ISSUE BRIEF

Creating a Better State of Health for Women

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Women's wellness spans from childhood into adolescence, through the childbearing period, and into older age. It includes not only wellness issues related to cardiovascular disease, cancer, and other chronic conditions but also the consequences of intimate partner violence and mental health issues.

Throughout the life course, women's health should be a priority. Healthier women lead to healthier babies, which lead to healthier communities. In addition, when women are connected to the health care system, their families are also more likely to be connected. This issue of the *North Carolina Medical Journal* explores the many aspects of women's health and its many impacts.

Improving the health of women is an important issue that requires our collective attention. Not only is every woman impacted by her own health status, but her health also influences her entire family. This issue of the *North Carolina Medical Journal* focuses on the health status of women throughout the lifespan.

Healthier women tend to have healthier birth outcomes. Supporting women during the preconception period in order to help them address chronic health issues, behavioral health issues, and social and economic challenges helps to move women toward a more positive life trajectory. Social determinants of health [1]—the structural conditions in which people are born, grow, live, work, and age—also play a critical role. A focus on social determinants of health is needed in order to address our ongoing challenges with health equity.

North Carolina has long been striving to improve women's perinatal health. In March 2016, the state released a collaborative 12-point Perinatal Health Strategic Plan that focused on infant mortality, maternal health, maternal mortality, and the health status of men and women of childbearing age. In this issue of the NCMJ, Sarah Verbiest and I outline the key components of this plan and provide details on these 12 points [2]. This plan focuses on improving health care for women and men, strengthening families and communities, and addressing social and economic inequities. Adapting the framework shared by Michael Lu and colleagues [3], the plan infuses social determinants of health and health equity throughout. As data confirm, we must address the 2-fold disparity in birth outcomes in order to see overall improvements.

Also in this issue, a sidebar by Brett Prestia and colleagues [4] offers a historical perspective on infant mortality in our state since the late 1980s, including programs and services that were developed during that time. This article references Executive Order 99 [5], which established the 5-year Governor's Commission on the Reduction of Infant Mortality. This sidebar also provides information on more recent efforts, one of which is the development of a statewide Preconception Health Strategic Plan [6] in 2008 and the supplement to this plan developed in 2014 [7]. Both documents focus on strategies for women to improve behaviors and chronic health conditions. The plan's priorities include pregnancy intendedness, obesity and related conditions, and substance abuse. The plan's addendum discusses the role of access to care, mental health, and life planning in addressing preconception health and women's wellness in our state.

Another article in this issue of the NCMJ, by Carmen Strickland and colleagues [8], documents the benefits of group prenatal care. This model can strengthen patient and provider engagement, and evidence has emerged on improvements in preterm birth, family planning utilization, and birth outcomes, as well as cost savings. Research also suggests that group prenatal care is related to increased patient satisfaction [9].

Like many other states, North Carolina still struggles with the issue of pregnancy intendedness. Approximately half of North Carolina pregnancies are to women who were not intending to become pregnant at the time of conception [10]. Thus, these women may not have had an opportunity to address the preconception health and women's wellness issues that can influence their birth outcomes. An unintended pregnancy can also have social and economic impacts on a woman and her family. In April 2014, the Office of Population Affairs, in conjunction with the Centers for Disease Control and Prevention, released family planning guidelines [11] in order to strengthen efforts to address unintended pregnancies. The guidelines not only provide recommendations for how to help prevent and achieve pregnancy

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but also emphasize the importance of offering a full range of contraceptive methods for persons seeking to prevent pregnancy and highlight the special needs of adolescent clients.

In the sidebar by Marcus Plescia and Ophelia Garmon-Brown [12], the authors focus on improving access to long-acting reversible contraception, social determinants of health, and the impact of these factors on families' economic mobility. In 2015, North Carolina's teen pregnancy rate for females aged 15–19 years was 30.2 per 1,000 [13]. While this rate is at an all-time low, we must continue to focus on this issue. Adolescents who have a baby are less likely to finish high school, are more likely to be poor as adults, and are more likely to rely on public assistance than are those who do not have a teen birth. Children born to teen parents tend to have poorer cognitive and educational outcomes, such as a lower likelihood of completing high school and lower test scores; more behavioral problems, including higher levels of fighting, delinquency, and early sexual experience; and poorer health outcomes, such as a low birth weight [14].

Many communities have chosen to tackle this challenge and made teen pregnancy prevention a priority. In their commentary in this issue, Christopher C. Dobbins and colleagues [15] bring attention to pregnancy intendedness by discussing their efforts with teen pregnancy prevention in their community. This article discusses the challenges of teen motherhood and socioeconomic status. Utilizing a collective impact framework, the community engaged teens in the discussion to come up with solutions ranging from teen-friendly clinic spaces to same-day insertion of long-acting reversible contraception. This article shares how these efforts are being implemented.

While some women are affected by unintended pregnancy, others struggle with infertility. In a sidebar in this issue, Windy Ezzell [16] focuses on the toll that infertility can take on a woman's mental health. Not only does infertility impact a woman's self-esteem, but it can also negatively impact communication and potentially lead to relationship problems. As this article describes, infertility can be related to age, lifestyle, and/or environmental conditions.

The article by Alison C. Perkins and Elizabeth N. Skinner [17] looks beyond reproduction to address a key issue related to the well-woman visit—cervical cancer screening. This article focuses on the new Pap smear guidelines, which allow the provider more time for education and discussion of women's health issues. While regular cervical cancer screening is still recommended, the new guidelines promote different screening schedules for women in different age groups. In a similar article, Tamera Coyne-Beasley and Bridget E. Hochwalt [18] focus on the HPV vaccine and provide information on recommended doses, appropriate ages for receipt, connection to sexual contact, and the vaccine's impact on cervical cancer prevention.

Of course, there are additional issues that impact women's wellness. In her commentary, Dana W. Mangum [19] shares the unsettling statistic that 1 in 4 women will experience intimate partner violence in her lifetime. Her article mentions the link between sexually transmitted infections and intimate partner violence, and she focuses on the importance of screening for intimate partner violence and the need for primary and secondary prevention efforts. In a related sidebar, George S. Ake III [20] delves more deeply into this issue. His article centers on the importance of screening and assessment and the role of clinicians in providing care to women and families who have been impacted by the trauma of domestic violence.

Another issue that disproportionately affects women is eating disorders. The commentary by Denise M. Martz and Courtney B. Rogers [21] includes a discussion of bulimia, anorexia nervosa, and other eating disorders. These mental health challenges have high morbidity and mortality rates and require focused treatment for success.

Similarly, Paula Miller [22] reminds us of the prevalence of cardiovascular disease in women. In North Carolina, cardiovascular disease accounts for more than one-quarter of all female deaths. Miller's commentary includes a discussion of women's wellness and the importance of counseling on prevention related to tobacco use, obesity, diabetes, and sedentary lifestyles. Tobacco use continues to be one of the leading preventable causes of death and disease in our state, with 16.3% of women in North Carolina reporting tobacco use [23]. For improvements to occur, it is especially important to focus on preventing tobacco use among young people, eliminating exposure to secondhand smoke, and helping tobacco users quit. As noted in the 2014 Surgeon's General Report [24], there is a causal relationship between smoking and cardiovascular disease, as well as between secondhand smoke and coronary heart disease and stroke. This report also states that there is no safe level of secondhand smoke exposure. According to data from the North Carolina Behavioral Risk Factor Surveillance System, a majority of North Carolina women who smoke are trying to quit (65.4% in 2015) [25]. In her commentary, Miller points out the need for worksite wellness efforts and community outreach as ways to reduce rates of cardiovascular disease, and more can certainly be done in these areas. As it relates to tobacco use, we can make the places where women live and work smoke- and tobacco-free, and we can provide help and support for evidence-based tobacco cessation.

In reading the article by John Goforth and Michelle Langaker [26], some may be struck by the statistic that approximately 50% of women will experience some form of urinary incontinence in their lifetime. This commentary goes on to discuss risk factors, the need to screen for symptoms during routine office visits, and potential treatment options. Another health concern that is often associated with age is osteoporosis. Lisa A. LaVallee and colleagues [27] discuss this silent disease in their article in this issue. The authors share information related to the cost, prevalence, and burden of this disease, as well as recommendations for screening, treatment, and care management. Finally, a commentary

by Tanya Bass provides a holistic model for thinking about female sexuality and discusses the importance of educating clinicians on this topic [28].

Throughout the life course, women's health should be a priority. Healthy women lead to healthy babies, which lead to healthy communities. In addition, women often serve as the health gatekeeper for their families, ensuring their children, spouses or partners, and other family members are cared for and working to protect their health. This issue of the *North Carolina Medical Journal* explores the many aspects of women's health and its many impacts. NCMJ

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References

1. Heiman HJ, Artiga S. Beyond Health Care: The Role of Social Determinants in Promoting Health and Health Equity. Menlo Park, CA: The Henry J. Kaiser Family Foundation; 2015.
2. Verbiest S, Pettiford B. North Carolina's Perinatal Health Strategic Plan: striving to improve birth outcomes for all families. N C Med J. 2016;77(6):410-415.
3. Lu MC, Kotelchuck M, Hogan V, Jones L, Wright K, Halfon N. Closing the black-white gap in birth outcomes: a life-course approach. Ethn Dis. 2010;20(1 suppl 2):S2-62-76.
4. Prestia BM, Rhodes J, Williams RW. A retrospective look at North Carolina's efforts to reduce infant mortality. N C Med J. 2016;77(6):411-412.
5. Martin JG. Executive Order 99: Governor's Commission on Reduction of Infant Mortality. Raleigh, NC; State of North Carolina: December 13, 1989.
6. North Carolina Division of Public Health. North Carolina Preconception Health Strategic Plan: September 2008-September 2013. Raleigh, NC: North Carolina Department of Health and Human Services; 2008.
7. North Carolina Division of Public Health. North Carolina Preconception Health Strategic Plan Supplement: 2014-2019. Raleigh, NC: North Carolina Department of Health and Human Services; 2014.
8. Strickland C, Merrell S, Kirk JK. CenteringPregnancy: meeting the Quadruple Aim in prenatal care. N C Med J. 2016;77(6):394-397.
9. Cunningham SD, Grilo S, Lewis JB, et al. Group prenatal care attendance: determinants and relationship with care satisfaction [published online ahead of print August 2, 2016]. Matern Child Health J.
10. North Carolina State Center for Health Statistics. 2015 Reported Pregnancies. North Carolina Health and Human Services website. http://www.schs.state.nc.us/data/vital/pregnancies/2015/. Updated October 17, 2016. Accessed November 8, 2016.
11. Gavin L, Moskosky S, Carter M, et al; Centers for Disease Control and Prevention (CDC). Providing quality family planning services: recommendations of CDC and the US Office of Populations Affairs. MMWR Recomm Rep. 2014;63(RR-04):1-54.
12. Plescia M, Garmon-Brown O. A public-private partnership to reduce unintended pregnancy rates and improve economic mobility. N C Med J. 2016;77(6):389-390.
13. North Carolina State Center for Health Statistics. 2015 NC Resident Pregnancy Rates: Females Ages 15–19 by Race/Ethnicity, Perinatal Care Regions, and County of Residence. North Carolina Department of Health and Human Services website. http://www.schs.state.nc.us/data/vital/pregnancies/2015/preg1519.pdf. Accessed November 8, 2016.
14. Ng AS, Kaye K. Why It Matters: Teen Childbearing, Education, and Economic Wellbeing. Washington, DC: The National Campaign to Prevent Teen and Unplanned Pregnancy; 2012.
15. Dobbins CC, Kenney BN, Meier CE, Taormina VV. Down with teen pregnancy, up with mobility: teen pregnancy prevention efforts in Gaston County, North Carolina. N C Med J. 2016;77(6):388-393.
16. Ezzell W. The impact of infertility on women's mental health. N C Med J. 2016;77(6):427-428.
17. Perkins AC, Skinner EN. A review of the current cervical cancer screening guidelines. N C Med J. 2016;77(6):420-422.
18. Coyne-Beasley T, Hochwalt BE. Protecting women against human papillomavirus: benefits, barriers, and evidence-based strategies to increase vaccine uptake. N C Med J. 2016;77(6):402-405.
19. Mangum DW. Intimate partner violence prevention programs in North Carolina. N C Med J. 2016;77(6):398-401.
20. Ake GS. Domestic violence and families: trauma-focused treatment options. N C Med J. 2016;77(6):399-400.
21. Martz DM, Rogers CB. Understanding and treating women's body image and eating disorders. N C Med J. 2016;77(6):426-429.
22. Miller P. Women and cardiovascular disease: what can health care providers do to reduce the risks? N C Med J. 2016;77(6):406-409.
23. North Carolina State Center for Health Statistics. 2015 BRFSS Survey Results: North Carolina; Tobacco Use; Current Smoker. North Carolina Health and Human Services website. http://www.schs.state.nc.us/data/brfss/2015/nc/all/_rfsmok3.html. Created September 20, 2016. Accessed November 8, 2016.
24. Office of the Surgeon General. The Health Consequences of Smoking–50 Years of Progress. Rockville, MD: US Department of Health and Human Services; 2014.
25. North Carolina State Center for Health Statistics. 2015 BRFSS Survey Results: North Carolina; Tobacco Use; During the past 12 months, have you stopped smoking for one day or longer because you were trying to quit smoking? North Carolina Health and Human Services website. http://www.schs.state.nc.us/data/brfss/2015/nc/all/stopsmk2.html. Created September 20, 2016. Accessed November 8, 2016.
26. Goforth J, Langaker M. Urinary incontinence in women. N C Med J. 2016;77(6):423-425.
27. LaVallee LA, Scott MA, Hulkower SD. Challenges in the screening and management of osteoporosis. N C Med J. 2016;77(6):416-419.
28. Bass TM. Exploring female sexuality: embracing the whole narrative. N C Med J. 2016;77(6):430-432.