Incorporating Kindergarten Readiness as a Meaningful Measure in Pediatric Value-Based Care

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Value-based care focused on improving children's health has been gaining traction. The Center for Medicare and Medicaid Innovation announced 8 Integrated Care for Kids (InCK) model awards in 2019, aimed at streamlining care delivery across health and social sectors and developing child-focused alternative payment models. Each awardee, consisting of a health care organization, state Medicaid agency, and a Partnership Council, is receiving up to $16 million to implement the 7-year model. Selecting meaningful performance measures that reflect child well-being is central to pediatric value-based care.

Kindergarten readiness is one such measure and typically encompasses multiple domains of well-being: physical health, social-emotional health, approaches to learning, language development, and cognition and general knowledge. Kindergarten readiness has been linked to greater economic well-being, improved mental health, and reduced justice system involvement into adulthood. Because kindergarten readiness potentiates immediate and long-term well-being and economic benefits, its inclusion in pediatric value-based care, such as InCK, warrants further consideration.

Only 4 in 10 US children were assessed as “healthy and ready to learn” at school entry in 2016. Improving school readiness rates requires support for families well before kindergarten entry. Children’s primary care clinicians are in a unique position to affect kindergarten readiness rates because of their role as trusted partners in child well-being. Their frequent contact with families creates opportunities for essential screenings and connecting families to early childhood programs.

However, many factors that influence a child’s school readiness lie outside clinical settings, suggesting that multisector partnerships may be best positioned to affect and be accountable for kindergarten readiness rates. Community-based partnerships, such as California’s First 5 Ventura County initiative that connects schools, and social and health care services to promote early literacy and healthy development, could be ideal accountable entities. Establishing multisector entities, their authority, and the blended or braided funds (ie, from health care and other sectors) will take time. Intermediate steps include working with health plans or accountable care organizations to promote school readiness through care management efforts.

Although the role of school readiness in child health and well-being has long been recognized, pathways to incorporate kindergarten readiness as a quality measure in value-based care and facilitate cross-sector collaboration are lacking. Herein, we outline strategies to (1) define and measure kindergarten readiness and (2) develop innovative payment approaches.

Defining and Measuring Kindergarten Readiness

Promoting kindergarten readiness should start with aligning on a quality measure definition. The Table describes example kindergarten readiness measures that are used by states or are under development. Thresholds that indicate kindergarten readiness must be defined (eg, ready/not ready) and can be used as a benchmark goal tied to an incentive payment. Although most state definitions have similarities, different benchmarks are used, meaning that the same group of children may be deemed ready in one state but not another. More research is needed to identify which components of the kindergarten readiness assessment best predict long-term well-being. The Healthy and Ready to Learn pilot measure, developed using a nationally representative sample, provides new...
opportunities to examine the relationship between kindergarten readiness and other health indicators.

A complementary approach is to define kindergarten readiness promoting activities in primary care. Oregon has developed quality measures that capture health aspects of kindergarten readiness (eg, receipt of well visits, social-emotional screening) and is gradually tying them to incentive payments.6

How a kindergarten readiness performance measure is defined will drive how the data are collected (eg, through health care claims, electronic health record data, or observational assessments by teachers in school). Cross-sector data sharing platforms, such as Philadelphia’s Integrated Data System, which links school, social services, and health care data, are not only needed for report generation and accountability in value-based payment models, but also to identify children eligible for more intensive supports.4

### Innovative Payment Approaches for Kindergarten Readiness

Sustainably incorporating kindergarten readiness into care delivery requires investment. Alternative payment models can be used as a vehicle for incentives and financial flexibility. Payment models can initially support health care organizations in building the necessary reporting infrastructure and determining baseline rates of kindergarten readiness among their patients. An alternative payment model can start with simpler, pay-for-reporting or pay-for-performance incentives (eg, incentives for reporting on health-related drivers of school readiness and executing cross-sector data sharing agreements).

The model could also link incentive payments to a bundle of primary care interventions that promote kindergarten readiness. These bundled activities can include office-based interventions (eg, developmental screenings, Reach Out and Read) or connections to programs like Early Head Start and prekindergarten. Such referrals can enable more equitable access to early childhood programs, potentially mitigating socioeconomic disparities in kindergarten readiness.7 While stronger evidence is needed to directly link such activities to improvements in kindergarten readiness, they have benefits for child health and well-being beyond kindergarten readiness and should be included in children’s primary care. A summative performance measure that captures the delivery of these services to families can be structured as an evidence-based care bundle.8 A kindergarten readiness promotion bundle for primary care settings is being developed for the North Carolina InCK Model.

Eventually, kindergarten readiness can be included in more advanced payment models that braid or blend funds across health care (eg, Medicaid) and early childhood to promote cross-sector collaboration. Payers, such as Medicaid, may find value in improving kindergarten readiness because of associated cost savings; improved physical health at kindergarten entry may be associated with greater physical activity and decreased substance abuse later in life.9 Braiding and blending funds could also expand access to evidence-based programs like pre-K. The American Rescue Plan, which

### Table. Examples of Measures of Kindergarten Readiness*

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<th>Measure</th>
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<td>Healthy and Ready to Learn</td>
<td>National population-level measure of kindergarten readiness (under development). Piloted in 2016 and revised in 2018. Consists of 18 items from the National Survey of Children’s Health that assess 4 domains of kindergarten readiness (early learning skills, social-emotional development, self-regulation, and physical well-being, and motor development) for children aged 3 to 5 years. Both domain-specific and summative scores are generated. Scores are given based on aged-specific standards and categorized as “on-track,” “needs support,” or “at risk.”</td>
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<td>Maryland’s Ready 4 Kindergarten (R4K) Measure</td>
<td>Consists of (1) early learning assessment for children ages 36 to 72 mo, administered by childcare and Head Start programs or Pre-K teachers, and (2) kindergarten readiness assessment administered at the start of the academic year by public school teachers and based on observations and performance tasks across 4 domains: language and literacy, mathematics, social foundations, and motor development. Students are given a scaled score and are said to be “demonstrating readiness,” “approaching readiness,” or “emerging readiness,” based on their score. This measure was launched in 2014.</td>
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<td>Oregon's Health Aspects of Kindergarten Readiness</td>
<td>Developed through a partnership between the Children’s Institute and the Oregon Health Authority. It is focused on health and developmental drivers of school readiness. The proposed measure includes 4 key parts: (1) preventive dental visits for children aged 1 to 5, (2) well-child visits for children aged 3 to 6, (3) metric on social-emotional health (under development), and (4) follow-up to developmental screening. Most data will be collected via Medicaid claims or will be extracted from electronic health records.</td>
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* Measures included in this table were selected to represent common state-level and national approaches and are not inclusive of all possible measures.
commit $39 million in funding to early childcare and education, is a recent policy that addresses service gaps through expanding high-quality preschool and home visiting programs.\textsuperscript{10}

**Conclusions**

Kindergarten readiness is an important measure of short- and long-term child well-being at the individual and population levels. Future care integration efforts for children should align measures of success across the health care and early childhood sectors, include cross-sector interventions, and leverage payment models that invest in interventions so that children are ready to learn at school entry.

**ARTICLE INFORMATION**

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**REFERENCES**


