Evaluating Integrated Care for Children: A Clarion Call or a Call for Clarity?

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"Integrated care" is often used to describe concepts such as coordinated and seamless care instead of the often fragmented and episodic care that patients receive. Integrated care reflects the aspirations of modern health care systems and receives significant academic attention. A PubMed search yields >53,000 articles, including >7000 publications about children <18 years old, some of which are published in journals wholly dedicated to the topic (eg, International Journal of Integrated Care).

Integrated care is particularly important for the children and youth with chronic conditions who frequently require care by multiple providers in multiple locations over time. Achieving integrated care in pediatric health systems adds layers of complexity because of the incorporation of educational and developmental services and other community supports to optimize health. Transitions within and across these systems occur frequently in childhood, including transitions across settings (eg, hospital to home) and across time (eg, preschool to school age), adding further challenges. Pediatric-specific barriers to integrated care include the diversity and/or rarity of underlying conditions among children with chronic illness, the distinct stakeholders in the health ecosystem (eg, parents), and the need to tailor to specific needs at different developmental stages of the child.

Although support for integrated care is nearly universal, little is known about the effectiveness of pediatric integrated care. Addressing this knowledge gap is the systematic review and meta-analysis published by Wolfe et al. The authors conducted a broad search strategy to identify randomized controlled trials comparing integrated care with usual care. They defined integrated care as those having either vertical integration (between primary and secondary and/or subspecialty care), horizontal integration (between sectors like health and education), or longitudinal integration (eg, transition to adult services). Trials describing 18 different interventions were found among diverse populations, with varied, often contradictory outcomes. Some outcomes appeared to improve, such as health-related quality of life in studies of obesity, asthma, or diabetes, whereas others were more mixed (eg, health service use, education, cost outcomes). No studies were focused on longitudinal integration.

One of the challenges highlighted by the authors in studying integration is definitional vagueness. Integration is a diffuse term and is often interchangeably used with other terms included in the authors' search strategy ("care transitions," "coordinated care," "shared care," "whole system thinking," "medical home"). The effectiveness of some of these concepts have been systematically reviewed. For instance, reviews of the medical home for both

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broad populations\(^5\) as well as children with special health care needs\(^6\) have also noted inconsistent definitions but nevertheless overall positive impacts.

As the authors note, the absence of measures on intervention implementation makes interpretation challenging. Although individual interventions may have been ineffective, it is plausible that even effective interventions could have resulted in negative findings if either poorly implemented or if the wrong outcomes were selected. A theory-based logic model is essential to link interventions to outcomes, and it is unfortunate that none of the studies identified in the review by Wolfe et al\(^4\) described such a model with their intervention.

Perhaps the most important question arising from this review is to what extent integration is an intervention in need of evaluation or simply a key health system outcome, as has been proposed for the medical home.\(^7\)

Although specific integration initiatives may not achieve certain selected outcomes, it would be hard to argue that the construct of integration can be meaningfully determined to be ineffective as a whole. Is there a realistic scenario in which one would conclude that receiving integrated care is not a desirable goal? The more pressing question researchers may need to ask is not “does integration improve child health outcomes?” but rather “does a particular intervention improve integration and at what cost?”

To answer this question requires a meaningful measurement of different types of integration outcomes, likely along a continuum because integration itself is multidimensional rather than a simple binary construct. This framework can include that which was used in this review (horizontal, vertical, or longitudinal) but also other highly relevant ones as well (such as integration of behavioral health and/or social determinants of health into medical care). To better understand such outcomes requires clear logic models to illuminate why (and why not) integration improves. Perspectives matter as well because integration outcomes may differ from the viewpoint of patients, health systems, payers, and other stakeholders."\(^8\)

As health systems continue to incentivize integration such as within accountable care organizations or by bundled payments, it is critical that integration is meaningfully assessed. Some dimensions of integration will be easier to improve than others. It is likely much easier, for instance, to integrate vertically (eg, via care coordination between primary and subspecialty care), rather than horizontally, across sectors. Future study of the outcomes of such initiatives requires more clarity than research conducted to date to help ensure that interventions achieve the important integration objectives of a high-functioning child health system.

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