Consult: Jonathan Miller (left), medical director of Nemours's Value-Based Services Organization, regularly consults with physicians from the Delaware Children's Health Network, including Megan Werner, the network's vice chair and associate medical director of population health and quality at Westside Family Healthcare, and Jason Hann-Deschaine, the network's chair and a pediatrician with Delaware Pediatrics.

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A SERIES ON
HEALTH SYSTEM TRANSFORMATION

Integrating Pediatric Care And Taking On Risk To Improve Health

In Delaware, Nemours Children's Health System wants to get paid for keeping children healthy.

BY REBECCA GALE

George Datto spotted a theme in his pediatric weight management practice: The kids who had challenges in their lives such as food insecurity, poverty, and trauma weren't coming back for follow-up appointments. And without follow-up appointments or consistent treatment, the chances of achieving a healthy body weight were far lower.

"I always knew that if the bottom of the pyramid is broken, you can't start to address lifestyle. You have to address psychological and social," Datto says. He started looking into better ways to screen patients to see what could be addressed when they came in for their initial appointment, and he realized that there was no standardized approach to tracking food insecurity (that is, when a patient's family regularly runs out of food or doesn't know where their next meal may come from).

"Addressing anxiety and mental health was in my [medical] training," Datto says, "but this wasn't."

His weight management practice at Nemours Children's Health System in Wilmington, Delaware, is one of the busiest in the country. But among the seven doctors in his group, there wasn't a standard way to account for what social determinants of health their patients were grappling with. So Datto convened the team of weight management physicians, several of whom are based in Nemours's Florida health system, for an all-day meeting at his office in Wilmington. The physicians came up with two questions on food security to add to their initial screenings, which patients can fill out on a tablet so that their information is automatically entered into the electronic health record system (a paper option is also available). They also included a question that gives patients and caregivers the option to talk to a hospital social worker about other resources that might be available.

Within a few months of using the new screener, they'd seen some patterns. Datto says that while the medical literature doesn't always show a correlation between overweight patients and food insecurity, his practice found that there was one for the most overweight kids, those with class 3 obesity—which translates into an adult body mass index (BMI) of 40 kg/m^2.[1] (BMI over 25 is considered overweight.) Datto found that 30 percent of children with class 3 obesity were also food insecure. And kids with class 3 obesity were also the least likely to come to a follow-up ap-

Photograph by James Kern

pointment. (These data are currently being written up for publication.)

With this information, Datto made some changes to his practice. If a patient registers as having strong food insecurity on their screening form, he brings a social worker to the first appointment, so the connection can be made right away. He's standardized this approach across the weight management practice and is working with other primary care doctors throughout the Nemours health system to educate them on food insecurity and other social determinants of health that can affect outcomes.

Nationally, general obesity in children has leveled off, but instances of class 3 obesity are on the rise.[1] "Public health messages and day care interventions and prevention work [have had some success] in preventing obesity early on. But once the kids get on a trajectory that is pathologic, those efforts don't work as well. Fixing the bottom of the broken pyramid is better. You can't change the environment, but you may be able to help the parents," Datto says.

A New Health Care Model

Datto is one of a growing group of providers who are factoring in social determinants when treating patients at Nemours. Understanding social determinants is especially critical in treating children, as their health patterns and lifestyle choices are still forming.

This trend of examining health care within the context of how a child lives and who they interact with is part of Nemours's larger effort to tackle risk factors and spend more resources in prevention efforts, a concept called "upstream work" (clinical care is the downstream work). But while prevention work is laudable, it's difficult to get paid for it in the US health care system, which has long been based on a fee-for-service approach that prioritizes procedures and interventions.

Nemours has set out to change that.

"The ultimate solution is to get paid for health," says Larry Moss, Nemours's CEO. Moss is a surgeon who specializes in congenital defects, the sort of complex medical problems whose treatment is rewarded by the current health system. When he speaks to *Health Affairs*, it's via videoconference, as Moss is based in Nemours's Jacksonville Health System in Florida, though the current efforts he describes are focused on the system's Delaware entities. "It's a $3.5 trillion enterprise," Moss says of the US health care system, "and every dollar of that enterprise is incentivized to buy the opposite of what we want, which is health. We've got a system built on the complexity and volume and treatment."

Moss is spearheading the Nemours health system's multipronged transformation: His teams are working to renegotiate outcome-based contracts with insurance companies, include social determinants in their health care assessments, expand their preventive work efforts, and work with Delaware's governor and other state leaders to upend the way the state pays for children's care under Medicaid.

Other health systems have made strides in renegotiating insurance contracts, delivering robust preventive work, and including social determinants, but no children's health system has been able to change its state's Medicaid delivery model to shift risk and any potential upside from the state to the health system. Moss wants Delaware and Nemours to be the first.

Moving To Value

"After years of planning, we've just scratched the surface on the move to value," says Cindy Bo, the chief strategy and business development officer at Nemours Delaware Valley, who heads up the effort.

Value, in this instance, is measured by tracking health outcomes, which are among the metrics gaining prominence among hospitals and insurers alike. Tracking these metrics requires access to data and a robust analytical method to document success—including defining what that success looks like. It also requires a mind-set shift among providers in how they treat patients. Many clinicians have built successful practices following the fee-for-service model. It's created a culture that focuses on volume of patients, with less emphasis on follow-up care, well visits, and preventing readmissions.

But Moss believes that for Nemours to truly deliver health care focused on improving health outcomes, it would have to "accept risk." Under this model, the hospital would receive a set payment for each child on its rolls, regardless of the medical services the child received.

Moss believes that Medicaid, which covers about half of Delaware's 200,000 children, is the place to start. Though Medicaid is a federal program, states have a great deal of latitude in how it's administered. If Nemours accepted risk for all of the state's Medicaid-covered children, it would be incentivized to lower the health care costs associated with each child. This would be the first time a health care system became a state's primary children's insurance network. If it's successful, the approach could become a national model for others to emulate.

The ambitious plan just might work, Moss notes, because Nemours is in a pretty uncommon position. It is the only child-focused health system in Delaware, and its primary care network serves approximately one-third of the state's children.

Moss and his team are also in conversations with Gov. John Carney and his health secretary, Kara Odom Walker, both of whom Moss describes as "forward thinking" and willing partners in exploring what it would take to change the health care system to focus on child health outcomes. When Moss spoke to *Health Affairs*, he had additional meetings scheduled with Governor Carney's team, but nothing concrete to report yet.

"Conceptually we are on the same page: We're trying to create a system that aligns the incentives—a financial and health win for everybody," he says.

Delaware is a unique state in terms of health care: There are six hospitals in the entire state, and (as noted above) only one—Nemours—focuses on children. Because of this, the Nemours executive team says that it faces less competition and so is able to create synergy and collaborate effectively. The state is small in both geographic size and population (it had about 960,000 residents in 2018), which means that a large health system such as Nemours can ambitiously aim to serve the state's entire population of children.

Learning From Past Disappointment

Executives at Nemours stress that health care prevention work has always been

part of its mission, ever since the land for the hospital was bequeathed to it by Alfred du Pont. In 2004 the system created Nemours Health and Prevention Services to focus on innovative models to promote optimal child health and well-being, starting first with obesity prevention, healthy eating, and active living. Nemours also received a grant through the Center for Medicare and Medicaid Innovation's Health Care Innovation Awards to target asthma prevention in 2012.

Nemours Health and Prevention Services was headed up by Debbie Chang, a senior vice president at Nemours, who went out into the community in search of partnership opportunities and ways to address the social determinants that contribute to both asthma and obesity—including improving air quality by reducing the time school buses spent idling outside buildings, and working with day care centers to offer more nutritious food to kids.

"It was a change in the business model to focus on root causes," says Chang, who no longer heads up the program but is based at Nemours's office in the District of Columbia—which focuses on health policy and prevention at both the federal and state levels to spread and scale what works. When launching Nemours Health and Prevention Services, she'd commute the two hours each way to Delaware several times a week.

It was pioneering work, Chang says: "At the time there weren't any other children's hospitals that were doing this." Even so, the system may have gotten ahead of itself. Under a fee-for-service model, payers reimburse health care providers when an asthma patient goes to the emergency department, but not for work done to reduce asthma triggers or to make sure the patient's asthma medication prescription is filled. Even though the asthma prevention work had strong success metrics, such as cutting emergency department visits and hospital readmissions in half in just three years, it was impossible to sustain financially under the fee-for-service reimbursement model.[2]

Moss says it is no surprise that the prevention work didn't succeed in the fee-for-service model, which he describes as inherently flawed. "It's a sickness- and disease-based model," he says. Nemours brought in a consultant in 2015 to address how it could continue prevention work while making that financially sustainable.

In response to the consultant's recommendations and internal reflections, Nemours began exploring ways to focus on outcomes and changing insurance reimbursement. This in turn led Nemours to create its Value-Based Services Organization in 2016. The organization would bring the prevention work that Chang was doing closer to the clinical work. In part, the goal was to produce metrics that would both show a return on investment in running the program and open the door to a shift in reimbursement through insurance contracts.

"The single biggest obstacle to providing value-based services is the insurance contracts," says Jonathan Miller, the medical director of the Value-Based Services Organization. Miller, a pediatrician, counts Bo's children among his patients. He moved to Delaware from Chicago to take the position at Nemours, as part of its national search to identify new talent for its new approach. The US health care system "is not designed to create healthy people," Miller says. "It is not a system that puts an emphasis on prevention or healthy communities or health. It is designed to make money when the ICU [intensive care unit] is full and when the OR [operating room] is busy."

Miller works with Jamie Clarke, who was brought in to be the executive director of the Value-Based Services Organization. Their challenge in working with insurance companies is to create metrics that Nemours can meet and standardize across other payers.

"The industry has been moving this way for the past five years," says Clarke, who came to Nemours after more than a decade of working in the insurance industry. "A lot of insurance companies are requiring this. If you want to continue working for payers, you have to continue to move to value."

"We have thirty-three different metrics with seven different payers," Clarke explains, which is not atypical for a single health system. "The health payers were saying we aren't just going to pay you, we want outcomes and reductions in cost."

While a number of the metrics overlap between companies, including tracking emergency department visits, lengths-of-stay, vaccination rates, and well child visits, there is still an annual contract to negotiate and enough variability that getting the entire health system—from providers to payers—on board proves complicated.

Building A Bigger Network

Nemours employs 512 pediatricians in the Delaware Valley, 108 of whom are primary care providers. To arrange and negotiate the kind of contracts with payers it wanted, Nemours needed even more providers—not just those employed by the system—to join in creating an even broader network.

To this end, Miller and Clarke set out to create a clinically integrated network called the Delaware Children's Health Network, the first of its kind in Delaware. Creating the network would extend Nemours's reach, even among health care providers who operate independently. It would also help Moss's efforts in working with the governor to assume risk for the state's children and assist Nemours's negotiation efforts with payers. Independent providers who joined the network could benefit from group-negotiated contracts and better reimbursement rates.

Historically, insurance companies initially targeted the adult market and the avoidance of long-term costs associated with chronic ailments such as diabetes, when focusing on outcomes. Pediatrics had once been an afterthought for cost savings, since children account for only about 8 percent of US health care expenditures.[3] So Nemours needed to change the equation and create an expanded network. "This gives us a larger pediatric voice," Clarke explains.

The wider network also would give Nemours access to population health metrics, along with a commitment from primary care providers to try to improve on targeted metrics such as vaccine rates and well visits. As part of the network, each participant would get access to the electronic health record tool, called Healthy Planet, provided and paid for by Nemours, even if providers were already using a different electronic health record vendor than the one Nemours used.

Nemours wanted its clinically inte-

grated network to have a long enough reach to be able to effectively conduct population searches with the common electronic health record, such as identifying ZIP codes with low vaccination rates or few well visits.

Providers have long been providing individualized care, Miller says, but they haven't been able to think about broader patient populations because they lacked the tools to do so. Access to larger sets of records could show whether a population or geographic area would require a more targeted effort or different approach. By joining the network, primary care providers pledge their commitment to improving their own metrics, and the larger data set would allow them to compare their metrics to those of other practices and see if they had room for improvement.

But creating the network from scratch required significant effort to convince providers to join: It was an unproven quantity, and Nemours's primary care practice had long been viewed as a competitor to independent physicians.

"Historically Nemours had been growing its primary care footprints, so community pediatricians were [suspicious] that we were trying to take their patients," Miller says. "That has changed. We're focused on value—our primary care network is at capacity."

Miller and Clarke traveled up and down the state to convince twenty pediatric practices not affiliated with Nemours to join the network and recruit five clinicians to serve on the network board.

They would call, text, offer to meet before or after hours, and bring sandwiches or go to places such as Panera to grab a quick lunch and explain to the doctors that their participation in the network would be valuable for both parties.

Clarke recalls one physician initially declining her request to meet, claiming he was uninterested in meeting if Nemours wanted to buy his practice. Miller says that physicians nervously recalled past instances of Nemours's primary care physicians moving in next door. But as more physicians signed on, it became easier to convince others to join.

Miller and Clarke also improved collaboration between the health system and the unaffiliated physicians by providing direct access to Nemours's higher-ups. For example, when Nemours launched an advertising campaign focused on telemedicine, Miller says he quickly heard from several primary care providers who felt that some of the campaign's framing undercut their business model. "Within twenty-four hours we had it stopped," he says.

Addressing Social Determinants Of Health

Bo believes that Nemours would never succeed in its move to prioritize value without addressing the social determinants of health—even those factors that had no clear solutions. "You can have perfect care delivery. But when you think about health outcomes, maybe 30 percent at most is derived from the perfect care that the institution delivers. The rest is outside our control," Bo says.

Another way for Nemours to confront this challenge is through its program on adverse childhood experiences (ACEs), which are "stressful, toxic experiences, such as child abuse or neglect…that have profound effects on [children's] health and well-being," according to Lee Pachter, who runs the initiative.

A long-term study showed that in addition to being bad for kids in the near term, ACEs are bad for the adults they grow up to be.[4] "Thirty, forty, and fifty years later, those who had the toxic stressors in childhood had a higher likelihood of being an adult with chronic diseases, such as diabetes or obesity," Pachter says.

Identifying these social determinants is one piece of the puzzle, but it can be confounding since ready-made solutions aren't available, and the health system is limited in what it can do.

"You can't fix a divorce," says Na-Tasha Williams, a senior population health specialist who works on the ACEs program. "But we can ask how we can better educate our families to provide as many resilient factors to try to mitigate some of those things so it doesn't have a negative long-term effect. Long term is what causes the big [health care] spending."

Pachter and Williams have relied on support from a "Healthy Tomorrows" federal grant through the Department of Health and Human Services and from Delaware's first lady, Tracey Quillen Carney, who has made the focus on social determinants one of her personal initiatives. State funds have also helped bring in nontraditional partners, such as faith-based groups, day care centers, and schools. Their work under the grant has three goals: train practitioners in trauma-informed care; work within communities to do a public interest campaign on ACEs; and identify and seek resources to address parental mental health issues, which inevitably affect children.

Pachter says that the increased focus on social determinants in health care is a huge change that has gained traction only recently—for example, the initial ACEs study was conducted in the 1990s. "It takes five to twelve years [for ACEs factors] to be incorporated into care," he says. "Once people became interested, it became a paradigm shift. [It's the] most important public health issue of our generation."

"Having four to five adverse childhood experiences is as high a risk as having a pack [of cigarettes] a day for cardiovascular disease," he adds.

Spread

In addition to its asthma and obesity programs, Nemours has designed a curriculum that allows teachers to improve high school students' health literacy by teaching them how to make a doctor's appointment and understand the details of an insurance card.

"Data shows that people who have greater levels of health literacy are better at seeking care and have lower rates of hospital and emergency room visits," says Kate Blackburn, the manager of practice and prevention who works in Nemours's national office to spread and scale policy and prevention programs such as this one.

"We needed to educate students on where is the best place to seek care and why," says Denise Hughes, the senior population health specialist who developed the health literacy curriculum and works with schools and other community partners to implement it. The curriculum also includes details about the state's privacy laws, which allow kids older than age twelve to seek care on their own for preventive services.

Hughes found that students lacked a

basic understanding of what constitutes healthy food. Many thought that scrapple, the regional concoction of greasy pork scraps and cornmeal, was considered healthy since it was a breakfast food. Hughes also saw that students wanted to know more about how insurance works and how they could get their own coverage. These were students, she said, who would be the ones managing their own care and driving themselves to appointments.

The program proved so successful in Delaware high schools that Blackburn and her team, with help from Hughes, scaled it for national use. Jenny Baker, an adolescent health project coordinator with the Division of Public Health in the Alaska Department of Health and Social Services, discovered the health literacy curriculum and offered it to adolescents in the state as part of a five-session class. Students who completed the program were rewarded with a gift card, paid for by Nemours.

Baker had only five students complete all five sessions, and another seven complete about 75 percent of them, but she said that these students learned that they could visit physicians without their parents present, which was especially important with visits connected to sexual health. The students spent sessions going over ways to be an active participant in doctor visits, asking questions and seeking further clarification when they got explanations that they didn't understand.

"What was most interesting to me is how little I know about health care, even though I work in public health," Baker says. The students had little understanding of how well visits worked and didn't even know that they could access them on their own. "One of the young people said the doctor was surprised that they came to the visit with questions prepared," Baker says. Another youth learned about how her insurance worked, and still another went to see a doctor on her own for the first time.

Improvements in health literacy now would yield adults who could better manage their own health care and keep costs lower within the health care system—yielding dividends for a health system that pays more for health than for sickness.

Looking Ahead

Increasingly, insurance companies have incentives to try something new such as basing payments on outcomes, thereby transferring the risk to Nemours and other health systems that have both the resources to absorb risk and the leaders willing to make the change. But such a drastic change will require more integration and coordination within the various sectors of the health system, intricate negotiations with payers and the state, and a mind-set shift among both patients and physicians.

Moss is adamant that such a major change is the only way to transform the health care system. "Baby steps" such as incentivized contracts or one-off prevention programs aren't enough. "You can't have 97 percent of the business to provide volume and complex care and 3 percent to [provide] value," he says. There needs to be a coordinated effort on all fronts: accept risk, work with payers, and continue prevention work.

Other children's health systems across the country are examining ways to take on risk and move away from fee-for-service reimbursement in favor of reimbursement based on health outcomes. If Nemours can negotiate effectively with the state to change the pediatric model, its process could attract close attention from other states. Bo estimates that half of child-focused health systems are working with payers to negotiate reimbursement based on outcome, and another quarter are creating their own integrated networks.

Nemours is predicting that its willingness to invest in prevention efforts, shift to value-based reimbursement, and work with the state to take on risk will yield better care for patients and meet its bottom-line needs as well. Nemours is a nonprofit organization, and as Miller notes, its primary care doctors are at capacity. This has made it possible for innovation and improved outcomes to take precedence over the endless drive toward expansion and growth that motivates many systems.

"We won't make…transformational changes and advances in caring for kids in this country until we get the financial incentives aligned with health," Moss says. It may take individual efforts such as those at Nemours to show how such changes can be made and what progress looks like. Moss is optimistic that a plan to accept risk for the state's Medicaid children could begin in 2021, and Bo hopes that within a year Nemours will have some metrics from its network to show success.

"The ultimate solution is to get paid for health," Moss says. "Until we are all the way there, we have to find other ways to make these things work." ■

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NOTES

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