

Diaper Need and its Link to Maternal Mental Health and Medicaid Spend

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Diaper Need as an Economic Issue



Why Diapers Matter

Without Diapers — Babies Cannot Participate in Early Childhood Education
Without Childcare — Parents Cannot Go to Work



Why Does Early Childhood Education Matter?

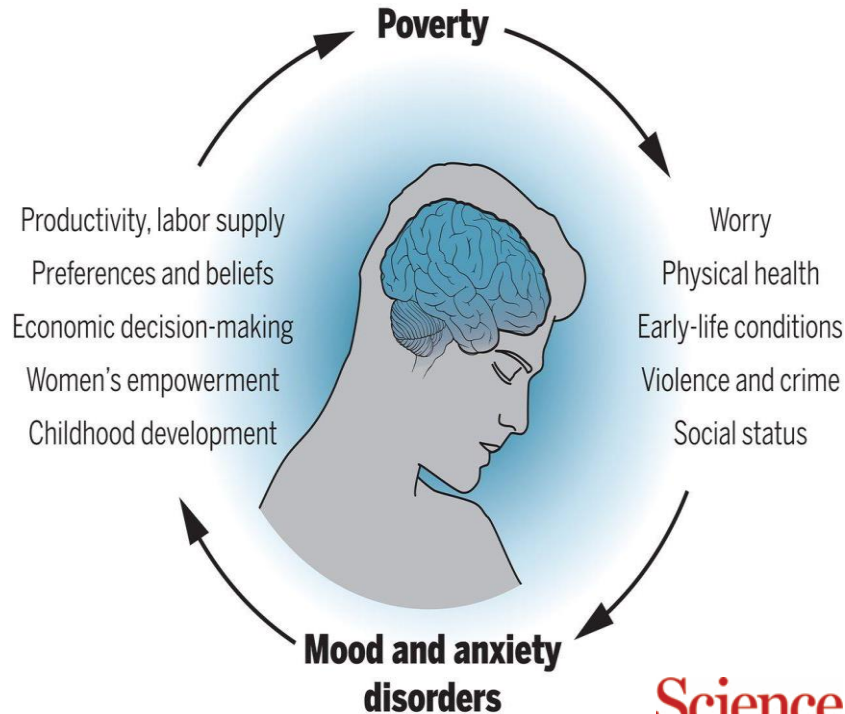
Students that participate in early childhood education are 2.5 times more likely to go on to higher education.



Source: *Economic Impacts of Early Care and Education in California*, UC Berkeley Center for Labor Research and Education, 2011



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Matthew Ridley et al. Science 2020;370:eaay0214

Diaper Need as a Health Issue: Causal Evidence



- Economic shocks worsen diaper need and mental health^{1,4}
- Diaper need number one predictor of postpartum depression in CT sample of low-income women
- Interventions to improve economic circumstances boost mental health for mothers and children^{2, 5, 6}

1 Mani et al. Science 2013. Smith Pediatrics 2013

2 Costello EJ. JAMA. 2003

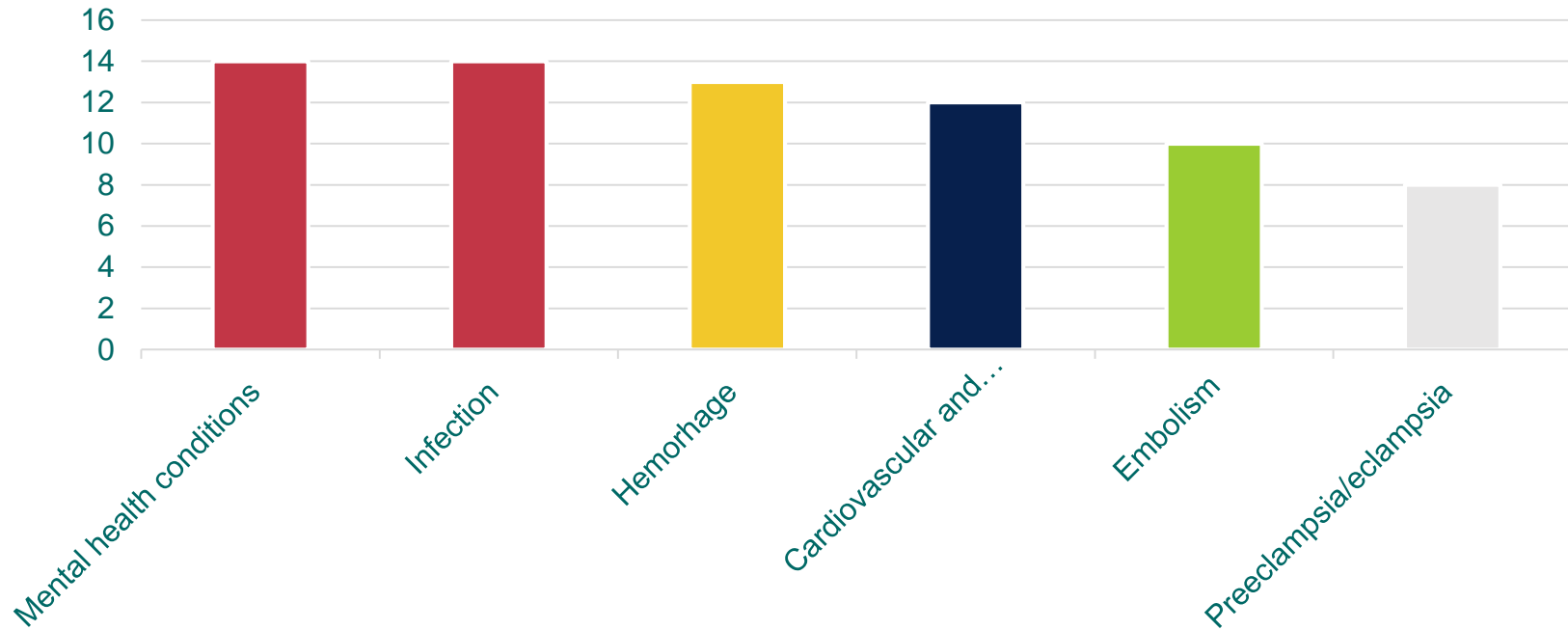
3 Putnam R. Our Kids. 2015

4 Frاسquilho, D., BMC public health. 2015

5 Olesen, S. C., BMC psychiatry. 2013

6 Pierce, J. R., Am Economic Review: Insights. 2000

Mental Health Conditions Leading Cause of Preventable Maternal Deaths



Medicaid costs associated with maternal depression



- Reducing maternal depression has the potential to lower costs associated with:
 - Preterm births (\$3.3 billion)
 - ED visits/mental health expenditures (\$2.9 billion annually)
 - Referrals to DCF (State medical costs for child abuse and neglect: **\$210,012** for non-fatal victims, over **\$1.3 million** for fatal victims (61% Medicaid paid))
- Given Medicaid covers 50% of all births in the U.S., the implications for Medicaid costs for untreated maternal depression are substantial.

Medicaid costs associated with maternal depression



- Untreated perinatal mood and anxiety disorders cost the U.S. **\$14.2 billion** in 2017 (when following the mother-child pair from pregnancy-5 years postpartum), which equates to **\$32,000** for each mother-child pair
- The economic burden of serious mental illness in adults is about **\$400 million** for Connecticut each year.

Medicaid costs and diaper need



- Diaper need can lead to increases in urinary tract infections (UTIs) as well as increased pediatric visits for diaper dermatitis
- Reducing diaper need among Medicaid enrollees has the potential to reduce costs to Medicaid through reduced emergency department (ED visits):
 - Pediatric UTIs are the third leading primary cause of rehospitalization after birth for Medicaid enrollees
 - Children with UTIs account for 500,000 annual ED visits
 - Children under one year represent 40% of all UTI hospitalizations
 - Total ED costs in 2011 for UTIs was \$464 million

Opportunities



1. Consider diapers as an integral part of any maternal and/or pediatric bundle.

This payment could reduce Medicaid costs through reductions in diaper dermatitis and urinary tract infections for the child and reductions in acute maternal mental health visits.

1. Integrated Care for Kids (InCK) New Haven

Further collaboration



Integrated Care for Kids/Clifford Beers

We are also examining ways to expand the pilot by integrating it with the work of Clifford Beers and through the Federal CMS Center for Innovation, Integrated Care for Kids (InCK) initiative, focused on a system of integrated care that addresses the physical, mental and social determinants of health for 30,000 New Haven children and pregnant mothers on Medicaid and CHIP.



Integrated Care for Kids System of Care Framework

Goals:

- 1 Early identification and treatment
- 2 Integrated care coordination and case management
- 3 Development of a state payment model

References-Maternal Depression

- Luca, Dara Lee, Garlow, Nellie, Staatz, Colleen, Margiotta, Caroline, Zivin, Kara. (2019). *Mathematica Policy Research*. Societal Costs of Untreated Perinatal Mood and Anxiety Disorders in the United States. <https://www.mathematica.org/news/new-study-uncovers-the-heavy-financial-toll-of-untreated-maternal-mental-health-conditions>
- Luca, Dara Lee, Garlow, Nellie, Staatz, Colleen, Margiotta, Caroline, Zivin, Kara. (2019). *Mathematica Policy Research*. Societal Costs of Untreated Perinatal Mood and Anxiety Disorders in the United States. <https://www.mathematica.org/news/new-study-uncovers-the-heavy-financial-toll-of-untreated-maternal-mental-health-conditions>
- Luca, Dara Lee, Garlow, Nellie, Staatz, Colleen, Margiotta, Caroline, Zivin, Kara. (2019). *Mathematica Policy Research*. Societal Costs of Untreated Perinatal Mood and Anxiety Disorders in the United States. <https://www.mathematica.org/news/new-study-uncovers-the-heavy-financial-toll-of-untreated-maternal-mental-health-conditions>
- C Liu, S Cnattingius, M Bergström, V Östberg, A Hjern. Prenatal parental depression and preterm birth: a national cohort study. *BJOG: An International Journal of Obstetrics & Gynaecology*, 2016; DOI: [10.1111/1471-0528.13891](https://doi.org/10.1111/1471-0528.13891)
- Employer expenditures and healthcare utilization figures from Truven Health Analytics, Inc. Costs of Preterm Birth. Prepared for March of Dimes, 2013. References: Wier, L.M. (Thomson Reuters), and Andrews, R.M. (AHRQ). The National Hospital Bill: The Most Expensive Conditions by Payer, 2008. HCUP Statistical Brief #107. March 2011. Agency for Healthcare Research and Quality, Rockville, MD. <http://www.hcup-us.ahrq.gov/reports/statbriefs/sb107.pdf>. and HCUPnet. Healthcare Cost and Utilization Project (HCUP). 2011. Agency for Healthcare Research and Quality, Rockville, MD. <http://hcupnet.ahrq.gov/> Accessed September 12, 2013. www.marchofdimes.org/materials/premature-birth-the-financial-impact-on-business.pdf
- National Center for Health Statistics, final natality data. (2020) Retrieved from: <https://www.marchofdimes.org/peristats/ViewTopic.aspx?reg=09&top=3&lev=0&slev=4>
- Heun-Johnson, Hanke, Menchine, Michael, Goldman, Dana, & Seabury, Seth. (2018). Leonard D. Schaeffer Center for Health Policy and Economics. Presentation on The Cost of Mental Illness: Connecticut Facts and Figures. http://ctnonprofitalliance.org/wp-content/uploads/2016/12/CT-Chartbook_final.pdf
- Jacob V, Chattopadhyay SK, Sipe TA, Thota AB, Byard GJ, Chapman DP; Community Preventive Services Task Force. Economics of collaborative care for management of depressive disorders: a community guide systematic review. *Am J Prev Med*. 2012 May;42(5):539-49. doi: 10.1016/j.amepre.2012.01.011. PMID: 22516496.
- Peterson, C., Florence, C., Thomas, R., & Klevens, J. (2018). Cost-Benefit Analysis of Two Child Abuse and Neglect Primary Prevention Programs for US States. *Prevention science: the official journal of the Society for Prevention Research*, 19(6), 705–715. <https://doi.org/10.1007/s11121-017-0819-8>

References- Diaper Need

- Sobowale, Kunmi, Clayton, Ashley, Smith, Megan. (2020). Diaper Need is Associated with Pediatric Care Use: An Analysis of a Nationally representative Sample of Parents of Young Children. *The Journal of Pediatrics*. <https://doi.org/10.1016/j.jpeds.2020.10.061>
- Schiltz, N. K., Finkelstein Rosenthal, B., Crowley, M. A., Koroukian, S. M., Nevar, A., Meropol, S. B., & Cuttler, L. (2014). Rehospitalization during the first year of life by insurance status. *Clinical pediatrics*, 53(9), 845–853. <https://doi.org/10.1177/0009922814536924>
- Spencer, John D., Schwaderer, Andrew, McHugh, Kirk, & Hains, David S. (2010) *Pediatric Nephrology*. Pediatric Urinary Tract Infections: An Analysis of Hospitalizations, Charges, and Costs in the USA. doi: [10.1007/s00467-010-1625-8](https://doi.org/10.1007/s00467-010-1625-8)
- Sood, Akshay, Penna, Frank J., Eleswarapu, Sriram, Pucheril, Dan, Weaver, John, Abd- El-Rahman Abd-El-Barr, Wagner, Jordan C., Lakshmanan, Yegappan, Menon, Mani, Quoc-Dien Trinh, Sammon, Jesse D., Elder, Jack S. (2014) *Journal of Pediatric Urology*. Incidence, admission rates and economic burden of pediatric emergency department visits for urinary tract infection: data from the nationwide emergency department sample, 2006 to 2011. [10.1016/j.jpurol.2014.10.005](https://doi.org/10.1016/j.jpurol.2014.10.005)

Thank you!

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