

Nemours/Alfred I. duPont Hospital for Children

# 2014 Progress Report



**Nemours**<sup>®</sup> Alfred I. duPont  
Hospital for Children

Wilmington, Del.

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## Introduction

In 2013, Nemours conducted Community Health Needs Assessments for communities we serve in the Delaware Valley (Delaware and Pennsylvania) and Florida. The assessment for the Delaware Valley included New Castle, Kent and Sussex counties in Delaware and Chester and Delaware counties in Pennsylvania. The assessment was comprised of both qualitative and quantitative data including a customized local child and adolescent health survey, focus groups, public health data, vital statistical data

and other benchmark data on children's health in the Delaware Valley. The report that follows reflects the progress made on priorities set forth in the Nemours/Delaware Valley Community Health Needs Assessment Work Plan.

Based on information gathered through the study, the following seven areas of opportunity were identified as significant health needs of children and adolescents in the community.

## Areas of Opportunity

- Access to Health Services
- Alcohol, Tobacco and Other Drugs
- Health Education
- Mental and Emotional Health
- Nutrition, Physical Activity and Weight
- Prenatal and Infant Health
- Sexual Activity

After reviewing this information, Nemours evaluated and prioritized the top health needs of children in the Delaware Valley using the following criteria:

- Magnitude – the number of children affected and the differences from state/national health data and Healthy People 2020 objectives
- Seriousness – the degree to which a health issue leads to death, disability or loss of the quality of life
- Impact – the degree to which the health issues affect/exacerbate other health issues
- Feasibility – the ability to reasonably impact the issue, given available resources
- Consequences of inaction – the risk of exacerbating the problem by not addressing at the earliest opportunity

As the result of evaluating data and feedback from community stakeholders, three health priorities rose to the top for Nemours/Delaware Valley; they are Nutrition, Physical Activity and Weight; Access to Health Services; and Mental and Emotional Health. However, Nemours believes that we have a responsibility to our communities to address all seven health concerns identified.

This document identifies the activities and programs developed and executed during 2014 as a result of the implementation plan objectives and strategies developed from the 2013 Community Health Needs Assessment.

# Nutrition, Physical Activity & Weight

Obesity and nutrition were identified by families surveyed in our TSA, as well as by focus group participants, as the number one perceived health issue for children and teens. More than 50 percent of those surveyed believe community resources are insufficient and/or not available to address childhood obesity and nutrition issues. While the prevalence of overweight and obese children in the TSA is less than the national average, it is significantly higher in Sussex County at 38.2 percent. The prevalence of overweight and obesity is notably higher among boys (29.1 percent) ages 5 through 12 (30.6 percent) and ethnic minorities (Hispanic: 42.7 percent and African-American: 38.2 percent).

The assessment also shows that consumption of fruits and vegetables and daily physical activity for the TSA is less than the national average. This data is similar to the findings from the 2011 Delaware Survey of Children's Health (DSCH), a biennial survey sponsored by Nemours. It is administered by telephone to more than 3,000 Delaware households with children ages birth through age 17. Administered in 2006, 2008 and 2011, the DSCH provides data on various health trends including weight status, consumption of healthy foods, activity levels, use of screen media and parental understanding of a child's weight. Though the DSCH sample size is much larger than the sample size of the CHNA, findings from the DSCH suggest that 40 percent of Delaware children, ages 2-17, were overweight or obese in 2011, a figure that is unchanged in terms of statistical significance since the first sampling of the population in 2006. (Additional findings from the DSCH can be found at [www.nemours.org/dsch](http://www.nemours.org/dsch).)

Given that Sussex and Kent counties noted the highest percentage of overweight or obese children (38.2 percent and 28.6 percent respectively) and the highest percentage of obese children (21.6 percent and 15.4 percent respectively) among the five counties surveyed, Nemours is currently focusing its efforts within the state of Delaware with regards to obesity. Through Nemours Health & Prevention Services (NHPS) and other divisions of Nemours, programs aimed at healthy behaviors and healthy weight among children are being piloted in Delaware for future spread and scale outside of the state.

Objective:	
1.	Increase the percentage of Delaware children in a healthy weight range.
2.	Increase the percentage of Delaware children reporting targeted healthy behaviors including healthy eating, active living and positive relationships.
3.	Increase education and awareness around targeted healthy behaviors that positively impact a child's healthy weight.
Implementation Strategies:	
A.	Build <b>Wide Dissemination and Targeted Saturation of Community Health Promotion and Disease Prevention Programs</b> that target childhood obesity prevention.
B.	<b>Leverage Community Partnerships</b> to disseminate messaging around healthy eating and active living.
Evaluation:	
1.	Monitor self-reported BMI (height and weight) and targeted health behaviors among 5th, 8th and 11th grade public school students in the three-county area in Delaware through the Delaware School Survey (DSS), conducted annually by the University of Delaware, and statewide through the middle and high school Youth Risk Behavior Survey (YRBS), conducted biennially by the University of Delaware.
2.	Monitor the number of children reached through Nemours' community health promotion and disease prevention programs that target childhood obesity prevention.

## Wide Dissemination and Targeted Saturation of Community Health and Promotion and Disease Prevention Programs

### In Schools and Child Care Centers

- 950: the number of early childhood education courses taken by Delaware early care and education providers through DEPD Now!, a professional development and continuing education website hosted by the Delaware Institute for Excellence in Early Education.
- 34,000: the number of children impacted by these courses that are part of Nemours Health & Prevention Services (NHPS) **Healthy Beginning in Early Childhood Education** initiative.
- 23,000: the number of elementary school students benefiting from improved wellness policies and practices in 41 elementary schools through the Community Transformation Grant. Wellness policies include healthy eating, physical activity, social and emotional well-being and parental involvement.
- 1,700: elementary and middle school students who participated in **Food of the Month**, a food sampling program done in partnership with Delaware public schools to introduce students to new vegetables and fruits.
- 27,500: elementary school students who continue to receive 150 minutes of moderate to vigorous exercise during the school day, outside of PE class and recess thanks to the 36 elementary schools across the state who participated in the **Take 10! Challenge**.
- 400: the number of children in Kent County who are more active and eating healthier because of the 58 parents who participated in **Family Habits for Healthy Lifestyles**.
- 56,000: the number of school children who are making healthier food choices at school, because their schools are implementing a behavioral economics strategy, **Smarter Lunchrooms**, which has changed the way school cafeteria personnel are displaying, presenting and organizing foods differently on food service lines, making them more appetizing and influencing kids' food choices, purchases and consumption. Even soft music was introduced in a few cafeterias and was found to actually decrease the amount of "healthy food" waste compared to the same student population who did not have music earlier in the school year.
- 1,500: the number of 4th grade and 213 the number of middle school students who participated in **Food of the Month**, a program offered in several public schools to encourage children to add more fruits and vegetables to their diets. Each month a new fruit or vegetable is taste tested in school cafeterias using yummy recipes to increase visual and taste appeal. Recipes for the highlight food are featured on many of the school districts' cafeteria menus, and additional information is sent home to educate parents on the importance of adding certain food groups to their diets and encouraging them to try the new recipes.

## In the Community

- 8,233: the number of children living in five vulnerable census tracts that are benefiting from the advocates of **Active Delaware**; who are educating city and county land use planners about how to improve safety and access to parks and open spaces in these communities.
- 1,700: community residents who participated in Community Dinners, Family Fun Nights and Community Garden activities through the coalition work of NHPS. Kent Kids, a children's health coalition in Kent County built 22 new community gardens this year, going from one garden last year to 23 in 2014. Foods harvested from the gardens are being given to community residents and are also being used for the community dinners, teaching families how to prepare the fruits and vegetables that are being grown in the gardens.

Our advocacy for healthier food options also influenced Delaware state government in two ways in 2014. First, it influenced the adoption of a public awareness campaign to reduce the consumption of sugary beverages by the Governor's Council on Health Promotion and Disease Prevention; and secondly, we influenced the adoption and implementation of a healthy beverage policy standard for all state-owned vending machines.

## In Our Hospital

- 105,000 healthier meals were offered to patients this year. **Nemours Healthy Hospital** is a partnership between the hospital's dietetic department, the hospital cafeteria and Nemours Health & Prevention Services (NHPS) to promote healthier food options for children and families spending time at the hospital. On average 7,011 inpatient meals are served on a monthly basis. Based on dietary needs of all of our patients, the dietetics staff has been able to adjust and enhance menus to include more fruits and vegetables, and decrease sugary beverage options resulting in over 105,000 healthier meals offered in 2014.
- For patients, families and hospital staff, the **Nemours Healthy Hospital** team helped revamp the hospital café and vending services; rearranging the location of healthier food items to the front of the food service lines; adding healthier food and beverage options to the menu. More healthy food items were put in the vending machines hospitalwide, while less healthy items were reduced. The result – customers are eating more healthfully, and revenues for the café have increased!



# Access to Health Services

According to the CHNA our communities experience higher than the national average levels of children who went without health insurance at some point in the last year. In addition to intermittent insurance coverage, families said they had difficulty accessing care. The greatest barriers reported to accessing health care were inconvenient office hours, getting a doctor's appointment and the cost of prescriptions.

Objective:
1. To provide coordinated, comprehensive and culturally appropriate care to children and families of the Delaware Valley.
2. To increase access to primary, specialty and subspecialty health care for children in the Delaware Valley.
Implementation Strategies:
A. Implement <b>New Models of Care and New Technology</b> to support coordination of care
B. Create <b>Programs and Initiatives</b> to increase access to primary and specialty care
C. Conduct <b>Screenings and Community Events</b> to bring children's health specialists into the community
D. Provide <b>Resources and Space for Community Partners</b> dedicated to children's health
Evaluation:
1. Monitor access to and usage of Nemours satellite operations and specialty programs.

- **Nontraditional Office Hours.** Increased from 21 percent to 75 percent of Nemours divisions in the Delaware Valley with nontraditional hours.
- **A Patient Navigation Department** was created this year to enhance access to care for complex patients and their families in order to expedite appointments and facilitate the integration and coordination of care across disciplines. More than 2,300 unique patients/families obtained 6,700 appointments to direct access subspecialty care through the Patient Navigation Department this year.
- **Supporting Family-Centered Medical Home.** Three of our primary care practices (one in each county) received Level III certification as Patient-Centered Medical Homes by the National Council on Quality Assurance (NCQA). Three other practices expect to receive certification in 2015.
- **The Student Health Collaboration** is a partnership between Nemours primary and specialty health care providers, school nurses, the Delaware Department of Education, Nemours patients and their parents. Its goal is to improve health outcomes and the quality of life for children under Nemours' care. School nurses who have parental permission now have access to Nemours' patient electronic health records and are recognized as part of a child's health care team. All Delaware public school districts, 78 percent of Delaware charter schools, 62 percent of Diocesan schools and 30 percent of private/independent schools are participating; and, this year 1,480 students/patients are enrolled through 234 school nurse agreements.



- **Telehealth** stations in 18 emergency departments in Kent and Sussex counties, and on the delivery, nursery and pediatric floors of Nanticoke Hospital went live this year. These stations located in two primary care clinics in Kent and Sussex counties, conveniently increase access to specialties including behavioral health, GI, weight management, urology and audiology.

## Screenings and Community Events

- **Health Screenings**
  - **Primary Eye Care and Screening.** In 2014 we hired an optometrist to staff primary eye care as well as reached out to Vision to Learn who will provide glasses to children who would not otherwise receive them.
- **Blood Drives.** By increasing our blood drives from one to two times a year to monthly, we have increased our blood draws from 90 to 500 per year. The drives not only help children in our hospital, but help the Blood Bank of Delmarva supply blood and blood products to the other 17 hospitals on the Delmarva Peninsula.

## Resources and Space for Community Partners

- **Office Space**
  - **Child Advocacy Center.** Nemours/Alfred I. duPont Hospital for Children provides free office space, security, welcome center staff, dining services, utilities and other support services to this organization allowing all direct operational dollars to go directly to the delivery of services for abused children. The physician in charge is heavily subsidized by the hospital and is an expert witness for the State Attorney General's Office and the Division of Family Services in Delaware's Children's Department. In addition the salary of the social worker who provides case management services for all victims of child abuse who present at our hospital is subsidized by our Emergency Department.
  - **Community Meetings Held at Nemours Locations in 2014**

▪ Association of Pediatric Hematology Oncology Nurses (APHON) Chapter Meeting	▪ Creative Quilting Bereavement Group	▪ Oncology Pro
▪ Autism Spectrum Disorder (ASD) Social Skills	▪ Day of Remembrance	▪ Oncology Sibling Bereavement Group
▪ Asperger Support Group	▪ American Academy of Pediatrics (Delaware) Board Meeting	▪ Ortho SWANK Family Conference
▪ Audiology Parent Group	▪ Diabetes Family Conference	▪ Ortho Swank Family Meeting
▪ Bariatric Info Night	▪ Down Syndrome Support Group	▪ Physician Assistant (PA) Council Meeting
▪ Bereavement Support Group	▪ Grief Support Group	▪ Parent Child Conduct Clinic
▪ Brain Injury Support Group	▪ Hospital Awareness Program	▪ Peer Support Group
▪ Candlelighters Support Group	▪ Inflammatory Bowel Disease (IBD) Awareness Day	▪ Sickle Cell Art Speaks Event
▪ Car Seat Safety	▪ Jr. League of Wilmington	▪ Spine Marketing Meeting for Families
▪ Chronically Cool Families Support Group	▪ Lung Force Breakfast	▪ Siblings That Are Really Special (STARS)
		▪ Spring Forward Program
- **Nemours Cares Volunteers:**
  - Four tons of food placed where families need it and seek it out
  - 200 families educated on life with a child with a cardiac condition
  - 500 families educated on health & safety information including 100 bike helmets and 38 car seat checks
  - 191 Nemours Associates having fun together outside traditional work teams meeting community needs



# Mental & Emotional Health

The majority of our respondents ranked mental health “Excellent/Very Good” for children ages 5 through 17, with only 5.6 percent of parents believing that their child’s mental health is Fair or Poor compared to the national average of 10.28 percent. However, parent’s awareness of mental health services in our service area is lower than the national average of 68.8 percent. Therefore one objective was set, “To positively impact the mental health status of children in Nemours’ total service area.” Strategies implemented to meet this objective include conducting parenting seminars and delivering effective resources aimed at promoting positive relationships between parents and children; and conducting relevant health screenings for children throughout the state.

<b>Objectives:</b>
1. Positively impact the mental health status of children in Nemours’ total service area.
<b>Implementation Strategies:</b>
A. Conduct <b>Parenting Seminars and Deliver Effective Resources</b> aimed at promoting positive relationships between parents and children.
B. <b>Conduct Relevant Health Screenings</b> for children throughout the state.
<b>Evaluation:</b>
1. Monitor mental and emotional health indicators, including self-reported strength of family relationships among 5th, 8th and 11th grade public school students in the three-county area in Delaware through the Delaware School Survey (DSS), conducted annually by the University of Delaware, and statewide through the middle and high school Youth Risk Behavior Survey (YRBS), conducted biennially by the University of Delaware.

## Parenting Seminars and Delivery of Effective Resources

Nemours provides parenting seminars and resources to assist parents in the community with developing stronger relationships with their children. The goal of these parent engagement strategies not only improves the strength of the parent-child relationship, but increases the opportunities for communication between children and their families on a variety of health-related issues, including mental and emotional well-being.

- **Parent Education and Training Programs.** Working in conjunction with community partners, free parenting seminars and training programs were offered at various locations throughout the Delaware Valley. *Growing Together* offers seminars on topics such as *Rainy Day Play*, *Parenting the Plugged-In Child*, and *Raising a Friendly Kid*, while the federally funded Community Transition Grant program worked with local school districts to facilitate one-and-a-half day workshops on positive behavior modification techniques for parents. Sixty trainers completed the program and are now ready to facilitate parenting workshops to fellow parents in their school districts.
- **Nemours Reading BrightStart!** is the first program of its kind in the nation that researches, develops and offers evidence-based tools targeting young children at risk for reading failure. In 2014, 150 children were screened for reading challenges. In Florida short-term results have shown an average of a 140 percent gain in reading readiness for participants from fall to spring of their prekindergarten year. Initial results in our longitudinal study show that a majority of children are on track with their peers through 3rd grade. Although limited, children in Delaware participating in the program have also shown promising results. In addition to direct services for young children, Nemours Reading BrightStart! helps parents, educators, health care professionals and community leaders understand the key concepts and actions needed to promote reading success for all children through a variety of specific tools, services and resources.

- **Pediatric Developmental Screenings.** Just over 6,800 developmental screenings were completed in the Nemours duPont Pediatrics practices this year with approximately 3.5 percent of screened patients requiring referral to community intervention agencies.
- **Adolescent Depression Screening.** Staff has been trained in three of our primary care practices to administer the adolescent depression screening tool which was piloted in these sites to collect baseline data and make necessary adjustments to the electronic health records (EHR) system to support the screening tool.
- **A Statewide Behavioral Health Plan** was developed this year in response to state identified gaps, and the ADHD Diagnostic and Treatment Program continued to be refined this year. A two-year fellow was added this year to focus on Autism – “Applied Behavior Analysis” and clinicians were deployed in the community at the First State School, Child Development Watch and Early Headstart. Telehealth psychiatry services were also launched in Dover and Seaford, Delaware.



# Secondary Health Concerns

## Alcohol, Tobacco & Other Drugs

Delaware is on par with national averages for teen smoking with 18.3 percent reporting smoking at least one cigarette a day in the last 30 days, and 40.4 percent reporting having at least one alcoholic beverage in the same time period. Delaware high school students also reported that 46 percent of them have tried marijuana at least once and 27.6 percent said they have used marijuana one or more times in the last month, which is significantly higher than the national average. While data are not available for these at-risk behaviors until next year, Nemours Delaware Valley has been working toward our goal of decreasing the number of high school students using alcohol or other drugs.

<b>Objective:</b>
1. Decrease the number of high school students using alcohol, tobacco and other drugs.
<b>Implementation Strategies:</b>
A <b>Partner With Community and Health Care Organizations</b> to provide education, treatment and services related to alcohol, tobacco and other drugs.
B Provide <b>Health Education for Patients and Families</b> in our community.
<b>Evaluation:</b>
1. Monitor self-reported alcohol, tobacco and drug use among 8th and 11th grade public school students in the three-county area in Delaware through the Delaware School Survey (DSS), conducted annually by the University of Delaware, and statewide through the middle and high school Youth Risk Behavior Survey (YRBS), conducted biennially by the University of Delaware.

**American Lung Association.** As part of the Community Transformation Grant program Nemours partnered with the American Lung Association to train 22 students from 11 middle and high schools as School Ambassadors who in turn engage students and parents in preventing the use of tobacco and helping them to quit smoking. Approximately 23,000 students in the participating schools were impacted through activities such as *Kick Butts* and *"N-O-T" (Not on Tobacco)*, a tobacco cessation program for teens.



# Health Education

Nationally 8.6 percent of parents use the internet as their primary source of health care information for children; in Delaware 8.8 percent say they do. However, parents in Delaware were significantly less aware of parent education programs in their community than the national average of 40.3 percent with parents in New Castle County reporting the least awareness of these programs (38.5 percent). Further, 13.3 percent versus the national average of 18.8 percent reported using a local parenting education program. Therefore, Nemours Delaware Valley has pledged to increase the amount of available health information and resources for children, families and community health care providers both within our walls and in the community.

<b>Objectives:</b>
1. Increase the amount of available health information and resources for children, families and community health care providers for various health needs.
<b>Implementation Strategies:</b>
A. Provide <b>Health Education for Patients and Families</b> both within our walls and in the community.
B. Foster the <b>Education of Future Health Care Leaders</b> .
<b>Evaluation:</b>
1. Monitor hits on KidsHealth.org and related Nemours' health education sites.

- KidsHealth.org** is a no-cost, advertisement-free website operated by the Nemours Center for Children’s Health Media and provides more than 10,000 articles, animation, movies, fact sheets, recipes and more in both English and Spanish. Our *KidsHealth Video Library* offers a wide range of medical, behavioral, safety and development topics to help families understand health issues that require hospitalization and often require lifelong management (e.g., asthma, diabetes); intensive home management (e.g., tracheotomies, g- tubes; or acute episodic care (e.g., cancer, scoliosis). In 2014, there were 7,474 inpatient views of videos. *KidsHealth in the Classroom* was visited 15,875 times by Delaware teachers.
- Nemours** also provided expertise and content for the *KidsHealth IM Program*, which is offered through the Michael Phelps Foundation, and run by the Boys & Girls Clubs and Special Olympics worldwide. Lesson plans for *IM Healthy* teach about nutrition and physical activity and *IM Successful* helps youth with setting and achieving goals. Working through the Boys & Girls Clubs of Delaware *IM40* helps youth build resiliency through positive relationships with adult role models. In 2014, there were 197,000 visits to the *IM40* Web page.
- Nemours/Alfred.I duPont Hospital for Children’s Injury Prevention Program** attended 173 events reaching 31,602 children. Events included health fairs, child passenger safety seat checks, and programs that taught fire prevention, bike and motor vehicle safety as well as concussion prevention. The Safety Store moved into its new location in the Atrium of our new building, and continues to sell low-cost safety, health and wellness products and provides education for the use of the products. This year a new mobile Safety Store was added and now brings these products into the community. Our mobile store sold 1,050 safety products in 2014 at seven community events.
- Concussion Awareness and Screening.** With concussions a growing concern among parents, coaches and health care providers of children and youth, Nemours adopted a comprehensive concussion awareness and screening program in the community. Parent education materials and information about concussion screenings have been pushed out into the community, and “Concussion in the Classroom” materials are being distributed by physician liaisons in schools, community organizations and pediatric practices throughout the region. In addition, 550 comprehensive concussion screenings were completed this year.

- **Navigating the Health Care System: Health Literacy for Adolescents** is a new curriculum being tested in Delaware public schools. Six modules; Personal and Family Information, Understanding Your Medical History, Insurance, Making/Navigating Your Medical Visit, Taking Charge of Your Health; and Resources were used by 13 teachers in 11 public high schools in a variety of classes including health classes and enrichment classes in traditional high schools as well as technical (allied health) classes in the vocational high schools. Overall 986 students participated and their knowledge of health care terminology and the health care system improved from a score of 64 percent on the pre-test to 82 percent on the post-test. Over 96 percent of the students either agreed or strongly agreed that the lessons on health care were helpful and nearly 95 percent of the students agreed or strongly agreed that they would know what to do better at their next doctor's visit.

## Medical Education (Graduate, EMT, PICU, Interns)

- **Pediatric Practice Program.** More than 100 unique community resources have been identified, investigated and presented for discussion by medical students and resident physicians participating in advocacy and ambulatory pediatric training in the Pediatric Practice Program; and a hospitalwide advocacy resource site (SharePoint) continues to be populated with this information.
  - **Fluoride Varnish Treatments.** Delaware is among the few states where Medicaid does not reimburse for primary care to prevent early childhood dental cavities at this time. Varnish is therefore not routinely incorporated into well child care. In April 2012, Wilmington Hospital Health Center's Pediatric Practice Program began an aggressive oral health campaign sustained with funds from the Delaware Division of Public Health enabling Pediatric and Med-Peds residents to integrate cavity prevention (risk-assessment, oral examination, anticipatory guidance, fluoride varnish and dental referral) into pediatric well visits for 1- to 6-year-olds. Access barriers to dental care have been further addressed through a novel interdepartmental scheduling system with our Dental Department. Oral health advocacy efforts prompted the First State School for Chronically Ill Children to assess for/enroll students in dental care.
  - **Community Advocacy.** Residents visited the Sunday Breakfast Mission, and participated in a question and answer session with Tania M. Culley, Esquire, a child welfare law specialist, from the Office of the Child Advocate. Residents also participated in a number of advocacy engagements, facilitated by Wilmington Advocacy Education Program. Dr. Himani Divatia advocated for the importance of a medical home at Christiana Care Health System's STORK (Sharing Topics of Research and Knowledge) event attended by neonatal and obstetric providers throughout Delaware in February 2014. Our residents learned about community engagement and advocacy through their JeffSTARS projects. They also have had the opportunity to engage in advocacy projects as part of learning how to complete a Quality Improvement Cycle.
- **Paramedic Education.** Currently all classes, lectures and competencies are conducted in-house in our Emergency and Transport Departments. Following assessment for effectiveness, these training courses will be opened up to surrounding areas. In Transport, monthly educational lectures and competency training on equipment, medications and other topics are held; and quarterly there are simulations in the ambulance with the NICU and flight vendor. These continuing education credits are provided to each state (Delaware, New Jersey, Pennsylvania and Maryland) and can go toward recertification for personnel. In the community, two of our paramedics offered a free Basic Life Support class to the instructors, children and parents at the Middletown American Tae Kwon Do Association, teaching 13 participants how to perform basic life support, use an automated external defibrillator, assist a choking victim and safely survey an accident scene.

- **Fellowship Training for Research Professionals.** Nemours Biomedical Research offers robust fellowship training through affiliations with the University of Delaware and the Sidney Kimmel Medical College at Thomas Jefferson University (TJU). The Nemours Graduate Education and Research Program is affiliated with the University of Delaware Department of Biological Sciences as part of a Human Health Initiative. Although the majority of our MS and PhD students enter through this initiative, the program is also affiliated with other departments at the University of Delaware and other institutions. Students accepted for study in the Department of Biological Sciences have the opportunity to perform thesis/dissertation research in laboratories of research scientists at Nemours/Alfred I. duPont Hospital for Children. Students entering the program follow course work at their educational institution and their research work is conducted at Nemours. Video conferencing is available to facilitate interactions between Nemours and the educational institutions. All graduate students are supported as either a research assistant or teaching assistant. Masters students typically graduate in two years, PhD students in five years.



- **Nemours Summer Undergraduate Research Scholars Program.** Each summer college undergraduates participate in a 10-week scholars program guided by faculty through the process of formulating and testing hypotheses, interpreting data and communicating results. Scholars are matched with mentors who are leading researchers and pediatric specialists at Nemours. In addition to the research the Summer Scholars participate in pediatric lectures, pediatric seminars and student-led activities such as a journal club as well as job shadowing opportunities. On the final day of the program, a mandatory symposium gives students opportunities to present their research activities to the Nemours professional community, family and friends.

# Prenatal & Infant Health

Infant mortality in our region is 7.2 per 1,000 live births – higher than the national average of 6.5 per 1,000 live births. In addition incidence of low birth weight babies (9 percent) is higher than the national average (8.2 percent.) Thus Nemours has been implementing a number of programs to reduce the incidence of infant mortality and improve infant health, especially among our Hispanic and Black populations in the Delaware Valley.

<b>Objectives:</b>
1. Positively impact the infant mortality rate in the Delaware Valley area and among the Non-Hispanic African-American population.
<b>Implementation Strategies:</b>
A. Increase <b>Education and Awareness</b> of prenatal and infant health issues among health care providers in the Delaware Valley.
<b>Evaluation:</b>
1. Monitor the infant mortality rate using annual data from the Delaware Department of Health and the Pennsylvania Department of Health.

- **Healthy Beginnings – Early Feeding.** Annually, about 11,000 babies are delivered in Delaware’s four labor hospitals, and Nemours Health & Prevention Services (NHPS) continues to provide technical assistance to these hospitals as they pursue the Baby Friendly Hospital designation. In 2014, Beebe Hospital in Sussex County and Kent General and Milford Hospitals operated by Bayhealth System’s in Kent and Sussex counties received the Baby Friendly Hospital designation; two other hospitals have submitted application for the designation. Six Health Ambassadors from Christiana Care Health System were trained on Baby Behavior. Delaware Women, Infants and Children’s Food Program (WIC) peer counselors, who see approximately 4,300 pregnant/breastfeeding women and 5,100 infants monthly, began providing our baby behaviors education and materials to participants.
- **Safe to Sleep.** Nemours/Alfred I. duPont Hospital for Children implemented Delaware’s *Safe to Sleep* program in January of 2014. All departments who impact the care of infants under the age of 1 have eliminated blankets in the infants sleep environment and are now using Sleep Sacs and Swaddle Sacs for all infants under age 1. All nurses have completed the SIDS (Sudden Infant Death Syndrome) Risk Reduction Curriculum for Nurses; these education modules are now included in orientation for all new nurses. Safe sleep practices education is initiated on admission for all families with infants under age 1.



# Sexual Activity

Delaware has a higher percentage of teen parents than the national average with Sussex and Kent counties having the highest rates at 15.5 and 12.2 percent respectively, versus the national average of 10 percent. Moreover, 43 percent of Delaware high school students reported having sexual intercourse in the past three months; with an alarming 41 percent who said they did not use a condom during their last sexual encounter, and 16 percent said they used no method of birth control.

Nemours is addressing this through increased education around treatment and services related to teenage pregnancy and sexual activity by partnering with community and health care organizations to provide education and treatment and services. This year duPont Hospital for Children hired a social worker to address the psychosocial needs of our adolescent patients. She discusses issues related to sexuality, reproduction options, safe sex, etc. In addition, a second adolescent medicine physician was hired who, among other things, provides gynecologic care for our adolescent girls.

## Objectives:

1. Increase education around treatment and services related to teenage pregnancy and sexual activity.

## Implementation Strategies:

- A. **Partner With Community and Health Care Organizations** to provide education, treatment and services related to teenage pregnancy and sexual activity.

## Evaluation:

1. Monitor self-reported sexual activity indicators among 8th and 11th grade public school students in the three-county area in Delaware through the Delaware School Survey (DSS), conducted annually by the University of Delaware, and statewide through the middle and high school Youth Risk Behavior Survey (YRBS), conducted biennially by the University of Delaware.

- **KidsHealth.** Through the KidsHealth.org website, children and adolescents can access more than 100 articles, fact sheets and modules to listen to which provide information about sexual health, puberty, menstruation and infections impacting teen girls and guys.
- **Partnering With Other Organizations.** Within Nemours, members of our Social Work departments provide adolescents with information and education about risks, safe sex practices, birth control and other issues related to sexual activity. In cases where patients require additional services or information, referrals are made on the patient's behalf to the adolescent medicine department, local health care providers such as OB/GYNs and community agencies such as Planned Parenthood. In the event a patient has experienced previous sexual abuse, Nemours also makes referrals to Survivors of Abuse in Recovery (SOAR), an agency that specializes in those issues. Additionally, Nemours works with school wellness centers to provide information for teens.



# Additional Efforts to Benefit and Support the Health of Our Communities

- **Office of Health Equity and Inclusion (OHEI)** was formed in 2012 and engages with internal and external partners to promote equity and inclusion in the delivery of health care. OHEI monitors the diversity of community populations and collaborates with Nemours leadership and the human resources department to recruit, hire, mentor, and retain a diverse workforce reflective of the communities we serve. It also supports Patient Services by monitoring and evaluating the delivery of culturally appropriate language and health literacy proficient services to the families we serve. This year a team of doctors and staff from our Social Work department reviewed patient/family materials to assure “reader friendliness” and that materials were written at no more than a fifth grade reading level. In 2015 these materials will be translated into Spanish. To date OHEI has provided cultural competence training to 85 percent of all hospital and NHPS staff and continues to provide this training to all new Nemours Associates, as part of Nemours’ standard hiring practices.
  - **Summer Scholars.** Five summer scholars (4 graduate and 1 undergraduate) were hired in the summer of 2014 and were mentored and trained in health care disparities and workforce diversity. New this year, the expansion of the Summer Lecture Series included 20 students from research summer schools and 6 interns from Nemours Health & Prevention Services.
- **Community Translational Research.** Nemours, along with the University of Delaware, Christiana Care Health System and the Medical University of South Carolina, received \$25 million to support the growth of clinical and translational research in 2013. The total includes \$20 million from the National Institutes of Health and an additional \$3.3 million in matching funds from the participating institutions. In 2014 Nemours research included:
  - Screening for psychosocial risk in pediatric sickle cell disease
  - Clinical and biological impact of early initiation of inhaled nitric oxide in infants with hypoxic respiratory failure and pulmonary hypertension
  - Development of prenatal consultation training in pediatric surgery fellowship
  - Improving outcomes for infants who have cardiac surgery
  - The role of stress elbow ultrasound in ulnar collateral ligament injury
  - Family psychosocial risk assessment and intervention in a pediatric heart center
  - Use of electronic previsit questionnaire on the quality of preventive well-child care
  - Community assets and barriers to reducing childhood obesity
  - Role of inflammation in sickle cell disease –related pain in children with sickle cell disease
  - General pediatrician as specialist – embedding within subspecialty divisions to improve access to care, patient satisfaction, health care costs and outcomes
  - Genetic risk and markers of early kidney disease in children with sickle cell disease



## Community Boards and Leadership

Children & Family First

Board of the West Chester YMCA

Ronald McDonald House of Delaware

United Way of Delaware

American Heart Association – Delaware

Junior Achievement

Make-a-Wish Advisory Council

American Lung Association – Delaware

Health Care Innovation Leadership Council

American Lung Association – Delaware



## Community Events and Sponsorships

Caitlin Robb Foundation	Epilepsy Foundation of Delaware	Harmelin Media
Congenital Heart Walk Headquarters	Katz Jewish Community Center	Philadelphia Pregnancy Center
Conkerr Cancer	Marlton Recreation Council	Prenatal Diagnosis Institute
Cystic Fibrosis Foundation	Sickle Cell Fund, Inc.	Delaware State Chamber of Commerce
First Friday Main Line	MLHS Neonatology	Adopt-a-Pig
Gift of Life Donor Program	NICU Golf Outing	American Heart Association
Haverford Township	B+ Foundation	American Planning Association
Kind of Kids Foundation	Crohns & Colitis Foundation	American Liver Foundation
KINfolk	Cystic Fibrosis Foundation	Arthritis Foundation
Latin American Community Center	DAFYC	Brain Injury Association of Delaware
Melmark Foundation	<i>Delaware Today</i> magazine	Catholic Charities of Delaware
Narberth Business Association	Families of Spinal Muscular Atrophy McKennas Gala	Delaware State University
Osteogenesis Imperfecta Foundation	Healthy Foods Delaware	Gift of Life
St. Francis Foundation	Human Rights Campaign	Girl Scouts of the Chesapeake Bay
St. Katherine of Siena School	Maternity Care Coalition	Leukemia Research Foundation
Very Special Arts Memorial Day Classic	American Academy for Cerebral Palsy and Developmental Meetings Manager	March of Dimes
Wayne Business Association	Bryn Mawr Business Association	Society of Pediatric Psychology
Inspira Foundation	Bryn Mawr Day Committee	Talleyville Fire Company
Inspira Health Network	Cen Del Foundation	Wilmington Flower Market
Kay's Kamp	Little Smiles Philadelphia	Center for Learning
Exceptional Care for Children	Bringing Hope Home	Garden State Discovery Museum
Cooper Foundation	Juvenile Diabetes Research Foundation	Ronald McDonald House of Delaware
2014 Bert Bell Dinner	United Cerebral Palsy of Philadelphia	State of Delaware
Association of Pediatric Oncology Social Workers	United Cerebral Palsy of Delaware	
Michaels Way		