CA, ID, IA, MS, MT, NV, NH, NM, ND, OR, SC, SD, WI, WY).

assessment, three states (Arkansas, North Carolina, Oklahoma) require school children to receive a referral for follow-up vision care if problems are identified by the screen, and three states (Illinois, Kentucky, Missouri) required an actual eye examination.[99]

F. Performance and Monitoring

In addition to addressing the content of vision services, state EPSDT officials need to establish effective monitoring of the delivery of vision services. The federal government stopped requiring state Medicaid agencies to report separate data on EPSDT vision screens in 1998. As a result, there is no uniform reporting component for vision screening through EPSDT.

Some attention is being paid to developing performance measures that track the extent to which vision services are being provided. The National Committee for Quality Assurance has recommended expanding the scope of childhood quality measures to increase attention to outcomes of broad interest, specifically school readiness, workforce readiness, and family productivity. Vision screening by age 6, 13, and 18 are among the suggested measures.[100] The National Quality Forum (NQF) has established a quality measure of the percentage of preschool-age children who receive vision screening in the medical home.[101] To date, the federal government has not included vision screening among the core set of child health care quality measures for Medicaid and CHIP.[102]

Unfortunately, most states are not actively engaged in tracking children's EPSDT vision screens. The most common monitoring method used by states is simply to require physicians to keep medical records of EPSDT vision screens on file at the provider's office. Some states specify the particular information that must be recorded and a small number have occasional audits. But the vast majority of states are not routinely collecting data or providing state oversight.

There are a handful of states that have developed monitoring methods to help the state evaluate the efficacy of vision screening and ensure that providers are meeting the EPSDT requirements. Maine requires screening providers to use a standardized EPSDT vision

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[99] *Id*.
[100] Sarah H. Scholle et al., National Committee for Quality Assurance, *Quality of Child Health Care: Expanding the Scope and Flexibility of Measurement Approaches* 13, 26 (May 2009), *available at* http://www.ncqa.org/portals/0/hedisqm/Research/Child_Health_Issue_Brief.61410.pdf (last visited Nov. 11, 2014).
[101] National Quality Forum, *Pre-school vision screening in the medical home* (2011), *available at* www.qualityforum.org/Measure_Reports_Tools.aspx.
[102] For the 2014 core measures, see http://www.medicaid.gov/medicaid-chip-program-information/by-topics/quality-of-care/downloads/childcoremeasures.pdf.

screening form.[103] Minnesota uses a similar approach and more specifically requires providers to submit the screening form to the state Medicaid agency after completing each vision screening.[104] The District of Columbia recently implemented new billing requirements and rate changes for EPSDT screening that include enhanced billing for vision screening and introduction of a modifier screening code if the screening requires follow-up or a referral.[105] Iowa maintains an online record of EPSDT-eligible children that indicates when the child last received screening services.[106] In Georgia, online monitoring is used as a tool to encourage the required outreach to parents to inform them of available EPSDT services.[107]

IV. CONCLUSION

A number of states are using EPSDT to address the important issue of early and effective childhood vision screening. There is room for improvement. CMS and state Medicaid agencies should do the following:

- Increase awareness of the problem and of the EPSDT requirements by providing information to government partners, managed care contractors, participating health care providers, and Medicaid beneficiaries.

- If they have not already done so, state Medicaid agencies must establish a separate schedule of pre-set, periodic intervals for vision screens. States that already have separate schedules should revisit them to make sure they are up-to-date. States need to consult with ophthalmologists and optometrists to determine the periodicity schedule for vision screening and ensure that the schedule is consistent with the current recommendations of the AAP *Bright Futures*.[108]

- State Medicaid agencies need to consult with ophthalmologists and optometrists to determine the content of vision screening. States should ensure: (1) appropriate age-based variations in assessment, (2) assessment

[103] ME. DEP'T OF HEALTH AND HUMAN SERVS., MAINECARE BENEFITS MANUAL, CHAPTER 2, SECTION 94: EARLY AND PERIODIC SCREENING, DIAGNOSIS AND TREATMENT SERVICES 1-2 (May 2010), http://www.maine.gov/sos/cec/rules/10/ch101.htm.
[104] Minn. Admin. R. § 9505.1709.
[105] Transmittal from Claudia Schlosberg, Acting Senior Deputy Medicaid Director, to District of Columbia EPSDT/Health Check Providers (Oct. 2, 2014) (Transmittal No. 14-29) (on file with authors).
[106] IOWA DEP'T OF PUB. HEALTH, EPSDT INFORMING AND CARE COORDINATION HANDBOOK 1.6 (2010), *available at* http://www.idph.state.ia.us/hpcdp/common/pdf/epsdt_handbook.pdf (last visited Nov. 18, 2014).
[107] GA. DEP'T OF CMTY. HEALTH, DCH HEALTH CHECK REVIEW POLICY: PART II POLICIES AND PROCEDURES FOR HEALTH CHECK SERVICES (EPSDT) 34-35 (Jan. 2012), *available at* http://www.pshpgeorgia.com/files/2008/11/Health-Check-Services-28-12-2011-151104.pdf (last visited Nov. 24, 2014).
[108] *Bright Futures*, *supra* note 45.

with sufficient sensitivity to identify major vision problems, and (3) clear referral criteria to ensure children are consistently and timely referred to eye doctors for necessary comprehensive exams and follow-up care. Vision screens must include assessment to identify problems not only with visual acuity but also to assess visual motor-functioning, refractive errors, amblyopia and its risk factors (including strabismus), convergence insufficiency and other binocular programs, color vision defects, and ocular pathology.

- State Medicaid agencies should establish EPSDT vision coverage that employs multiple screening tools.

- State Medicaid agencies and the managed care contractors should recognize vision screening as a separately identifiable screening service with separate codes and costs (as opposed to bundling vision screening into a global well-child code and payment).

- CMS and state Medicaid agencies should provide guidance on when Medicaid participating providers are expected to refer enrolled children for follow-up vision care.

- States should actively track children's use of EPSDT vision screens through age-appropriate standardized reporting forms and online monitoring.

- CMS should consider adding a child quality measure of vision screening for state Medicaid programs and Children's Health Insurance Programs.

- CMS and state Medicaid agencies should provide guidance to Medicaid participating managed care entities, health care providers, and Medicaid-enrollees on the need for ongoing vision care and the recommended periodicity and content of the EPSDT vision screen.