Doi: 10.32481/djph.2022.05.002

# Pediatric Integrated Primary Care:

## A Population Health Approach to Meeting the Behavioral Health Needs of Children and Families

Meghan McAuliffe Lines, Ph.D.

Clinical Director, Integrated Primary Care & School-Based Behavioral Health, Nemours Children's Health, Delaware; Clinical Associate Professor of Pediatrics, Sidney Kimmel Medical College, Thomas Jefferson University

### Abstract

Addressing the behavioral health needs of the population is a growing public health concern; a significant portion of the population struggles with behavioral health challenges yet access to care is limited due to a multitude of barriers. Research has demonstrated that integration of behavioral health providers into the primary care team is an effective means of increasing care access and reducing barriers to care. While there has been an uptake in integrated primary care (IPC) in adult healthcare, there is significant opportunity for expanding IPC in pediatrics. Nemours Children's Health has developed a model IPC program to serve children and youth in Delaware and train future behavioral health professionals. Policy to support payment for IPC services and fund workforce development will be essential to sustaining the Nemours program as well as expanding this and other IPC models in order to serve more children and youth in Delaware and beyond.

## Rationale for Integrated Primary Care

Behavioral health conditions are a common and costly public health concern. It is estimated that 13 million adults in the United States experienced significant mental illness in the past year, and the economic impact of mental illness is over $300 billion annually.[1] Behavioral and physical health are inextricably linked, where individuals with mental health comorbidities often experience poorer physical health than the general population, and physical health conditions may contribute to or exacerbate behavioral health concerns.[2] Yet despite the clear linkage between physical and behavioral health, behavioral healthcare has historically been isolated from the medical system, both in terms of care provision and payment. This often results in poorer access to behavioral health care, particularly for historically underrepresented populations, thus further widening existing health disparities for minoritized groups (such as Black, Latin@, and other minoritized populations).[3] This separation also likely contributes to the stigma that exists in many communities with seeking out care for behavioral health concerns.

Integration of behavioral health care into the primary care setting increases access to much-needed care in a safe, comfortable and destigmatized environment. This is critical for ensuring equitable access to high quality, evidence-based, and trauma-informed care for all patients, particularly those from underrepresented groups. Models of integrated primary care (IPC), in which behavioral health providers deliver care as members of the primary care team, can often provide earlier access to care through a shorter wait time to service (typically ranging from same day to a few weeks for IPC, vs. several months for an outpatient therapist) as well as being

referred for care sooner than they might otherwise be referred to a provider outside of the practice (resulting in prevention or earlier intervention).[4,5]

IPC models are consistent with healthcare models that have emerged in recent decades to improve and reform the healthcare system. The Quadruple Aim, adapted from the widely accepted Triple Aim, is a framework that aims to reduce healthcare costs, improve population health outcomes, improve patient care, and improve provider well-being.[6–8] The Quadruple Aim is in alignment with IPC models, and is consistent with Value-Based Care (VBC). VBC is an advancement in payment reform, that moves away from a traditional fee-for-service model in which healthcare providers are paid for treating "sick" patients, to incentivizing health promotion and wellness. VBC places emphasis on rewarding healthcare providers and health systems for administering preventive care, improving population health outcomes, and increasing care quality. Given the close connection between physical and behavioral health, VBC is in clear philosophical alignment with the preventative nature of primary care and adds a clear and compelling financial incentive to the already existing clinical rationale for move more rapidly towards IPC models.

## Rationale for Pediatric Integrated Primary Care

IPC models have developed a foothold in adult primary care but are still relatively less common in pediatrics. Pediatric IPC models have been present for over 40 years[9] and have begun to gain traction in recent years. Emerging data suggest that IPC is a key approach to addressing the growing behavioral health needs of our nation's youth and further spreading and scaling of pediatric IPC models is needed.

Mental health concerns are among the most prevalent health concerns for children and adolescents in the United States, with 10-20% of youth each year meeting criteria for a mental health diagnosis, but more than 50% of them never receiving the needed treatment.[10,11] Youth from minoritized racial and ethnic groups and youth living in poverty are at higher risk of mental health challenges yet are even less likely to receive behavioral health treatment than youth overall.[12–14] Moreover, youth mental health needs have skyrocketed in the wake of the COVID-19 pandemic and the heightened racial trauma in the U.S. following the murders of Breonna Taylor, Ahmaud Arbery, George Floyd, and too many others, leading to multiple pediatric expert organizations coming together to declare a national emergency in child and adolescent mental health, particularly for youth of color, and calling for policy changes and advocacy to meet the critical needs.[15]

The American Academy of Pediatrics recommends 12 well-child visits with a child's primary care provider (PCP) between the age of 0-3 years, followed by annual visits from ages 3-21 years.[16] Since children have a consistent, longitudinal relationship with their PCP and relatively frequent contact, particularly in the early years, IPC is a seamless fit for pediatrics. Integrating a behavioral health provider as part of the primary care team is an opportunity to reduce access barriers related to stigma, time, and transportation, and increase comfort and trust with seeking behavioral health services. IPC also connects logically with the pediatric primary care focus on prevention and provides an opportunity to truly move behavioral healthcare "upstream" and take a population health approach to whole child wellness. Pediatric integrated care provides population-level care to more children, removes barriers to obtaining care, and increases access to high quality, culturally-relevant, evidence-based practices.[17] Pediatric IPC offers the opportunity for a continuum of services ranging from prevention and health promotion activities

(e.g., HealthySteps, an integrated, preventive program for at-risk early childhood patients ages 0-3 and their caregivers) to more traditional mental health interventions.[18]

Untreated mental health needs during childhood are associated with negative health outcomes (poorer mental and physical health, increased substance use, increased suicide risk).[19] Conversely, several studies to date indicate positive outcomes for youth who receive behavioral health services in primary care. These include outcomes related to HealthySteps[20–25] (e.g., higher social-emotional screening scores, higher rates of vaccination, lower rates of childhood obesity, decrease in maternal depression symptoms, increase in safe parenting practices) as well as other services along the integrated primary care continuum (mental health symptom reduction, better continuity of care).[26–28]

While the cost savings in pediatrics is not always as readily apparent as in the adult literature, there is still a financial impact of pediatric IPC with public health implications. Untreated mental health needs in childhood yield higher costs (i.e., higher health care service utilization) in adulthood.[19] Conversely, pediatric IPC services have demonstrated short term medical cost-offset in some studies and have potential implications for longer term cost savings.[29,30]

## Pediatric Integrated Primary Care at Nemours Children's Health

Nemours Children's Health is one of the largest integrated pediatric health systems in the country with multispecialty pediatric hospitals in Delaware and Florida, and additional outpatient locations in Delaware, Florida, Pennsylvania, and New Jersey. As the only pediatric health system in Delaware, Nemours has a main hospital campus in Wilmington, outpatient specialty services in Milford, as well as 12 pediatric primary care clinics throughout the state that serve as the primary care medical home for approximately 30% of the children in Delaware. These primary care clinics are recognized by the National Committee for Quality Assurance (NCQA) as pediatric Patient Centered Medical Homes (PCMH), a model that emphasizes interdisciplinary teams, care coordination, and quality improvement. As part of the medical home model, behavioral health providers are integrated into the care team at all 12 Nemours Children's Health primary care practices in Delaware.

Nemours has been a national leader in pediatric IPC, integrating the first behavioral health providers into pediatric primary care practices in 2002. Behavioral health providers at Nemours see patients and families for 45-minute new patient and follow-up visits within the primary care clinic when referred by their PCP for emotional, behavioral, developmental, or health behavior concerns. Behavioral health providers are also available in the moment for "warm handoffs," with real time consultations during a patient's medical visit. Depending upon the presenting concerns, a warm handoff may consist of any of the following: a brief introduction to behavioral health services in the practice and encouragement for scheduling follow up, brief assessment and psychoeducation or brief intervention, risk assessment and treatment planning, and a more comprehensive same day visit if conducive to the provider and family schedule. In addition to visits with patients, behavioral health providers also engage in population-level screening initiatives, participate in case consultation with other members of the care team, co-manage common behavioral health conditions with PCPs (e.g., ADHD, functional GI disorders, sleep problems), and engage in quality improvement efforts within clinic.

Over the past 20 years, the Nemours IPC program has demonstrated significant growth in several ways. Behavioral health providers started out in two practices and are now integrated into all 12

practices in Delaware. There has been an increase in total provider time across the clinics, starting with two trainees spending a half-day per week in primary care under supervision, whereas now there are approximately 12 full-time equivalents (FTE) of licensed provider time, and an additional 4-5 FTEs of trainee time across 12 practices. Each clinic has between .5 FTE and 2.0 FTE of behavioral health provider time based upon patient and training needs. This increase has allowed for several factors to take place: the behavioral health providers have become an integral part of the care team within the practices, behavioral health is involved in both episodic and longitudinal care of patients along with PCPs, and Nemours has been able to contribute to workforce development of behavioral health providers entering the workforce trained to deliver pediatric IPC services.

While there has been significant institutional support that has promoted program growth and sustainability, there continue to be systems level challenges that interfere with full integration. As stated earlier, physical and mental health care have historically been separated from one another and IPC presents an opportunity to bring them together for holistic care. Although clinical models of integration have served to remove some of this separation, there is still room for further integration in pediatrics. In many institutions, physical health is further along on the VBC journey than behavioral health is, so fee-for-service contracts limit the services for which IPC providers can be reimbursed. The Nemours team has had success with obtaining grant funding to pilot early childhood integration models (e.g., integrated well child visits, preventive care), but further policy change will be needed at the payor level to truly spread and scale these efforts as they are not covered in a traditional fee-for service model (which typically requires a mental health diagnosis).

## Policy and Advocacy Implications

There are several recent policy efforts that support IPC at the federal and state level. The Affordable Care Act requires that primary care providers perform a number of preventive services as part of routine care, many of which are related to behavioral health care (e.g., developmental and autism screening, behavioral assessment, depression screening, drug and alcohol assessments.[31] IPC providers are often engaged in supporting these efforts within the PCMH. The Mental Health Parity and Addiction Equity Act (MHPAEA) mandates equal insurance coverage for behavioral health care.[32] While this law is fundamental, additional policy work to ensure compliance with mental health parity laws is warranted.[15]

Just as Delaware has been a clinical leader in pediatric IPC, Delaware lawmakers have set an example for other states with innovative policy. In 2022, Delaware introduced House Bill 303, which if enacted will require insurance to cover an annual behavioral health well check with a licensed behavioral health provider. This could be a step toward true mental health parity, allow for coverage of integrated well visits, and provide support for a public health approach to behavioral health care. Additional policies to support payment for fully integrated models of behavioral health in primary care that represent the full continuum from prevention to intervention for the pediatric lifespan are essential. There is research to support that these models are effective in reaching families, improving outcomes, and saving costs, so providers and health systems need policy support to disseminate sustainable programs.

The Nemours IPC program has been fortunate to receive several grants from HRSA to support the training and education of psychology and social work trainees, and will continue to seek out opportunities to garner support for workforce development. However, there continues to be a

national shortage in behavioral health providers, and the shortage is even more significant when considering providers who represent racial, ethnic, or linguistic diversity. Education and training support programs to incentivize individuals to pursue careers in behavioral health, and workforce development funding for organizations to support licensure and incentivize retention in Delaware are critical. We must invest in our workforce in order to provide optimal care for our children and families.

Dr. Lines may be contacted at Meghan.Lines@Nemours.org

## References

1. Substance Abuse and Mental Health Services Administration. (2021). Key substance use and mental health indicators in the United States: Results from the 2020 National Survey on Drug Use and Health (HHS Publication No. PEP21-07-01-003, NSDUH Series H-56). Retrieved from https://www.samhsa.gov/data/
2. Colton, C. W., & Manderscheid, R. W. (2006, April). Congruencies in increased mortality rates, years of potential life lost, and causes of death among public mental health clients in eight states. *Preventing Chronic Disease*, *3*(2), A42. Retrieved from http://www.cdc.gov/pcd/issues/2006/apr/05_0180.htm PubMed
3. Cook, B. L., Trinh, N. H., Li, Z., Hou, S. S. Y., & Progovac, A. M. (2017, January 1). Trends in racial-ethnic disparities in access to mental health care, 2004–2012. *Psychiatric Services (Washington, D.C.)*, *68*(1), 9–16. https://doi.org/10.1176/appi.ps.201500453 PubMed
4. Pomerantz, A., Cole, B. H., Watts, B. V., & Weeks, W. B. (2008, November-December). Improving efficiency and access to mental health care: Combining integrated care and advanced access. *General Hospital Psychiatry*, *30*(6), 546–551. https://doi.org/10.1016/j.genhosppsych.2008.09.004 PubMed
5. Pomerantz, A. S., Shiner, B., Watts, B. V., Detzer, M. J., Kutter, C., Street, B., & Scott, D. (2010, June). The White River model of colocated collaborative care: A platform for mental and behavioral health care in the medical home. *Fam Syst Health*, *28*(2), 114–129. https://doi.org/10.1037/a0020261 PubMed
6. Berwick, D. M., Nolan, T. W., & Whittington, J. (2008, May-June). The triple aim: Care, health, and cost. *Health Affairs (Project Hope)*, *27*(3), 759–769. https://doi.org/10.1377/hlthaff.27.3.759 PubMed
7. Bodenheimer, T., & Sinsky, C. (2014, November-December). From triple to quadruple aim: Care of the patient requires care of the provider. *Annals of Family Medicine*, *12*(6), 573–576. https://doi.org/10.1370/afm.1713 PubMed
8. Institute for Health Care Improvement. (2007). The PCMH goes for the triple aim. Retrieved from www.ihi.org
9. Schroeder, C. S. (1979). Psychologists in a private pediatric practice. *Journal of Pediatric Psychology*, *4*, 5–18. https://doi.org/10.1093/jpepsy/4.1.5
10. Merikangas, K. R., He, J. P., Burstein, M., Swendsen, J., Avenevoli, S., Case, B., . . . Olfson, M. (2011, January). Service utilization for lifetime mental disorders in U.S. adolescents: Results of the National Comorbidity Survey-Adolescent Supplement (NCS-A).

*Journal of the American Academy of Child and Adolescent Psychiatry*, *50*(1), 32–45. https://doi.org/10.1016/j.jaac.2010.10.006 PubMed

11. Perou, R., Bitsko, R. H., Blumberg, S. J., Pastor, P., Ghandour, R. M., Gfroerer, J. C., . . .. Huang, L. N., & the Centers for Disease Control and Prevention (CDC). (2013, May 17). Mental health surveillance among children—United States, 2005-2011. *MMWR suppl, 62*(2), 1–35. PubMed
12. Kataoka, S. H., Zhang, L., & Wells, K. B. (2002, September). Unmet need for mental health care among U.S. children: Variation by ethnicity and insurance status. *The American Journal of Psychiatry*, *159*(9), 1548–1555. https://doi.org/10.1176/appi.ajp.159.9.1548 PubMed
13. Herbst, R. B., Margolis, K. L., Millar, A. M., Muther, E. F., & Talmi, A. (2016, May). Lost in translation: Identifying behavioral health disparities in pediatric primary care. *Journal of Pediatric Psychology*, *41*(4), 481–491. https://doi.org/10.1093/jpepsy/jsv079 PubMed
14. Arora, P. G., Godoy, L., & Hodgkinson, S. (2017). Serving the underserved: Cultural considerations in behavioral health integration in pediatric primary care. *Professional Psychology, Research and Practice*, *48*(3), 139. https://doi.org/10.1037/pro0000131
15. American Academy of Pediatrics. (2021, Oct). Declaration of a National Emergency in Child and Adolescent Mental Health. https://www.aap.org/en/advocacy/child-and-adolescent-healthy-mental-development/aap-aacap-cha-declaration-of-a-national-emergency-in-child-and-adolescent-mental-health/
16. Hagan, J. F., Shaw, J. S., & Duncan, P. M. (2017). Bright futures. American Academy of Pediatrics. https://brightfutures.aap.org/Pages/default.aspx
17. Njoroge, W. F. M., Hostutler, C. A., Schwartz, B. S., & Mautone, J. A. (2016, December). Integrated behavioral health in pediatric primary care. *Current Psychiatry Reports*, *18*(12), 106. https://doi.org/10.1007/s11920-016-0745-7 PubMed
18. Talmi, A., Muther, E. F., Margolis, K., Buchholz, M., Asherin, R., & Bunik, M. (2016, November). The scope of behavioral health integration in a pediatric primary care setting. *Journal of Pediatric Psychology*, *41*(10), 1120–1132. https://doi.org/10.1093/jpepsy/jsw065 PubMed
19. Das, J. K., Salam, R. A., Lassi, Z. S., Khan, M. N., Mahmood, W., Patel, V., & Bhutta, Z. A. (2016, October). Interventions for adolescent mental health: An overview of systematic reviews. *J Adolesc Health*, *59*(4S), S49–S60. https://doi.org/10.1016/j.jadohealth.2016.06.020 PubMed
20. Gross, R. S., Briggs, R. D., Hershberg, R. S., Silver, E. J., Velazco, N. K., Hauser, N. R., & Racine, A. D. (2015, October). Early child social-emotional problems and child obesity: Exploring the protective role of a primary care-based general parenting intervention. *J Dev Behav Pediatr*, *36*(8), 594–604. https://doi.org/10.1097/DBP.0000000000000212 PubMed
21. Briggs, R. D., Silver, E. J., Krug, L. M., Mason, Z. S., Schrag, R. D. A., Chinitz, S., & Racine, A. D. (2014). Healthy Steps as a moderator: The impact of maternal trauma on child social-emotional development. *Clinical Practice in Pediatric Psychology*, *2*(2), 166–175. https://doi.org/10.1037/cpp0000060

22. Guyer, B., Barth, M., Bishai, D., Caughy, M., Clark, B., Burkom, D., . . . Tang, C. (2003). *Healthy steps: The first three years: The Healthy Steps for Young Children Program National Evaluatio*n. https://ztt-healthysteps.s3.amazonaws.com/documents/139/attachments/2003_HS_National_Evaluation_Report.pdf?1539967.

23. Johnston, B. D., Huebner, C. E., Tyll, L. T., Barlow, W. E., & Thompson, R. S. (2004, May). Expanding developmental and behavioral services for newborns in primary care; Effects on parental well-being, practice, and satisfaction. *American Journal of Preventive Medicine*, *26*(4), 356–366. https://doi.org/10.1016/j.amepre.2003.12.018 PubMed

24. Johnston, B. D., Huebner, C. E., Anderson, M. L., Tyll, L. T., & Thompson, R. S. (2006, August). Healthy steps in an integrated delivery system: Child and parent outcomes at 30 months. *Archives of Pediatrics & Adolescent Medicine*, *160*(8), 793–800. https://doi.org/10.1001/archpedi.160.8.793 PubMed

25. Buchholz, M., & Talmi, A. (2012, July). What we talked about at the pediatrician's office: Exploring differences between healthy steps and traditional pediatric primary care visits. *Infant Mental Health Journal*, *33*(4), 430–436. https://doi.org/10.1002/imhj.21319 PubMed

26. Burkhart, K., Asogwa, K., Muzaffar, N., & Gabriel, M. (2020, February). Pediatric integrated care models: A systematic review. *Clinical Pediatrics*, *59*(2), 148–153. https://doi.org/10.1177/0009922819890004 PubMed

27. Shah, R., Kennedy, S., Clark, M. D., Bauer, S. C., & Schwartz, A. (2016, May). Primary care–based interventions to promote positive parenting behaviors: A meta-analysis. *Pediatrics*, *137*(5), e20153393. https://doi.org/10.1542/peds.2015-3393 PubMed

28. Weersing, V. R., Brent, D. A., Rozenman, M. S., Gonzalez, A., Jeffreys, M., Dickerson, J. F., . . . Iyengar, S. (2017, June 1). Brief behavioral therapy for pediatric anxiety and depression in primary care: A randomized clinical trial. *JAMA Psychiatry*, *74*(6), 571–578. https://doi.org/10.1001/jamapsychiatry.2017.0429 PubMed

29. Dopp, A. R., Smith, A. B., Dueweke, A. R., & Bridges, A. J. (2018). Cost-savings analysis of primary care behavioral health in a pediatric setting: Implications for provider agencies and training programs. *Clinical Practice in Pediatric Psychology*, *6*(2), 129–139. https://doi.org/10.1037/cpp0000231

30. Buchholz, M., Burnett, B., Margolis, K. L., Millar, A., & Talmi, A. (2018). Early childhood behavioral health integration activities and HealthySteps: Sustaining practice, averting costs. *Clinical Practice in Pediatric Psychology*, *6*(2), 140–151. https://doi.org/10.1037/cpp0000239

31. Patient Protection and Affordable Care Act, 42 U.S.C. § 18001 (2010).

32. Paul Wellstone and Pete Domenici Mental Health Parity and Addiction Equity Act of 2008 (MHPAEA, P.L. 110-343).