

How Children Can Transform the Economy ...AND HEALTH CARE



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A Message from the CEO

Studies suggest — and experience repeatedly demonstrates — that strategic investments in the well-being of children yield massive returns, not only to children's health and well-being, but also to the next generation of adults and to their children. Further, the economic benefits to society mirror the health benefits.

In this paper, I explore the connection between the health and well-being of children today and America's economy tomorrow. I also suggest that, as the health care debate in America continues, we can better understand and raise awareness about the programs and services that most effectively deliver health to children. By improving the health and well-being of children today, we will have a healthier population of adults in the future — helping to improve the health care system and strengthen the economy.

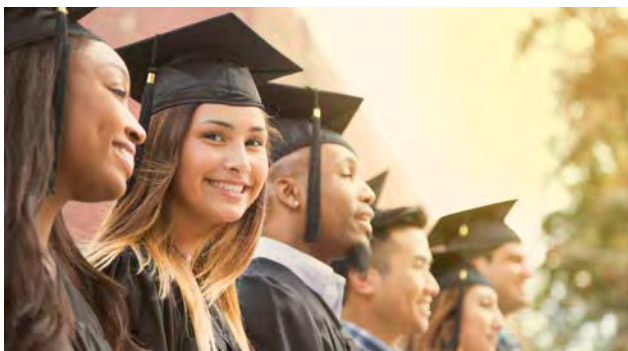
I hope this paper plays a role in fueling more radical conversations about transforming health care — from a system that pays for volume and complexity of medical services to a system that pays for health.

A handwritten signature in black ink, reading "R. Moss". The signature is stylized, with a large, sweeping "R" and a cursive "Moss".

R. Lawrence Moss, MD, FACS, FAAP
President and Chief Executive Officer
Nemours Children's Health System

Overview

Children's health and well-being is everyone's business.



Today's working adults and businesses depend on the next generation of productive taxpayers to keep the economy strong and the country safe.¹

Just as stock investors are advised to buy low and sell high, the United States — which is in dire need of a healthier workforce — should invest in human capital when it costs the least and when the return on investment will be realized for the longest amount of time.²

What is human capital? “Human capital is defined in the Oxford English Dictionary as ‘the skills the labor force possesses and is regarded as a resource or asset.’ It encompasses the notion that there are investments in people (e.g., education, training, health) and that these investments increase an individual's productivity.”³ This is why investing wisely in children's health and education is like buying stock at a low price: When the current generation of children mature into adults, the return is a highly productive workforce.⁴

Investing wisely in children's health begins with an evidence-based understanding of **what actually creates health.**

America's health care system is primarily focused on medical services — lab tests, imaging tests, surgical procedures, the prescribing of medications, and so on.⁵ However, provision of medical care in totality accounts for only 15% of health.⁶ The health of an individual is mostly due to other factors including education, nutrition, safety, security, and individual behaviors. These factors are often referred to as the social determinants of health, or SDOH.⁷ While SDOH is a useful term, it can be misleading. SDOH are not supplements to medical care. Medical care is actually a supplement to SDOH.

The Problem

America spends a large and increasing amount of its GDP on health care without a corresponding improvement in health outcomes.

According to the Centers for Medicaid and Medicare Services, “U.S. health care spending grew 4.6 percent in 2018, reaching \$3.6 trillion or \$11,172 per person. As a share of the nation’s Gross Domestic Product, health spending accounted for 17.7 percent.”⁸

Today, the United States has an average life expectancy (78.1 years) that is below that of the Czech Republic (79.1 years). The largest portion of the U.S. workforce, millennials, are less healthy than the previous generation and on track to earn less annual adjusted income, largely because of poor health.⁹

The loss is not limited to individual workers. Employers lose an estimated \$530 billion annually due to poor health.¹⁰

What about the health of future generations in the United States?

According to the United Nations Children’s Fund (UNICEF), American children experience worse health outcomes than children in nearly all the world’s developed nations (and many developing nations), across a range of ages and conditions.¹¹

In 2013, among the 29 countries, UNICEF found that U.S. children ranked 26th – trailing several countries that have much lower per-capita incomes, such as Greece and Slovakia.

This low ranking can be largely explained by demonstrable differences in the social determinants of health.¹² No amount of expensive medical care can obviate this difference. However, addressing the social determinants of health is eminently doable and very cost-effective.¹³

Employers lose an estimated **\$530 BILLION** **ANNUALLY** due to poor health.



The Traditional American Solution

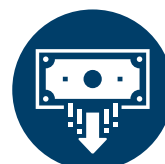
The Fee-For-Service Model

In America's health care system today, individuals and insurers (employers and the government) pay for medical services in a predominantly fee-for-service system.¹⁴ There are several drawbacks to a fee-for-service model, including:

DRAWBACK 1: The fee-for-service model incentivizes volume and complexity of medical services as opposed to incentivizing health outcomes. The sicker Americans are and the more medical services they use, the better the health system does financially;



DRAWBACK 2: The fee-for-service model does not have a mechanism to support SDOH interventions. Providers lose revenue if interventions result in a reduced need for medical care; and



DRAWBACK 3: The fee-for-service model is not conducive to implementing and sustaining an optimal level of cost-effective programs in childhood, the ideal time to build a foundation for life-long health.¹⁵



A Slow Transition to Value-Based Care

To address the shortcomings of the fee-for-service model, the government and many private insurers are promoting a shift to a value-based reimbursement or value-based payment model.¹⁶ While many states have made progress, experts agree that it will take decades, or longer, for value-based contracts to be the predominant system in the United States.¹⁷

A Better Solution

Start “small” for big (and cost-effective) results.

By moving to a “pay-for-health” system of care and addressing the social determinants of health among a specific portion of the population, children, we can have a dramatic impact on the entire health care system.

Why children? Children account for only about 7% of total medical care spending yet will soon become 100% of the adult population. The benefit of intervention in childhood is huge. Health trajectories and behaviors can still be readily influenced. These changes can last a lifetime and even impact the next generation.¹⁸



How does this work? A healthier adult population will spend less on health care, cost less for the government or employers to insure, earn more income, and be more productive members of the workforce



Who will lead this effort? Children's hospitals and health systems possess the expertise, trusted relationships, and infrastructure to serve as the stewards of children's health. Acting as integrators,¹⁹ children's hospitals can systematically assess gaps and barriers to improved health, working in partnership with others in their communities, states, and even regions to address them.



Children's Hospitals: Stewards of Children's Health

Children's hospitals across the United States are already addressing the social determinants of health for populations of children. To learn more, including how institutions like Boston Children's Hospital, Nationwide Children's Hospital, Nemours Children's Health System, Seattle Children's Hospital, and Children's Hospital of Wisconsin are addressing the well-being of children, visit www.movinghealthcareupstream.org, a resource created by Nemours through a grant by The Kresge Foundation.



How-To Guide

Transforming health care begins with children.

As trusted authorities on children's health, children's hospitals treat and care for children and families across the United States every day. As stewards of children's health, children's hospitals can take steps like these to reach even more children, create more health and well-being, and in the process, transform health care for everyone.

1. Create a value-based services organization. Transforming health care from a pay-for-medical-services industry to a pay-for-health industry requires a complete cultural transformation. At Nemours, we understand that culture cannot be mandated but we believe that structure enables culture. Therefore, we have created the Value-Based Services Organization (VBSO), a structural entity oriented toward becoming a pay-for-health system that includes teams devoted to population health management, care management and coordination, and data analytics under one reporting structure with aligned financial incentives. The VBSO collaborates with Nemours specialists, as well as independent community physicians, to improve quality of care, decrease inappropriate utilization of health care, and control costs. It also works with insurance companies to change the incentive structure of contracts away from fee-for-service and toward innovative value-based contracts.

2. Adopt a population mindset. Nemours believes that the concept of our patients needs to fundamentally change. Currently, "our patients," means those children in our hospital or on our clinic schedule. Tomorrow, "our patients" will mean all children for whom we are responsible. Nemours intends to be accountable for the health of all of our children, whether or not they seek medical care. Adopting a population mindset dictates thinking about groups of patients, such as patients with poorly controlled asthma, or children with learning disabilities. Modern electronic systems have made it possible for us to identify such groups of patients so that we can directly target them with the help they need.

To deliver health and well-being,
Nemours partners with **experts in education,
food security, adverse childhood experiences,
and other social determinants.**

3. Partner with organizations to split the risk and reward.

We are experts at delivering medical care. To deliver health and well-being, Nemours partners with experts in education, food security, adverse childhood experiences, and other social determinants. We also work to broaden the definition of health in relation to policies and practices by teaming up with state- and community-based entities. Nemours operates across five states, so partnerships and approaches vary from location to location. However, the goal of broadening the definition of health guides the direction of our entire system.

The Next Step? Contracts.

A value-based service organization, a population mindset, and a broader definition of health can lay the groundwork for children's hospitals, working with insurance companies, the government, and employers, to enter into pay-for-health contracts that transform the health of the next generation.

Conclusion

Imagine a World Where...



Our economy is driven by the power of a truly healthy workforce.

We spend 10% of our GDP on health care instead of 18%, freeing up approximately \$1.72 trillion dollars to invest in our nation's future.

The average American family spends 50% less on health care while enjoying a better quality of life.

These healthy trends and behaviors are passed on to the next generation of Americans at no added cost to society.

If the obstacles to achieving such a world seem insurmountable, consider this:

By making evidence-based changes in the way we “create” healthy children, we not only improve the quality of life for families, we also improve workforce productivity and reduce health care related costs to individuals, companies, and governments/communities.

We improve the American economy forever.

Endnotes

1. In a 2017 report, demographer Dowell Myers explains that “In the next 10-20 years, today’s children will grow into adulthood but their undersized numbers will struggle to support the U.S. economy as workers, consumers, and taxpayers...” (p.v). He further explains that underinvesting in children reduces their future productivity and details the ways in which the U.S. is currently underinvesting in children. Myers, D. (2017). *The New Importance of Children in America*. Palo Alto, CA and Washington, DC: The Lucile Packard Foundation for Children’s Health and Children’s Hospital Association (CHA). https://www.lpfch.org/sites/default/files/field/publications/newimportanceofchildren_myers_1.pdf.
2. Regarding the dire need for a healthier workforce, Moody’s Analytics published a report with the Blue Cross Blue Shield Association that outlines how the generation that makes up the largest portion of the workforce today, millennials, are sicker than the previous generation at this age, resulting in health care costs that could be up to 33% greater than the previous generation and cost us thousands a year in income due to poor health alone. pg. 3, “The Economic Consequences of Millennial Health” Moody’s Analytics, November 6, 2019. Regarding the relatively low cost of investing in children’s human capital in comparison to investing in adults, “Thinking of health as a stock that accumulates with investment or deteriorates without investment over time also highlights the importance of investing early in health. Building a strong foundation of health starts in childhood. This is not only because health as a child is the basis of that stock, but also because the opportunity cost of spending time investing in health instead of earning money or doing leisure activities in childhood is significantly less strong than in adulthood. Further, it’s clear empirically that poor childhood health is heavily correlated with poor adult health and worse economic outcomes.” pg. 7, Chen, Vicki. *The Economic Importance of Children’s Health*.
3. “Human capital is defined in the Oxford English Dictionary as ‘the skills the labor force possesses and is regarded as a resource or asset.’ It encompasses the notion that there are investments in people (e.g., education, training, health) and that these investments increase an individual’s productivity.” pg. 1, Goldin, Claudia. *Human Capital. Handbook of Cliometrics*. Heidelberg, Germany: Springer Verlag; 2016. Retrieved January 17, 2020 from https://scholar.harvard.edu/files/goldin/files/human_capital_handbook_of_cliometrics_0.pdf.
4. “A growing literature in economics, epidemiology, and psychology establishes the importance of attributes shaped in childhood in determining adult outcomes. At least 50% of the variability of lifetime earnings across persons results from attributes of persons determined by age 18.”pg. 3, Heckman, James and Mosso, Stefano (February 2014). *The Economics of Human Development and Social Mobility*. The University of Chicago. Retrieved January 17, 2020 from <http://ftp.iza.org/dp8000.pdf>.
5. See the Center for Medicare and Medicaid report *National Health Expenditures 2017 Highlights*, available online at <https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/Downloads/highlights.pdf>.

6. “It appears, in fact, that a much smaller proportion of preventable mortality in the United States, perhaps 10–15 percent, could be avoided by better availability or quality of medical care.” pg.1, McGinnis, J. M., et al. (2002, March). *The Case for More Active Policy Attention to Health Promotion*. <https://www.healthaffairs.org/doi/full/10.1377/hlthaff.21.2.78>.

7. The World Health Organization defines the social determinants of health as “the conditions in which people are born, grow, live, work and age. These circumstances are shaped by the distribution of money, power and resources at global, national and local levels.” Visit the World Health Organization’s website to learn more: https://www.who.int/social_determinants/sdh_definition/en/.

8. The Centers for Medicare and Medicaid. *Historical*. CMS, Retrieved January 17, 2020, from www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsHistorical.

9. The Organisation for Co-operation and Development. *Health Status - Life Expectancy at Birth - OECD Data*. The OECD. Retrieved January 17, 2020, from data.oecd.org/healthstat/life-expectancy-at-birth.htm.

10. Japsen, B. (November 11, 2015). *Poor Worker Health Costs U.S. Employers Trillion Dollars a Year*. <https://www.forbes.com/sites/brucejapsen/2018/11/15/poor-worker-health-costs-u-s-employers-half-trillion-dollars-a-year/#52850fe66d3b>.

11. Adamson, P. (April 2013). *Child Well-Being in Rich Countries, A Comparative Overview*. UNICEF Office of Research. https://www.unicef-irc.org/publications/pdf/rc11_eng.pdf.

12. The rankings featured in UNICEF’s Child Well-being in Rich Countries, A Comparative Overview were based on the “average ranking for the five dimensions of child well-being.” These dimensions — material well-being, health and safety, education, behaviors and risks, housing and environment — are aligned with the determinants of health and social determinants of health.

13. For examples of how the social determinants of health can be addressed through programming, how effective types of programming are, and the funding methods for these programs, visit:

The Heckman Equation, which offers free access to reports, FAQ sheets, and other resources highlighting Professor James Heckman’s groundbreaking work in the impact of early childhood interventions and the ROI of these interventions. <https://heckmanequation.org/>.

Childhood Interventions: What Works? by the Program for Children at The National Bureau of Economic Research, which describes and reports on the impact of a variety of programs <https://www.nber.org/themes/childhood/childhoodsummary.shtml>.

Moving Health Care Upstream, which offers a wide variety of tools and resources related to programs, policies, and funding of childhood interventions to promote well-being <https://www.movinghealthcareupstream.org/tools-and-resources>.

14. Haelle, T. (March 8, 2016). *Fee for Service Still Dominates in the United States*. Medscape. <https://www.medscape.com/viewarticle/860003>.
15. For more information on payment models for children's health, see Wong, et al. (June 2018) *Making the Case for Value-Based Payment Reform in Children's Health Care*. JAMA, June 2018. Retrieved on January 17, 2020, from <https://jamanetwork.com/journals/jamapediatrics/article-abstract/2676823>.
16. Regarding the government's support for a transition to value-based care, visit The Centers for Medicare and Medicaid webpage on *Value Based Programs* available at <https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Value-Based-Programs/Value-Based-Programs>.
17. Waldron, T. (September 30, 2019). *The Future of Value-Based Care: 2019 Survey Results*. The Definitive Blog, Definitive Health care. Retrieved on January 17, 2020, from <https://blog.definitivehc.com/value-based-care-2019-survey-results>.
18. A long-term evaluation of the Carolina Abecedarian Project (ABC) shows striking effects on adult health and other child outcomes. See Campbell, F. et al. (March 28, 2014). *Early Childhood Investment Substantially Boost Adult Health*. National Institutes of Health. Retrieved January 17, 2020, from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4028126/>.
19. Learn more about integrators by visiting the Population Health Integrators page at Moving Healthcare Upstream. <https://www.movinghealthcareupstream.org/population-health-integrators>.

About Nemours Children's Health System

Nemours is an internationally recognized children's health system that owns and operates two freestanding children's hospitals: the Nemours/Alfred I. duPont Hospital for Children in Wilmington, Del., and Nemours Children's Hospital in Orlando, Fla., along with outpatient facilities in five states, delivering pediatric primary, specialty, and urgent care. Nemours also powers the world's most-visited website for information on the health of children and teens, **KidsHealth.org**, and offers on-demand, online video patient visits through **Nemours CareConnect**. **Nemours ReadingBrightstart.org** is a program dedicated to preventing reading failure in young children, grounded in Nemours' understanding that child health and learning are inextricably linked, and that reading level is a strong predictor of adult health.

Established as The Nemours Foundation through the legacy and philanthropy of Alfred I. duPont, Nemours provides pediatric clinical care, research, education, advocacy, and prevention programs to families in the communities it serves.

Nemours® Children's Health System

