Healthy Generations

A publication of the Center for Leadership Education in Maternal and Child Public Health

Winter/Spring 2014

Reproductive and Sexual Health:

Public Health Approaches

University of Minnesota
School of Public Health

Reproductive and
Sexual Health:
Public Health Approaches

Winter/Spring 2014

IN THIS ISSUE

LETTER FROM THE EDITOR

In this volume of *Healthy Generations* we profile public health programs and professionals who are dedicated to providing reproductive health services to adolescents and adults, women and men. We describe three state-level efforts in Minnesota and North Dakota that meet reproductive health goals through surveillance, advocacy, science-based practice, and strategic partnerships. These efforts to address chlamydia, preconception health, and mental health were developed in response to a public health need and are characterized by innovative and focused leadership. We are excited to feature an article by a thoughtful and creative team in Iowa who are addressing a critical gap in reproductive health service provision—the lack of valid and meaningful performance measures for contraceptive services. We also highlight the work of three public health professionals whose considerable talents are matched by their passion for their work: Rebecca Shlafer, Cyndy Rastedt, and Liane Grayson. All have set their own path to improve the health of the people they serve. With pride we note that two of these professionals are MPH students in our online MCH Program for advanced students. We also include a short article on one of the many hot topics in reproductive health: long-acting reversible contraception.

This volume has been a joy to produce because of the people my writing team (Summer Martins, Shoua Vang, and Sheilah McGrath) and I have met in doing so. We hope that you enjoy reading about—and are inspired by—the great work that is being done by our public health colleagues in Minnesota, Iowa, and North Dakota.

—Wendy L. Hellerstedt, MPH, PhD

Healthy Generations is produced with support from the Maternal and Child Health Bureau, Health Resources and Services Administration, U.S. Department of Health and Human Services (grant number T76-MC00005, PI: Hellerstedt).

Contact: mch@umn.edu

The **Center for Leadership Education in Maternal and Child Public Health** is committed to improving the health of infants, children, women and families. Center faculty and staff offer a Master's degree in Public Health (including an online degree program), continuing professional education and consultation and technical assistance to community-based organizations and agencies. Center faculty are involved in intervention and etiologic research in child health, adolescent health, family health, health disparities, reproductive health, and women's health. See our website at **www.epi.umn.edu/mch** and our Facebook page at **http://www.facebook.com/pages/Maternal-and-Child-Health-University-of-Minnesota/103274476412772?ref=hl**

Photo credits and design credit appear on the inside back cover.

The Minnesota Chlamydia Partnership:

Working Together to Improve Reproductive Health

by Summer Martins, MPH

Rates of chlamydia infection are increasing nationwide. At the same time, state health departments—who play a vital role in the prevention and control of communicable diseases, including chlamydia—receive limited funds earmarked for sexually transmitted infections (STIs). After watching chlamydia rates increase year after year, professionals at the Minnesota Department of Health (MDH) realized that a large response—without a high price tag—was needed. They also knew they couldn't do it alone. We sat down with Candy Hadsall, RN, STD Nurse Specialist and Kathy Chinn, Sexual Health Program Specialist of MDH to discuss the formation, goals, and future steps of the Minnesota Chlamydia Partnership (MCP).

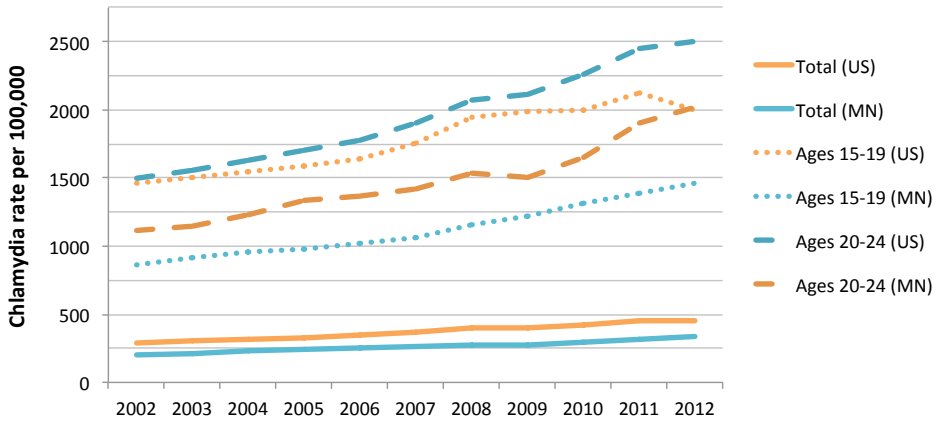


Figure 1. Rate of chlamydia (per 100,000) in the US and Minnesota, 2002-2012. Surveillance data from the Minnesota Department of Health[1] and US Centers for Disease Control and Prevention.[2]

> *We simply cannot control an epidemic when so many affected people do not get diagnosed and treated.*

Healthy Generations (HG): Chlamydia is a significant public health issue that state and local departments of health are trying to control. What is the situation in Minnesota?

Kathy Chinn (KC): As most of your readers probably know, state health departments are charged with monitoring the incidence of several infectious diseases, including chlamydia. Since the late 1990s, MDH has seen a trend of yearly increases in the chlamydia rate that shows no signs of abating. We had over 18,000 cases reported in 2012—another record! Rates are highest among young (15-24 year-old) females, but chlamydia has affected Minnesotans of all races/ethnicities across all geographies. This is not just an "urban" problem. We see the same patterns at the national level.

Candy Hadsall (CH): Because so many chlamydia infections are asymptomatic, people don't seek health care. In the meantime, these "silent" infections may be causing damage to reproductive organs and people may unknowingly transmit infections to their sexual partners. We simply cannot control an epidemic when so many affected people do not get diagnosed and treated. Therefore, the public health response includes: (1) *screening* of asymptomatic individuals, (2) prompt treatment of those who are infected, and (3) encouraging prevention behaviors like abstinence and use of condoms.

HG: What led the MDH to form the Minnesota Chlamydia Partnership (MCP)?

CH: Like so many other public health departments, MDH receives minimal funding for activities related to STIs beyond surveillance. So, every year we have been in the uncomfortable position of highlighting increases in chlamydia that we have very few tools to directly address. By 2009, many local health departments, hospitals, clinicians, and community groups were asking us, "What can we do?" We started to envision a role for MDH as convener of a coordinated effort based on the community action model. We wanted to harness the concern and energy while being realistic about everyone's limited resources. In order to maintain the community-level focus and function as independently as possible, we felt it was absolutely necessary that the effort have its own identity outside of MDH in order to succeed.

In February 2010 we secured a $10,000 grant from the National Chlamydia Coalition and the MCP was born. Our external partners include local public health, reproductive health clinics, the Minnesota Department of Education, academic institutions, youth development agencies, a health plan consortium, and concerned community members.

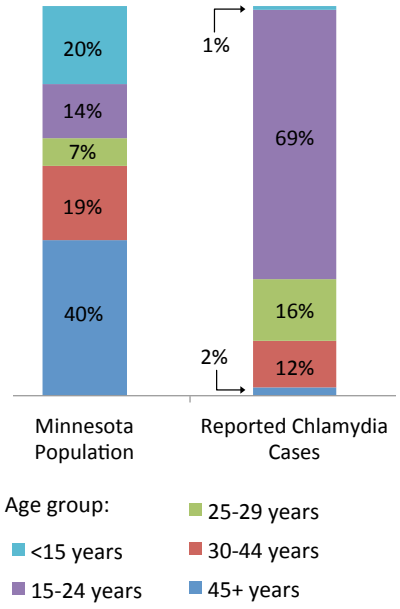


Figure 2. Age distributions of the Minnesota population and chlamydia cases reported to the Minnesota Department of Health in 2012 show the disproportionate chlamydia burden for young people. Data from the US Census[3] and Minnesota Department of Health.[1]

HG: How did the MCP get off the ground? What were some of its first activities?

KC: Our first major activity was the Minnesota Summit on Chlamydia in August 2010, which attracted 275 participants from across the state. We were very happy with the diverse representation. Clearly, many people cared about this issue and were ready to get to work. We solicited feedback on the essential issues that MCP should address, forming five work groups to tackle each issue in more depth over the next five months. It was a remarkable amount of work. Each work group came up with specific objectives and strategies for the issues under their domain. All of these recommendations were compiled in *The Minnesota Chlamydia Strategy: An Action Plan to Prevent and Reduce Chlamydia in Minnesota.* This is a very comprehensive document reflecting the multi-pronged strategies needed to tackle every angle of the chlamydia epidemic.

CH: We also developed a shorter version of the Action Plan, which we call the "booklet." The booklet maintains a focus on youth because of the highly disproportionate rates of chlamydia among young people. It provides a simple overview of chlamydia and the broader context surrounding it—things like health equity, youth development, and policy. An effective response to chlamydia requires that all these dots to be connected. The booklet conveys these somewhat complex concepts with user-friendly graphics and text, making it a great tool for just about any audience. We're hoping local communities will use this as a conversation-starter with their neighbors, healthcare providers, educators, policymakers, and others.

HG: How are local communities using the resources and recommendations offered by MCP?

KC: This is MCP's most important goal—empowering and facilitating local action. We are thrilled to have two demonstration projects that are integrating MCP recommendations and strategies in their local communities. These projects represent very different faces of the epidemic, underscoring the wide impact that chlamydia has had across the state as well as its disproportionate impact on youth and Minnesotans of color.

The first project is in rural Kandiyohi County, where members of an existing coalition on teen pregnancy (the Coalition for Healthy Adolescent Sexuality, or CHAS) broadened their scope to tackle chlamydia with financial and technical support from MCP. In collaboration with Kandiyohi County Public Health (KCPH), CHAS held a series of community meetings and devised a plan to address chlamydia. A key activity in the plan is a media campaign that uses positive messages encouraging parents to talk with their children. This is a great example of how we can take advantage of existing local infrastructures to garner support and action for chlamydia control.

CH: The second project is coordinated by NorthPoint, Inc.—an agency in North Minneapolis that is situated in the zip code with the highest chlamydia rate in the state. NorthPoint used seed money from MDH to implement the *collective impact model* and mobilize community support for the Minnesota Chlamydia Strategy and, more specifically, to develop a plan to reach African American youth in culturally sensitive ways. This North Minneapolis coalition has since been successful in raising funds from other sources to facilitate the inclusion of youth in their future activities.

HG: Minnesota's health plans have become an important ally of MCP. Can you tell us how this came to be?

WHAT IS CHLAMYDIA?

Chlamydia is a bacterial infection transmitted through sex (vaginal, anal, and oral) or from mother to infant during childbirth. Both men and women can become infected with chlamydia and transmit chlamydia.

Symptoms may include discharge, painful urination, and pain or swelling in the testes or rectum. One of the hallmark characteristics of chlamydia is its lack of symptoms—especially among women.

Diagnosis of chlamydia is confirmed through lab tests performed on urine samples or swabs taken from the vagina or rectum. Primary care providers and specialized (e.g., reproductive health) clinics may request these tests.

Chlamydia can be **treated** and **cured** with a brief regimen of antibiotics. Re-infection is possible, especially if sexual partners are not treated at the same time.

Complications of chlamydial infection can be severe due to its "silent" nature. Even without symptoms, chlamydia can spread through the reproductive tract and cause damage. Women may develop pelvic inflammatory disease (PID), which increases the risk of tubal infertility, life-threatening ectopic pregnancy, and chronic pelvic pain. Pregnant women infected with chlamydia may be at higher risk of preterm delivery and may pass the infection to their newborn. Complications in men are less common but also include infertility. Untreated chlamydia also facilitates the transmission of HIV in both men and women.

Prevention measures include abstinence, correct and consistent use of condoms, mutual monogamy, getting tested when changing sexual partners, and knowing the infection status of one's partner(s).

For more information about chlamydia, go to: **http://www.cdc.gov/std/chlamydia/STDFact-Chlamydia.htm**

WHAT'S IN A NUMBER? INTERPRETING CHLAMYDIA SURVEILLANCE DATA

Public health surveillance refers to continuous monitoring of the incidence and/or prevalence of a disease or condition at the population level. Surveillance is a powerful tool, but there are often limitations to interpreting surveillance data. Here are some things to keep in mind about chlamydia surveillance:

How is infectious disease surveillance conducted?

In the US, national, state, and local public health professionals are involved in infectious disease surveillance. The Centers for Disease Control and Prevention's National Notifiable Diseases Surveillance System gives public health officials capabilities to monitor the occurrence and spread of infections and diseases. Every state has laws that require clinicians and laboratories to report cases of certain infections and diseases to state and/or local health departments. The list of diseases varies by state but typically includes tuberculosis, HIV, food-borne diseases like salmonella, and some sexually transmitted infections (STIs) including chlamydia. Health departments use this information to track disease trends, often by geographic or demographic (age, race/ethnicity, sex) subgroups. Where there is a high threat to public health, health departments will follow up with individuals (e.g., notifying sex partners of their potential exposure to a reportable STI). State health departments also support national public health surveillance by voluntarily sharing a portion of their data with CDC. According to the CDC, it uses such data "to monitor disease trends, assess the effectiveness of prevention and control measures, identify populations or geographic areas at high risk, formulate prevention strategies, develop public health policies, and work with the international community to identify and contain global outbreaks." (**http://wwwn.cdc.gov/nndss/**)

Who is counted in chlamydia surveillance?

Chlamydia surveillance data include infected persons ("cases") who seek health care and have had their infections confirmed by a laboratory test.

Who is not counted in chlamydia surveillance?

Cases who don't seek medical care or are diagnosed without a laboratory test are not reported to the health department and are therefore not counted in surveillance. This includes sexual partners who are treated presumptively (without a laboratory diagnosis) because of known exposure to an infected partner.

What is a chlamydia rate?

To measure the population burden of a disease, epidemiologists use rates rather than raw numbers. This allows them to compare the impact of a disease in populations of different sizes. For example, 100 cases of chlamydia in a small town represent a higher disease burden than 100 cases of chlamydia in a large city. Therefore, rate calculations provide a relative estimate of impact by taking population size into account. A rate is thus ***number of cases/total population size***. Because this calculation usually results in a small number, it is multiplied by a larger number (1,000; 10,000; or 100,000 are most common) to make it easier to interpret. For example, if there were 151 cases in a city of 100,000 the number would be 0.00151. By multiplying that rate by 10,000, the rate becomes easier to understand: 15.1/10,000 persons.

Notes: rates are often calculated with the total population as the denominator. Rates can also be calculated with subgroups (e.g., persons 15–24 years-old) or with those at risk (e.g., those who report having had vaginal intercourse in the past 12 months). When examining a rate (or when trying to figure out why two rates are different) it is always important to know what the denominator is—different denominators will produce different rates.

The chlamydia rate is increasing. Does that mean that more people are getting infected?

Possibly. Chlamydia surveillance paints an incomplete picture because it only captures cases who seek care and receive a laboratory test. In this way, reported chlamydia cases are the tip of an iceberg—the total number of cases is unknown. Efforts to find additional cases—the iceberg below the surface—will cause rates to increase even if transmission rates are stable. As health care providers improve their chlamydia screening rates in response to public health recommendations, we can expect rates of reported chlamydia to rise. Other contributing, though much less significant, factors include improved accuracy of diagnostic tests and better reporting by clinicians and laboratories.

It's difficult to determine exactly how much the reported increase in chlamydia is "real" (due to increased transmission) and how much is an artifact of more screening. Regardless, we know that the true chlamydia rate is higher than what is detected through surveillance—which already shows very high rates in certain sub-groups like young women. Herein lies the public health significance of chlamydia and the urgent call for prevention, screening, and treatment efforts.

INFANT AND EARLY CHILDHOOD MENTAL HEALTH CERTIFICATE PROGRAM UNIVERSITY OF MINNESOTA, INSTITUTE OF CHILD DEVELOPMENT CENTER FOR EARLY EDUCATION AND DEVELOPMENT, IRVING B. HARRIS FOUNDATION

Open enrollment begins in the fall of 2014 for the new Infant and Early Childhood Mental Health (IECMH) Certificate Program. The two-year certificate program offers intensive, interdisciplinary post-baccalaureate training for professionals and students in mental health, health, education, and early child care. It is designed to enhance the understanding of infant and early childhood mental health and promote the skills necessary to support the social–emotional development of children from birth to age 5. Coursework involves day-long, in-person sessions each month during the fall, spring, and summer. Students may enroll for academic credit or CEUs. **APPLICATIONS DUE: April 15, 2014**. For more information: **www.cehd.umn.edu/CEED/certificateprograms/iecmh**

MINNESOTA CHLAMYDIA PARTNERSHIP STRATEGIC GOALS

In 2010, the Minnesota Chlamydia Partnership's Steering Committee developed five strategic areas and workgroups created 20 individual goals to reduce and treat chlamydia on a local or statewide level. Any individual, agency, organization or community can use these suggestions and recommendations to begin making a difference in their communities.

Funding and Policy Issues

1. Sustainable and sufficient funding for prevention education, screening and treatment for patients and their partners will be available.
2. Sustainable and sufficient funding to provide training and continuing education for health care providers will be available.

Raising Community Awareness

3. Increase the awareness in the general public of the epidemic of chlamydia and its consequences.
4. Inform 18–24 year-old young people who are not in school about the chlamydia epidemic and resources available, including screening.
5. Educate non-health care staff members who work in youth-serving organizations about the chlamydia epidemic and resources available.

Education in Communities

6. Increase the number of teachers receiving basic training in, or access to, recommended guidelines for sexual health education and the prevention of chlamydia and other sexually transmitted infections (STIs).
7. Reduce chlamydia rates in Minnesota students by educating middle and high school students about chlamydia and other STIs, as well as other topics related to sexual health.
8. Train parents and caregivers to be the primary sexuality educators for youth by providing sexual health education guidelines and resources, including information on chlamydia, its potential consequences, and information on screening and treatment.
9. Increase the number of community members who are informed of the education that is provided to teachers, students, and parents.
10. University/college campuses will participate in chlamydia and gonorrhea awareness activities during the school year, including screening.

Clinical Issues: Screening, Treating and Reporting

11. Every 15–25-year-old female in Minnesota will have a chlamydia test annually.
12. Health care providers will treat every person who tests positive for chlamydia within 14 days.
13. Health care providers will treat all partners of patients who have positive chlamydia test results.
14. Increase clinician use of—and comfort with—Expedited Partner Therapy to increase partner treatment and reduce numbers of infections.
15. Minnesota Department of Health Partner Services staff will provide field-delivered medications to individuals positive for chlamydia who do not return for treatment.

Affordable and Accessible STI/STD Services

16. The state of Minnesota will prioritize its public health care responsibility to assure affordable chlamydia screening and treatment is available for all at-risk youth.
17. Assure that low- or no-cost screening and testing is available for at-risk youth in all communities.
18. Assure that low- or no-cost treatment for chlamydial infections is available for at-risk youth in all communities.
19. Increase access to chlamydia screening outside of traditional clinical settings.
20. Promote availability of school-based clinics in school districts and colleges across the state to increase easier access to screening and treatment for all at-risk populations.

For More Information

The full *Minnesota Chlamydia Strategy: Action Plan to Reduce Chlamydia in Minnesota* can be found at: **http://www.health.state.mn.us/divs/idepc/diseases/chlamydia/mcp/strategy/index.html**

To see ideas for how schools, youth, parents and caregivers, businesses, medical professionals, youth-serving organizations, and health plans can work with the Strategy to improve the sexual health of youth, see: **www.mnchlamydiapartnership.org**

CH: The health plans are an important piece of the puzzle because of their influence over how clinical procedures (like chlamydia screening) are performed and paid for. Health plans already have a lot of reasons to care about chlamydia. First, annual chlamydia screening for all sexually active women under age 26 is endorsed by the US Centers for Disease Control and Prevention (CDC) and US Preventative Services Task Force (USPSTF) as cost effective and evidence based. Relatedly, it's one of several health indicators—"HEDIS" performance measures—used to gauge the quality of care provided under health plans nationwide (*see* page 23 for more information about HEDIS measures). By increasing chlamydia screening among young women, health plans can improve their standing in this performance measure. Lastly, increasing the proportion of members who receive annual chlamydia screening is a realistic and achievable goal. For example, electronic medical systems could trigger a "pop-up" reminder for patients who meet eligibility criteria for screening.

KC: Our collaboration with Minnesota's health plans is an example of how fruitful a coalition can be when expertise and resources are shared. Independent of the MCP, a consortium of four health plans had chosen to focus on chlamydia screening for many of the above reasons. By tapping into the MCP, the health plans gained access to experts and clinicians who advised them on their provider screening toolkit and a series of web-based trainings on chlamydia screening. Because of this partnership, the health plans were able to create additional and more robust resources. This was mutually beneficial for the MCP—we got

some great resources that we could promote to all our stakeholders.

HG: What advice do you have for people who want to adapt the MCP approach outside of Minnesota?

CH: One of the key realizations we've had is that chlamydia has to be framed as more than a medical issue. There's a lot of value in the traditional disease model, which focuses on things like screening and treatment. Clinicians are at the front lines filling these very important needs. However, screening and treatment alone are not *sufficient* if we want to curb this runaway epidemic. This is why MCP is looking more upstream at how chlamydia infection may be prevented by addressing social and structural determinants of health.

KC: Seeing how these bigger forces shape a public health problem like chlamydia is a big "aha" moment that inspires people to take action. And because the roots of chlamydia extend beyond the sphere of medicine, you need to engage a wide base of stakeholders in addition to health department professionals and clinicians—people from faith communities, businesses, education—it really does take a village! That being said, you still need a backbone organization to maintain momentum and tend to the coalition's administrative needs. MDH has filled that role for the MCP.

CH: We would also challenge people to think of what can be done without money. There's so much talk about constrained budgets and "What we could do if only we had money." But there are a lot of things that individuals and communities can do without funding. For example, changing social norms. Think about recent changes in attitudes toward smoking in public places. They occurred not only because programs to help smokers quit smoking were funded and implemented, but because individuals, businesses and communities decided that it was in everyone's best interest to breathe clean air. This sea change influenced policy makers to legislate healthier environments.

Finally, we would urge the engagement of health plans. Minnesota has a somewhat unique situation in that all health maintenance organizations (HMOs) are required to be not-for-profit entities. Our sense is that these insurers are community health-oriented and therefore more open to addressing a public health issue like chlamydia than for-profit companies. And as we described earlier, health plans have a strong impetus to improve chlamydia screening and reminding them of that might help get one's foot in the door.

HG: The MCP is about to embark on its fourth year. Congratulations! What is on the horizon for MCP in 2014 and beyond?

CH: We will be examining how the Minnesota Chlamydia Strategy is being implemented at the local level. The demonstration projects we're supporting will advance this effort. For example, the group in Kandiyohi County is charged with creating an "Organizer's Toolkit" that documents their process of local adaptation (available Spring 2014). We hope that will be a road map for others to follow. We'll be focusing a lot on communications, including improvements to the website, to promote awareness of chlamydia and uptake of our resources. Beyond that, we want to stay nimble in order to take advantage of whatever opportunities present themselves.

KC: While the focus of the MCP is on Minnesota, we're also plugged into the national community of public health professionals and advocates who are concerned about this epidemic and the sexual health of young people. We have been contacted by people working in health departments in other states and in Canada who want to know more about what we have done so that they can implement something similar. We've shared our experiences with national-level organizations that participate in the National Chlamydia Coalition as well as groups in Minnesota. We will continue to tell MCP's story.

For More Information

1. Minnesota Chlamydia Partnership. Available from: **http://www.health.state.mn.us/mcp** and **http://www.mnchlamydiapartnership.org**

2. Minnesota Chlamydia Strategy. Available from: **http://www.health.state.mn.us/divs/idepc/diseases/chlamydia/mcp/strategy/MNChlamydiaStrategy.pdf**

3. A Special Report: Chlamydia Prevention (the "booklet"). Available from: **http://www.mnchlamydiapartnership.org/wp-content/uploads/2012/10/MCP-Report-2012.pdf**

4. National Chlamydia Coalition. Available from: **http://www.ncc.prevent.org**

Figure 3. Conceptual model for community engagement in the Minnesota Chlamydia Partnership. Source: Minnesota Chlamydia Partnership.[4]

5. STI surveillance statistics are available for Minnesota. Available from: **http://www.health.state.mn.us/divs/idepc/dtopics/stds/stats/stdsurvrpts.html** as well as the United States **http://www.cdc.gov/std/stats12/**.

6. Basic information about chlamydia infection (symptoms, treatment, etc.). Available from: **http://www.cdc.gov/std/Chlamydia/**

7. For more information about MCP, including how to join, contact Candy Hadsall, RN at candy.hadsall@state.mn.us or (651) 201-4015.

REFERENCES

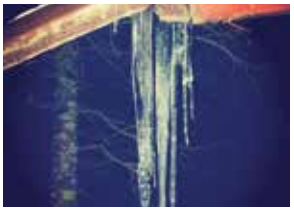
1. Minnesota Department of Health. 2012 STD Surveillance Statistics. Available from: **http://www.health.state.mn.us/divs/idepc/dtopics/stds/stats/stdsurvrpts.html**

2. US Centers for Disease Control. Sexually Transmitted Disease Surveillance 2012. Available from: **http://www.cdc.gov/std/stats12/default.htm**

3. US Census Bureau. Available from: **http://factfinder2.census.gov/**

4. Minnesota Chlamydia Partnership. A Special Report: Chlamydia Prevention. Available from: **http://www.mnchlamydiapartnership.org/wp-content/uploads/2012/10/MCP-Report-2012.pdf**

Summer Martins, MPH, is a student in the PhD program in epidemiology, Division of Epidemiology & Community Health, School of Public Health, University of Minnesota.



Preconception Health Promotion:

Primary Prevention and Wellness Promotion

by Wendy Hellerstedt, MPH, PhD

"Preconception health promotion is wellness promotion. It is basic primary prevention," Jen Harvey said. Harvey is the Women's Health Coordinator in the Minnesota Department of Health's Community & Family Health Division and she is committed to finding ways to educate the public and stakeholders about the importance of preconception health and health care.

Her efforts reflect her MPH training in the MCH Program at the University of Minnesota (*see* article on page 9). "Preconception health care is about optimizing health and wellbeing for women—and their partners—before and between pregnancies," Harvey said. "By promoting preconception health care you not only have healthier women, you can improve pregnancy and birth outcomes as well."

Why provide preconception health care? Because early prenatal care is often too late.

Preconception Health Care: Engaged Family Planning for Women and Men

For many people, childbearing is unplanned because pregnancies "just happen." It is estimated that about 50% of all pregnancies in the United States are mistimed or unwanted (i.e., unintended) and that about 30% of all births are unintended.[1] While women often adapt well to an unintended pregnancy, there is ample evidence that, compared to women with intended pregnancies, they are at higher risk for abortions and, when they continue the pregnancy, for infant complications and health problems.[2] These risks may be related to the fact that unintended pregnancy and childbirth disproportionately affects women who are economically and socially vulnerable.[1] Comprehensive family planning allows individuals and families to optimize health and better prepare for the tremendous life changes that occur during pregnancy and after the birth of a child. The need for comprehensive and universal preconception health care, according to Harvey, is simple. "Preconception wellness results in improved health for women, regardless of pregnancy intention," she said.

What Is Preconception Health Care?

Preconception health care is engaged family planning that has the potential to optimize the physical and psychological health of a couple prior to pregnancy, minimize negative exposures to pregnant women, and maximize the quality of the family, social, and physical environments in which women are pregnant and infants are born.

Preconception health care is a combination of two things: (1) contraception to ensure that individuals and couples create a pregnancy when and if they want to do so; and (2) preparation and, often behavior change, for individuals to ensure that women and families begin pregnancy at optimum health.

Critical Periods of Fetal Growth: Why the Preconception Period Is Important for Infant Health

Adverse—and health-promoting experiences—can affect a person at any time, but there are periods that are particularly sensitive, including fetal development.

In utero (i.e., fetal) exposures can "program" an individual's future health and development, as shown by many researchers who have examined the fetal origins of adult disease.[3-5] Fetal growth, under optimal conditions, follows a timed and sequenced genetic blueprint. For example, major heart, limb, eye, and ear development occur before the 10th week of gestation (Figure 1). The sequencing of fetal growth can be modified by less-than-optimal conditions or exposures. Preconception health care can reduce teratogenic exposures (i.e., those related to birth defects or poor growth) and introduce health-promoting exposures that would otherwise occur among women who:

- Experience unplanned pregnancies and may not recognize a missed menstrual period until gestational weeks 5 or 6. By the time such women realize they are pregnant, their fetuses may have been exposed to teratogens, like alcohol.

- Have inadequate knowledge about pregnancy health. Many women, including those with planned pregnancies, may not receive their first prenatal care visit until close to the end of the first trimester. Almost one-third of pregnant women in the US receive care after the first trimester or not at all.[6]

Once the fetus has been exposed to a teratogen, birth defects are not inevitable but there is nothing that can be done to remove the effects of that exposure if they do occur. For example, most limb defects occur 21 to 36 days after conception. If a fetus is exposed to a limb teratogen (e.g., a medication, an infection, a chemical) during this period, there is a risk that structural damage will occur that will not reverse itself even if exposure discontinues later in pregnancy. Conversely, if a fetus lacks a necessary exposure, irreparable damage may also occur, as in the case of neural tube defects (NTDs), the second most common group of birth defects (occurring in approximately 1/1000 livebirths).[7]

An NTD is an opening in the spinal cord or brain that occurs very early in fetal life. The early spinal cord of the embryo begins as a flat region, which rolls into a tube (the neural tube) 28 days after conception. When the neural tube does not close completely, an NTD develops. NTDs develop before most women know they are even pregnant. While the etiology and prevention of NTDs are complex,[8] perhaps 50-70% can be prevented when women supplement their diet with folic acid, a water-soluble B vitamin, beginning in the preconception period.[9]

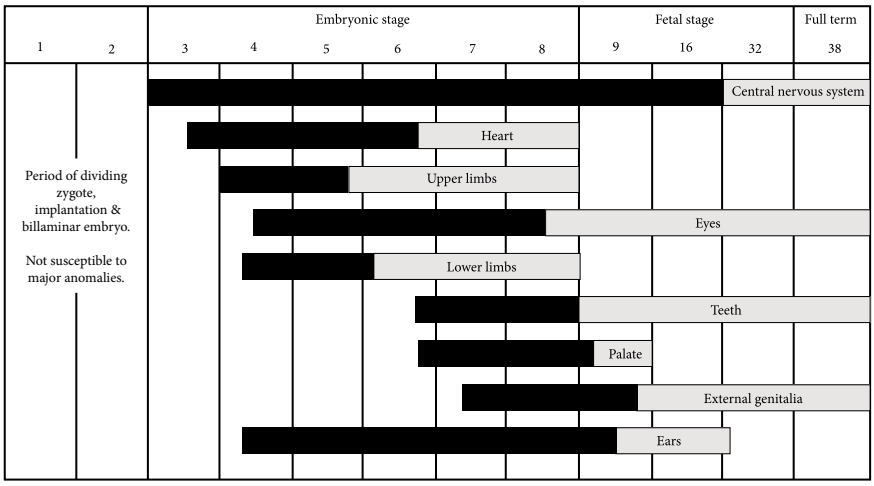


Figure 1. Embryonic and Fetal Organ Development (in weeks). Fetal and embryonic vulnerability varies during different phases of development. The dark portion of the bars reflects the most vulnerable periods of development for various organs and tissues, where risk for major defects is greatest. The lighter portion reflects periods when teratogens, like alcohol, may have only minor effects. Adapted from: Coles C. Critical periods for prenatal alcohol exposure. Alcohol Health Research World 1994;18(1):22-29 and Moore KL, Persaud TVN. Before we are born: essentials of embryology and birth defects. 5th ed. Philadelphia: WB Saunders, 1998.

Because the early weeks of gestation are so important for healthy fetal growth, the safest approach is for women to enter their planned pregnancies in optimum health and be aware of the exposures they should avoid (e.g., tobacco smoke, alcohol, drugs) and seek out (e.g., sufficient iron and folate) to promote healthy fetal growth.

"Why provide preconception health care?" Harvey asked rhetorically. "Because early prenatal care is often too late."

How Is Preconception Health Care Provided?

In 1989, the Public Health Service stated that, "To ensure the health of the woman and the developing fetus, preconception care should be an integral part of primary care."[10] Despite widespread support from health care organizations, including the American Congress of Obstetricians & Gynecologists,[11] the Centers for Disease Control and Prevention[12] and the World Health Organization,[13] preconception health care is not common. It has been envisioned as a part of routine health maintenance, at a defined preconception visit(s).

Anticipatory Counsel and Care. Preconception care, during primary care, includes an "anticipatory element"—a re-framing of health care advice and counsel that focuses on a desired future pregnancy. For example, whether and how to counsel a woman who reports consuming several alcoholic drinks every week takes on a different significance if the woman wants to conceive. Choosing medication to treat a chronic condition, like diabetes, may also be influenced by future pregnancy desire. Harvey said that counseling should "Engage women and men to consider values and life priorities in the context of sexual and reproductive health decision making."

Key Elements. Family planning is key to good preconception care for a woman/couple as successful contraception provides time to focus on what must be accomplished prior to conception. Preconception counsel and care should include:

- Risk assessment;
- Health promotion; and
- Medical and psychosocial interventions.

What Can Be Accomplished through Preconception Health Care?

Preconception health care visits are critical because:

- Some opportunities for effective intervention are not available after confirmation of pregnancy (e.g., rubella immunization);

- Some interventions lose effectiveness if not presented very early in, or before, pregnancy (e.g., folic acid supplementation; alcohol abstention); and
- Opportunities to improve outcomes decline as pregnancy processes (e.g., glycemic control of diabetes, weight loss).

Conditions that should be addressed prior to pregnancy include:

- Optimizing body weight. Underweight, overweight, and obese women are all at increased risk, compared with average weight women, of complications and poor infant outcomes;
- Prescription medication use among women with chronic conditions;
- Substance abuse and use (including tobacco);
- Need for interventions that cannot be undertaken during pregnancy (e.g., certain radiologic procedures, such as fluoroscopy, and immunizations, like rubella);
- Control of chronic conditions, like diabetes and epilepsy, that are associated with fetal and maternal complications if poorly controlled during pregnancy;
- Exposure of the woman or her partner to environmental or occupational teratogens;
- Genetic disease risk;
- High-risk social conditions that could put women (and offspring) at risk, including domestic violence;
- Control of maternal infections (e.g., sexually transmitted infections); and
- Nutritional risks (e.g., over- or under-supplementation of folic acid, iron, vitamins).

Preconception health care, although primarily conceptualized for women, could also benefit partners who may need (1) counseling about substance use or psychological health problems; (2) care for sexually transmitted infections; and (3) education about genetic risks and occupational/environmental exposures that could affect fertility or indirectly affect the health of a pregnant woman and/or fetus (e.g., secondhand cigarette smoke). As we continue to understand that impact of socioeconomic influences on individual and family health, couples who are considering becoming parents would benefit from preconception education and counseling about the financial and psychological costs of parenting and how parenting may affect their own educational, social, or occupational life plans.

For More Information

1. Guttmacher Institute. Unintended pregnancy [factsheet]. Available from: **http://www.guttmacher.org/pubs/FB-Unintended-Pregnancy-US.html#6**

2. Minnesota Department of Health. Preconception health. Minnesota 2012. Available from: **http://www.health.state.mn.us/divs/fh/mch/preconception/documents/preconceptiondatabook.pdf**

3. Maternal and Child Health Library, Georgetown University. Preconception and pregnancy. Available from: **http://www.mchlibrary.info/KnowledgePaths/kp_pregnancy.html**

4. US Department of Health and Human Services, Health Resources and Services Administration. Preconception health. Available from: **http://www.mchb.hrsa.gov/whusa12/hs/hsrmh/pages/ph.html**

REFERENCES

1. Finer LB, Zolna MR. Shifts in intended and unintended pregnancies in the United States, 2001–2008. Am J Public Health 2014;104(S1): S44-S48.
2. Shah PS, Balkhair T, Ohlsson A et al. Intention to become pregnant and low birth weight and preterm birth: a systematic review. Matern Child Health J 2011;15(2): 205-216.
3. Godfrey KM, Barker, DJ. Fetal programming and adult health. Public Health Nutr 2001; 4(2B; SPI):611-624.
4. Barker DJ. Fetal programming of coronary heart disease. Trends Endocrinol Metabol 2002;13(9):364-368.
5. Zandi-Nejad K, Luyckx VA, Brenner BM. Adult hypertension and kidney disease the role of fetal programming. Hypertension 2006;47(3): 502-508.
6. Mathews TJ, Miniño AM, Osterman MJ, et al. Annual summary of vital statistics: 2008. Pediatrics 2011;127(1):146-157.
7. Yi Y, Lindemann M, Colligs A, et al. Economic burden of neural tube defects and impact of prevention with folic acid: a literature review. Eur J Pediatrics 2011;170(11):1391-1400.
8. Wallingford JB, Niswander LA, Shaw GM, et al. The continuing challenge of understanding, preventing, and treating neural tube defects. Science 2013;339(6123).
9. Blencowe H, Cousens S, Modell B, et al. Folic acid to reduce neonatal mortality from neural tube disorders. Int J Epidemiol 2010;39(suppl 1):i110-i121.
10. US Department of Health and Human Services. Caring for our future: the content of prenatal care: a report of the Public Health Service Expert Panel on the Content of Prenatal Care. Washington, DC: US Department of Health and Human Services, Public Health Service; 1989.
11. American Congress of Obsetricians & Gyecologists (ACOG). The importance of preconception care in the continuum of women's health care. Available from: **https://www.acog.org/Resources_And_Publications/Committee_Opinions/Committee_on_Gynecologic_Practice/The_Importance_of_Preconception_Care_in_the_Continuum_of_Womens_Health_Care**
12. Johnson K, Posner SF, Biermann J et al. Recommendations to improve preconception health and health care—United States. Morb Mortal Weekly Rep 2006; 55(4). Available from: **http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5506a1.htm**
13. World Health Organization. Preconception care: maximizing the gains for maternal and child health [policy brief]. Available from: **http://www.who.int/maternal_child_adolescent/documents/preconception_care_policy_brief.pdf**

Wendy L. Hellerstedt is the Director of the Center for Leadership Education in Maternal and Child Public Health and an Associate Professor in the Division of Epidemiology & Community Health, School of Public Health, University of Minnesota.

Subscribe to Healthy Generations Listserv

Our Healthy Generations Listserv shares resources and enhances networks among multidisciplinary professionals who work to improve the health and well-being of children, adolescents, families, and communities. To sign up send a message to: listserv@lists.umn.edu. Leave the subject line blank. In the body of the text write:
Sub cyfhealth YOUR FIRST AND LAST NAME (example: sub cyfhealth Mary Jones). You will receive an email asking you to confirm your request.

Minnesota Department of Health:

Employing a Life Course Perspective to Promote Preconception Health

by Jen Harvey RN, CNP, MS, MPH

Through protecting, promoting and improving the health of reproductive-age women (and their partners) in Minnesota, the majority of programs at the Minnesota Department of Health (MDH) are promoting preconception health—whether or not they explicitly state that they do so. Activities to promote adult and adolescent immunization, prevent sexual violence, reduce tobacco use, and decrease obesity are all aspects of preconception health promotion.

The majority of programs at the Minnesota Department of Health (MDH) are promoting preconception health—whether or not they explicitly state that they do so.

Strategic Planning to Promote Preconception Health

While many programs and initiatives address preconception health (often indirectly), the Maternal and Child Health Section at MDH identified a need to *specifically* address preconception health as a singular issue. MDH thus began a 5-year strategic planning process in October 2013 to consider how preconception initiatives can optimize maternal, and offspring health. And in recognition of the complexity—and varied social, individual, environmental, and health contributors to preconception health—one of the first steps MDH took was to convene a group of professionals and stakeholders from MDH and communities across the state. The goal of this multi-disciplinary group is to develop a strategic plan that identifies priorities, interventions, action steps, and communication strategies that the state, health care providers, health systems, and other stakeholders can implement to improve preconception health.

The group uses the life course perspective as its theoretical framework. By doing so, it examines strategies and interventions that will address health promotion during critical and sensitive periods, such as adolescence and the prenatal/postpartum periods. This framework not only considers the impact of health across a person's life span, but also how an individual's health may affect that of future generations.

One of the first tasks of the group was to identify the top health indicators of preconception health. To do so, the group examined data and considered how indicators affected not only an individual's life course but also how indicators may affect the intergenerational transmission of markers of good or poor health. The group also considered the social determinants of health, specifically racism and poverty, on potential indicators and whether indicators had a sufficient evidence base to inform intervention development. As a result of several meetings and hours of deliberation, the group identified the following three preconception health priority areas: family planning, mental health, and wellness care (for adolescents, women, and recent mothers postpartum).

The next steps in the strategic planning process are to identify action steps and interventions to address the priority areas. The process will also result in incorporating general preconception health interventions and recommendations and the evaluation of preconception health programs at MDH.

Other Preconception Health Initiatives at the Minnesota Department of Health

The broad strategic preconception health planning is occurring at the same time that MDH is conducting several initiatives that promote preconception health and care, including:

Collaborative Improvement and Innovation Network (CoIIN) to Reduce Infant Mortality **(http://www.mchb.hrsa.gov/infantmortality/coiin/).** In March 2013, the Health Resource Services Administration (HRSA), the Association of State and Territorial Health Officials (ASTHO), the Maternal and Child Health Bureau (MCHB), and other sponsors, convened a Region V Infant Mortality Summit in Chicago. Illinois, to launch a Region V CoIIN. The goal of this meeting was to begin developing individual state plans to reduce infant mortality across states in Region V (i.e., Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin). During the meeting, state representatives prioritized infant mortality-related topics. Preconception health emerged as one of the three topic areas identified as being most likely to demonstrate the greatest impact in improving birth outcomes and reducing infant mortality in individual states and across the region. In 2014, MDH will continue its collaborative work to develop a statewide infant mortality plan.

Family Planning www.health.state.mn.us/divs/fh/mch/familyplanning/). Since 1979, MDH has funded agencies to deliver family planning services through the Family Planning Special Projects (FPSP) grant program. The goal of this program is to reduce the incidence of unintended pregnancy and increase the number of low-income, high-risk individuals who have access to family planning services. FPSP grantees provide six components of care to their clients: education and outreach, public awareness, counseling, method services, referral, and follow-up. The FPSP program currently funds 25 programs in Minnesota.

Birth Defects Prevention (www.health.state.mn.us/divs/cfh/program/cyshn/bdmaintro.cfm). The Birth Defects Monitoring and Analysis Unit at MDH awards money for the Preconception Health in Minnesota grant program. The goal of this program is to improve preconception health and care for non-pregnant, reproductive age women and their partners in Minnesota through support of evidence-based preconception health practices and programs that prevent and/or reduce the risk for birth defects. The program funds six organizations in Minnesota.

Preconception Care to HIV-positive Women. The HIV and STD Section at MDH partially funds a position at the Minnesota Perinatal and Pediatric HIV program at Children's Hospitals and Clinics of Minnesota. The aim of this program is to increase the knowledge of individuals who provide obstetric, gynecologic, or HIV services about preconception health issues and options (including preconception PrEp) for HIV-positive women and their partners. They also directly educate individuals about preconception PrEp and facilitate access to medication should they choose to use PrEp while conceiving.

Conclusion

There is little doubt that MDH, like so many other state health departments, provides solid programs and education to enhance preconception health. The workgroup members of MDH's current strategic planning for preconception health include colleagues in the community and in local and state public health who have already succeeded in improving preconception health through their work in family planning, social services, sexual health education, violence prevention, and birth defects. It is hoped, in coming years, that families will routinely discuss "preconception" issues and that they will live in communities where preconception education and services are accessible and of high quality.

Jen Harvey is the Women's Health Consultant in the Division of Community & Family Health, Minnesota Department of Health.

Mahube-Otwa Community Action Partnership:

Community-centered, Holistic Family Planning Services in Rural Minnesota

by Wendy Hellerstedt, MPH, PhD

Most people—if asked to describe publicly funded family planning services—likely think about a free-standing clinic in a densely populated urban site. It takes some imagination to envision how family planning services are delivered in rural settings—and it takes even more imagination to actually do the work.

Cyndy Rastedt

"I have gone everywhere—and will go anywhere—to talk to community members and stakeholders about what family planning and reproductive life planning are..."

Rural Communities: Diversity and Distance

Rural communities are as diverse as urban communities. "There is not a single day that I am bored with my work. Not a single day that I think that my work is monotonous," said Cyndy Rastedt, RN, BSN, Family Health Director of Mahube-Otwa Community Action Partnership in Detroit Lakes, MN. What is remarkable about her enthusiasm for her work is that Rastedt has been providing family planning and other public health services to rural clients for over 25 years. She and her seven-person staff serve family planning clients in eight rural Minnesota counties (Becker, Cass, Mahnomen, Otter Tail, Stevens, Todd, Traverse, and Wadena). Rastedt began working with the Community Action in 1989 as an LPN. Since that time, she earned two more degrees (RN, BSN) and became the Family Health Director in 1998. She is inclined to talk more about her staff members than herself. "They [her staff members] are phenomenal. They all have buy-in and they all do great jobs. They have pride in what they do," she said. "And they should be proud."

Like those who work in urban clinics, Rastedt and her staff members struggle with budgets that are too small to deliver the services that they feel are critical. And, like those in urban clinics, they focus on ensuring access, developing ties to their communities, and educating clients and stakeholders about what family planning really means. Unlike urban clinics, they often do their work on the road. Rastedt said there are days when she may be "75 miles from home, working with a community that doesn't speak English." In a typical week, she and her staff may provide education to an 8th grade class in one county, deliver services at a University-based clinic in another county, deliver home services to women under house arrest, and connect with a tribal health nurse about providing reservation-based services.

Mahube-Otwa is a community action partnership that serves eight counties in 11 clinics. Three of its clinics (in Perham, Detroit Lakes, and Fergus Falls) are free-standing. The other eight clinics are mobile. "It seems that funders want bigger clinics, like you find in cities," Rastedt observed. "But we need mobile clinics to reach the many people we serve," she explained. "We have no bus systems. Our clients usually have to drive to services." To facilitate access, Mahube-Otwa offers $10 coupons to people who drive more than 10 miles.

To be accepted and remain relevant in communities, urban family planning providers have to work with local stakeholders—but urban providers may define "local" as within a few miles from their site. Despite great distances, Rastedt and her staff know and collaborate with the diverse communities in which they work. "Our nurses work side-by-side with public health nurses and medical advisors in the

DETROIT LAKES MN CONFERENCE ON APRIL 9, 2014
PRECONCEPTION HEALTH CARE: INTEGRATING PRECONCEPTION HEALTH CARE & REPRODUCTIVE LIFE PLANS THROUGH EDUCATION AND THE CLINICAL SETTING

Mahube-Otwa Family Health is hosting a one-day conference about preconception and prenatal exposures that can affect fetal development and birth outcomes. The conference will offer formal and networking opportunities to discuss how to promote Healthy Women, Healthy Babies, Healthy Families, and Healthy Communities. Session topics will focus on exposures related to maternal and infant health, including: genes and psychological disorders; electronic cigarette and other tobacco use; sexually transmitted infections; domestic violence; nutrition; and substance use.

When: April 9, 2014, 8:15 am–4:15 pm

Where: M State Detroit Lakes Campus, 900 Highway 34 East, Detroit Lakes, MN

Intended audience: Clinicians, students, nurses, case managers, social service providers, health educators, public health professionals, and others who work with women of childbearing age and their families

Registration fee (tuition, syllabus, lunch, and refreshments): Regular = $30.00 ($35.00 after March 28); Student = $10.00 ($15.00 after March 28)

Continuing education credits will be available: This conference is designed to meet the continuing education requirements for the Minnesota Board of Nursing, Minnesota Board of Social Work, and Minnesota Board of Education.

Contact: Mahube-Otwa Family Health at (218) 847-1385 to register or email Marsha Vandermay at **mvandermay@mahube.org**

counties we serve," she said. "They are the pulse of the community." Shared goals—and creativity—often result in effective collaborations that bind Mahube-Otwa staff members with local public health professionals. For example, Rastedt is deeply aware of how few funds are available to her and to the public health departments with which she works. Her solution: combine resources when possible. Rastedt discussed a recent collaboration in which Mahube-Otwa and a public health department combined funds to create a clinic that would not only provide family planning services, but also WIC services and child check-ups "in a good, clean, accessible environment." Yes, access is an issue, she agreed, but she and her staff manage mobile clinics and maintain strong relationships with public health nurses to deliver services in convenient spots. "We couldn't do our work without tag-teaming with public health nurses," she said.

Delivering Services in Rural Communities

"Every community has a different point of view [about family planning]...and different needs," Rastedt said. "Our biggest challenge is to educate people about what 'family planning' really is. Lots of people think we just provide contraceptives, so there has sometimes been negative public sentiment. We really do so much more." To educate communities about the comprehensiveness of their services, Rastedt and her staff members have worked with school board members, church leaders, and business leaders. "It's important for people to understand that we are committed to the whole person," she said, "and that we support and provide a number of services that keep individuals and families healthy," including well-woman exams and sexually transmitted infection screenings. She and her staff members also help clients access a range of services offered by Mahube-Otwa or their local public health departments, including Head Start, WIC, and housing programs.

Rastedt always thinks about funding: how to obtain it and how to use it efficiently. "I am really excited that we have a preconception care grant [from the Minnesota Department of Health]," Rastedt said, "because it helps us emphasize the importance of reproductive life planning with our patients." Rastedt's vision of such planning is broad. "We want to help people be healthy overall. That's how you help women be strong. That's how you create healthy families. If that means finding someone a winter coat, that's what we do," she said. "It's so important that we can provide fuel and housing assistance," she said. "Our approach is holistic…we don't just follow a medical model."

One of the benefits of the preconception grant is that it allows Rastedt and her staff to discuss reproductive life planning when women come in for their prescriptions. "We can ask them how they are doing with their family planning goals and we get a chance to provide education at every visit," she said. When they go to a pharmacy, she emphasized, they don't get the attention she feels they need to ensure that their family planning methods are working for them—or that other areas of their lives are healthy.

"Education is the key to [family planning] compliance and the key to helping women and families plan and control their reproductive lives," Rastedt said. "I have gone everywhere—and will go anywhere—to talk to community members and stakeholders about what family planning and reproductive life planning are and how they fit into overall life planning."

Almost three decades of experience has also taught Rastedt how to creatively address contraceptive compliance issues. "You have to be honest: most contraceptives have side effects," she concedes. "We want women to succeed and to control their reproductive lives," Rastedt said. She facilitates this by telling her clients the truth about side effects and addressing potential side effects before they become problems. For example, she said, "Depression can be a side effect of progestin-only contraceptives. We give women 50–100 mg of vitamin B6 daily and that often works very well to reduce depressive symptoms. It's a simple and safe solution to a common compliance problem. We listen to our clients and we work with them to make sure they are in control,

comfortable, and effectively using the method of their choice."

A Family Planning Career and a Sense of Community Belonging

Rastedt comes from a small town in Alaska (Homer). Almost three decades ago, she met her husband and decided to live with him by Rush Lake in Ottertail, MN. She never left the area. Her work has required that she "tag team" with public health nurses in her area, that she meet with community leaders and stakeholders to be an effective service provider, and that she coordinate the activities of an energetic and talented staff. She also thrives on the high level of contact she has with the people she serves. "Every day that I go to work and see my patients, I get rejuvenated," she declared. Participating in the tasks of providing family planning services in a rural area would give anyone a sense of community. But Rastedt also has a sense of continuity, even legacy. "I am now seeing the children of patients I had when I started out," she said. "Isn't that something?"

For More Information

1. Mahube-Otwa Community Action Partnership. Information about its many services available from: **http://www.mahube.org/**

2. Reproductive life planning. See the Centers for Disease Control and Prevention site at **http://www.cdc.gov/preconception/reproductiveplan.html**

3. Minnesota Department of Health, Family Planning site at **http://www.health.state.mn.us/divs/fh/mch/familyplanning/**

Wendy L. Hellerstedt is the Director of the Center for Leadership Education in Maternal and Child Public Health and an Associate Professor in the Division of Epidemiology & Community Health, School of Public Health, University of Minnesota.

TOP 10 REASONS TO EARN AN MPH DEGREE IN MATERNAL AND CHILD HEALTH AT THE UNIVERSITY OF MINNESOTA

Opportunities in the Field of MCH

1. **MCH MPH graduates often work with—or on behalf of—socially and economically vulnerable populations** that include women, children, youth, and family members (broadly defined to include fathers, grandparents, etc.).
2. **MCH is one of the oldest—and one of the most varied—areas in national health promotion and assurance in the US.** In the US there is a national agency dedicated to MCH work, the Maternal and Child Health Bureau, which oversees public health programs that address a wide range of topics, including reproductive and prenatal health care access, newborn screening, family home visiting, care of children with special health care needs, and autism research. All of these initiatives require MCH professionals at national and local levels, see **http://www.hrsa.gov/about/organization/bureaus/mchb/**
3. **MCH MPH graduates develop public health programs and policies** that focus on health promotion, health care equity, disease prevention, and primary care services. Their work is conducted in non-profit organizations, government agencies, universities, school districts, advocacy organizations, health clinics, and research/academic institutions.
4. **Every state—and many cities and counties—have departments specifically dedicated to MCH public health** advocacy, assessment, and program development. In Minnesota, see **http://www.health.state.mn.us/divs/fh/mch/** for a description of the many focal areas in the State's MCH Section.
5. **MCH MPH-level epidemiologists** participate in research teams to conduct needs assessments, evaluate programs, and identify and promote social and environmental conditions that contribute to the health of women, children, youth, and families. MCH professionals with epidemiologic skills are especially in demand in city, county, and state health departments. Because MCH epidemiology training is so important, the Centers for Disease Control and Prevention sponsors MCH epidemiology training and internships. See **http://www.cdc.gov/reproductivehealth/mchepi/index.htm**
6. **MCH professionals are in heavy demand internationally**. Most of the eight United Nations' Millennium Development Goals focus on MCH areas, including eradicating poverty, reducing child mortality, empowering women/promoting gender equity, improving maternal health, and reducing the risk of HIV/AIDS and other diseases that affect vulnerable populations. See **http://www.who.int/topics/millennium_development_goals/en/**
7. **MCH professionals have organizations that help them network and that provide them with opportunities for continuing education**: the Association of Teachers of Maternal and Child Health (**www.atmch.org**) and the Association of Maternal and Child Health Programs (**www.amchp.org**).

Quality of the University of Minnesota MCH MPH Program

8. **The University of Minnesota has one of the most respected MCH programs in the world.** We have had more than 1000 graduates, many of whom have become leaders in MCH research, program development, and policymaking.
9. **The University of Minnesota's MCH program has about 40 regular or adjunct faculty members**, representing a variety of disciplines (e.g., pediatrics, nursing epidemiology, sociology, public health, psychology, anthropology) and community and academic work settings.
10. **To prepare our students for leadership positions,** they undertake field experiences with MCH leaders to enhance their research, program development, and policy making skills.

Broken Bonds:

Incarceration and Parenthood

by Barbara Knox

There is a problem affecting American kids that is bigger than autism or juvenile diabetes. It is too often unnoticed, or unacknowledged, by teachers, doctors, foster parents, and child-care providers. The problem? Growing up with a parent in prison or jail.

Rebecca Shlafer. Photographed by Brady Willette.

Between 1991 and 2007, the number of children with incarcerated parents increased by 80% in the US[1] In 2007, incarcerated women and men in the nation's prisons reported being parents to an estimated 1.7 million minor children—about 2.3% of the US resident population younger than 18 years.[1] This number is on the rise and with it the number of children who experience the stigma of having an incarcerated, absent parent.

Having an incarcerated parent can have a significant impact on the mental, emotional, and physical health of a child. One of the scientists at the forefront of research studying the effects of incarceration for parents and their children is the University of Minnesota's Rebecca Shlafer, PhD. Shlafer is an assistant professor in the Medical School's Department of Pediatrics and an MCH student in the online MPH program.

"I want to see this issue raised to public awareness," said Shlafer. "I want to figure out what the needs are for children with incarcerated parents and how we can support them. This is our next generation, and they're in a very vulnerable place."

Shlafer is a bit of a lone wolf when it comes to studying this issue—few people across the country have devoted their research careers to understanding the ripple effects of incarceration on the children of inmates.

"No one discipline has claimed this issue," Shlafer explained. "Criminologists typically study criminals and crime patterns, psychologists study the behavior of criminals, corrections professionals concentrate on the systems that securely house criminals … but no one has really taken the lead on looking at what happens when prisons and families come together. What's exciting to me about that is how an interdisciplinary perspective can shed light on the issue and ultimately help improve the lives of children and families."

> *The correctional system just wasn't designed to think about how kids are being impacted by time they spend in that setting.*

Inside Prison Walls

Prisons are designed to ensure security, not family bonding. In Minnesota's state prisons, that means prisoners and their visitors must keep their distance. If a child has a "contact visit" with a parent in prison, the two share a brief hug and kiss on the cheek at the beginning and the end of the visit. No hand-holding, no cuddling. Children are expected to sit in their assigned seats in an upright position with hands in full view. If it's a "non-contact visit," parent and child communicate by telephone with a Plexiglas partition between them or through closed-circuit televisions.

When she visits a jail in preparation for a research study, Shlafer said, she sees bleak environments and confining spaces not conducive to wiggly little kids. The corrections staff members, she said, like to show her where the security cameras are and explain how the booth layout contributes to the visitor's safety.

"I'm seeing a mom trying to talk to her

husband through Plexiglas while her little boy is jumping around. The correctional system just wasn't designed to think about how kids are being impacted by time they spend in that setting. I wasn't surprised when one prison warden admitted that he never really considered the fact that more than half of the men in his prison were fathers."

Opportunities for Awareness and Intervention

Adverse childhood experiences, like having an incarcerated family member, are known to affect an individual's development and health across the life course. It is also correlated with other family risk factors, such as poverty, domestic violence, and residential mobility. However, little is known about the life trajectories of children of incarcerated parents or about specific, and potentially modifiable, risk markers.

"Does it matter more if the incarcerated parent is a mom or a dad?" Shlafer asked, pointing out that the number of women in prison has increased more than 800% in the past 30 years and that two-thirds of female inmates are mothers. "A growing body of evidence would suggest that it does matter which parent is incarcerated. But, there is also so little research about incarcerated parents and their families and their unique circumstances—this isn't a homogenous group. The science isn't there yet. We have more work to do to chip away at these complex questions, to get to the heart of the problems and find ways to intervene to optimize health and development."

Shlafer's research portfolio is rich and her reach is broad. In addition to leading projects that include researchers from around the University of Minnesota (including MCH faculty members, Wendy Hellerstedt and Jamie Stang) and other institutions, she has also become a national advocate for children with incarcerated parents. She recently worked with colleagues at Sesame Workshop (the nonprofit organization behind Sesame Street). Sesame Workshop recently created a new Muppet, Alex, who shares his story about having an incarcerated father. Alex is featured in new resources that include a DVD, children's storybook, and caregiver guide for families affected by incarceration. "These resources provide an incredible opportunity to raise awareness about this growing public health issue." Shlafer said.

In June 2013, Shlafer attended a ceremony at the White House to promote the release of the Sesame Workshop materials, entitled, *Little Children, Big Challenges: Incarceration.* As part of a 10-state pilot project, Shlafer and her team have been working to disseminate the resources to organizations and agencies that serve families affected by incarceration. In six months, more than 23,000 resource kits were distributed to providers across the state, including public health nurses, Head Start classroom teachers, and school social workers. In addition, she and her colleague, Dr. Julie Poehlmann at the University of Wisconsin, are also in the process of conducting an intervention study at two jails in Minnesota and two jails in Wisconsin. For this project, Shlafer and Poehlmann are assessing the impact of the Sesame Street resources on children's access to health care and other support services, children's behavior, and their family relationships.

Shlafer made a second visit to the White House in September 2013, when she was invited to present at an event called, *Mentoring Children of Incarcerated Parents Listening Session*. The event was organized by the Department of Justice's Office of Juvenile Justice and Delinquency Prevention, the Domestic Policy Council, and the White House Office of Public Engagement. The purpose of the event was to explore how mentoring programs can support children of incarcerated parents and make recommendations for policy and practice. Following the event, the Office of Juvenile Justice and Delinquency Prevention commissioned a special report on the topic, to which Shlafer contributed.[2]

Shlafer has a life course perspective. While much of her national recognition revolves around the children of incarcerated parents, she knows that a healthy childhood begins *in utero*. She is currently exploring a series of research questions to examine the health of incarcerated pregnant women, including their nutritional status. One of her research projects involves assessing *Isis Rising*, a prison-based pregnancy and parenting support program offered at the women's prison in Shakopee, Minnesota. In addition to offering prenatal education, the program provides incarcerated pregnant women with doulas that provide physical and emotional support before, during, and after labor and delivery. With a remarkably low rate of deliveries via cesarean section and no preterm or low birthweight babies to date, such a program has the potential for ensuring healthy births for some of Minnesota's most vulnerable women and has long-term implications for the health and development of the next generation.

For More Information

1. Sesame Street's Little Children, Big Challenges: Incarceration. Information available from: **http://www.sesamestreet.org/parents/topicsandactivities/toolkits/incarceration**

2. Everyday Miracles. Description of Isis Rising program available from: **http://www.everyday-miracles.org/isis-rising-program/**

3. See a video about the prison doula project, narrated by Dr. Shlafer, at **http://www.youtube.com/watch?v=ZL2xRGoeXTQ&feature=youtube**

REFERENCES

1. Glaze LE, Maruschak LM. Parents in prison and their minor children. Bureau of Justice Statistics Special Report. Washington, DC: US Department of Justice, Office of Justice Programs (pp. 1–25), 2008. Available from: **http://www.ncjrs.gov/App/abstractdb/AbstractDBDetails.aspx?id=244893**

2. Jarjoura GR, DuBois DL, Shlafer R, et al. Mentoring children of incarcerated parents: A synthesis of research and input from the listening session held by the Office of Juvenile Justice and Delinquency Prevention and the White House Domestic Policy Council and Office of Public Engagement. Washington, DC: US Office of Juvenile Justice and Delinquency Prevention. 2013. Available from: **http://www.ojjdp.gov/about/MentoringCOIP2013.pdf**

Adapted by Wendy Hellerstedt from a Fall 2013 article in the Medical Bulletin*, a publication of the University of Minnesota Foundation. Available from:* **http://www.mmf.umn.edu/bulletin/archives/**

Long-acting Reversible Contraception:

Potential to Help Women Achieve Desired Fertility

by Wendy Hellerstedt, MPH, PhD

Birth control includes "natural" methods (e.g., withdrawal, periodic abstinence), barrier methods (e.g., condoms, diaphragms), and hormonal methods (e.g., birth control pills). Individuals—especially adolescents—have higher failure and discontinuation rates when they use birth control methods that depend on behavioral compliance or that require timely and routine access to the contraceptive (e.g., condoms).[1-5] Long-acting reversible contraception (LARC)—which includes intrauterine devices (IUDs) and implants—requires little behavioral compliance, is safe, and has low discontinuation rates for teens and adults.[1,2,4,5] Further, LARC is highly effective, with a 1% failure rate.[6] LARC benefits, from an individual perspective, include safety, satisfaction, ease of use, and effectiveness. From a public health perspective, LARC could significantly reduce population-level unintended pregnancy rates,[7] which are disproportionately high for socially vulnerable women.[8]

LARC methods should be considered first-line options for teens seeking contraception.

How Many Women in the United States Use LARC?

Eleven percent of women at risk for pregnancy do NOT use any contraception, with at-risk 15–19 year-olds having the highest proportion of non-use (18%).[9] Sixty-two percent of all 15–44 year-old women in the US use some form of contraception: 64% use non-permanent methods, 27% rely on female sterilization, and 10% rely on male sterilization.[9]

LARC is increasing in popularity in the US. In 2002, 2% of US women using contraception used LARC. In 2010, the percentage increased to 9.9%.[9] In 2010, among 15–44 year-old women in the US who used contraceptives:

- 5.6% used IUDs;
- 3.8% used injectables; and
- 0.5% used implants.[9]

Note: Percentages and rates will vary depending on the group of interest—women at risk for pregnancy (i.e., those who are physically capable of pregnancy and have had vaginal intercourse during the time period of interest), women who report they are using some form of contraception, and all women (some of whom may be infertile and some of whom may not have had vaginal intercourse during the time period of interest).

LARC: Good Choice for Adolescents

Younger women are less likely than older women to use LARC: about 4.5% of 15–19 year-olds used LARC (most of them use IUDs) in 2009 in the US, an increase from 0.3% in 2002.[10] There is strong public health and clinical support for the use of LARC for adolescents, who are known to be at high risk for pregnancy because they don't use contraceptives at all or they use them inefficiently. As a population, adolescents are at the highest risk for unintended pregnancy.[11] They also pay the highest social and economic costs for unintended pregnancy, and childbearing especially.

In a 2012 statement of support for adolescent use of LARC,[12] the American Congress of Obstetricians and Gynecologists (ACOG) identified several potential barriers,

HOW DO WE ESTIMATE UNINTENDED PREGNANCY AND CHILDBEARING?

Generally the terms "unintended pregnancy" or "unintended childbearing" refer to responses to questions about satisfaction with the timing of a pregnancy. The questions are generally phrased like this:

At the time you became pregnant, did you, yourself, actually want to have a baby at that time?

If the woman responds NO, the pregnancy is defined as **unwanted**.

If the woman responds YES, she is asked the following question:

Did you become pregnant sooner than you wanted, later than you wanted, or at about the right time?

If she responds that it was sooner than she wanted, the pregnancy is defined as **mistimed**. If she responds that it was later or at about the right time, the pregnancy is defined as **wanted/intended**.

For reporting, unwanted and mistimed responses are often combined as reflecting unintended pregnancies or childbirths.

For national surveillance—through the National Survey of Family Growth (NSFG)—women are asked about pregnancy intention up to five years after pregnancy resolution. The most common state surveillance of childbearing intention is done through the Pregnancy Risk Assessment Monitoring System (PRAMS), which is limited to women who have had livebirths. The question is asked approximately 2–4 months postpartum. There are many possible threats to the validity of intention measures, including length of time since pregnancy resolution and type of pregnancy resolution.

Pregnancy intention is often computed from estimated abortion rates AND survey responses on NSFG. In the US, it is estimated that 49% of all pregnancies are intended at conception and that 51% are unintended (about 20% are unwanted and 31% mistimed). Forty percent of unintended pregnancies end in abortion and 60% in livebirth.

Childbearing intention is computed from a subgroup of women who had pregnancies—those who had livebirths. In the US, it is estimated that about 63% of births are intended at conception, 23% are mistimed, and 14% are unwanted.

For More Information

The Guttmacher Institute routinely compiles national data about pregnancy intention. Its December 2013 report is available at **http://www.guttmacher.org/pubs/FB-Unintended-Pregnancy-US.html**. The July 2012 NSFG report on unintended and intended births is available at **http://www.cdc.gov/nchs/data/nhsr/nhsr055.pdf**

including "…a lack of familiarity with or misperceptions about the methods, the high cost, the lack of access, and health care providers' concerns about the safety of LARC use in adolescents." Citing findings from the CHOICE study,[13] ACOG stated, "A large study that removed cost and other common barriers to LARC methods, and included counseling on the full range of birth control options, found that more than two thirds of females aged 14–20 years chose LARC methods."[12]

Studies with teens have also shown that LARC is the most effective way to reduce the risk for **repeat teen pregnancy**.[3,4,14-16] In 2012, ACOG recommended the use of LARCs with teens postpartum because of their safety and effectiveness, stating that "…the insertion of an IUD or implant immediately postpartum ensures reliable contraception for teens when they are highly motivated to prevent pregnancy and are already in the health care system."[12] Similarly, the American Academy of Pediatrics[17] and the Centers for Disease Control and Prevention (CDC)18 recommend the use of LARCS to reduce repeat teen pregnancies. As summarized in a 2012 review, "LARC methods should be considered first-line options for teens seeking contraception."[19] In a 2013 report about repeat teen pregnancies, the CDC wrote, "Evidence-based approaches are needed to reduce repeat teen childbearing. These include linking pregnant and parenting teens to home visiting and similar programs that address a broad range of needs, and offering postpartum contraception to teens, including long-acting methods of reversible contraceptives."[18]

Reducing Barriers to LARC Use

LARC use is increasing in the US, among adults and adolescents. There are several barriers that must be addressed by public health professionals and clinical providers,[12,19] including:

- **Cost barriers.** For women who do not intend to have children for a few years, LARC is cost-effective in the long term. However, the initial wholesale and insertion costs can be as high as $1000 for IUDs and implants. The Affordable Care Act may help reduce such barriers, as it requires coverage for insertion and materials, as do most private insurance and Medicaid plans.
- **Clinic barriers.** Some clinics may have infrastructure difficulties in providing LARC, including those related to the cost of stocking or supplying LARC and the perceived lack of staffing or training to deliver LARC to clients.[20]
- **Clinician barriers.** Some providers have unfounded IUD concerns, including perception of high infection risk and a reluctance to IUDs for nulliparous women. ACOG and other medical groups are working to overcome common misconceptions.[12]

An important barrier to LARC use is the public's lack of knowledge about LARC and, for some groups, negative misconceptions. To create effective education about LARC, and to encourage women to engage in programs that provide LARC, public health and other professionals face several challenges, including:

- Contraception is "well care" so women often have less tolerance for side effects than they do for drugs and devices used to treat medical conditions;
- Negative reputations are hard to overcome, as illustrated by the experience with the Dalkon Shield IUD in the early 1970s (it was pulled from the market in 1976);
- It is difficult for the public to keep aware of new or less common contraceptives, so women do not always know to ask for them; and
- Some groups have irresponsibly linked

the promotion of LARC with eugenics and social engineering; some have suggested that the use of LARC will result in infertility. For individuals who do not understand that LARC is reversible, such fear-mongering is an important barrier.

There is rapid, renewed interest in IUDs and other LARC in the US and across the globe. In November 2013, at the International Conference on Family Planning in Addis Ababa, Ethiopia, the Population Council committed itself to promoting universal access to reproductive health services by increasing access to LARC.[21] For many women and families, LARC represents safe, effective, efficient, and acceptable birth control. Given the generally positive research surrounding LARC—and the increasing urgency to address high (and, for some groups, increasing) rates of unintended pregnancy—it will be important for US and international pubic health professionals to continue developing innovative programs and education that will reduce the structural and individual barriers affecting LARC access.

For More Information

1. American Congress of Obstetricians and Gynecologists. Long Acting Reversible Contraception Program. Available from: **http://www.acog.org/About_ACOG/ACOG_Departments/Long_Acting_Reversible_Contraception**

2. Boonstra HD. Leveling the playing field: the promise of long-acting reversible contraceptives for adolescents. Guttmacher Policy Review 2013;16(4). Available from: **http://www.guttmacher.org/pubs/gpr/16/4/gpr160413.html**

3. The Contraceptive CHOICE Project. This research project was launched in 2007 to decrease financial barriers to contraception for women in St. Louis; 9,256 14–45 year-old women enrolled over a four-year period (enrollment ended in 2011). Participants could choose any FDA-approved contraception: over 40% of 14–20 year-olds chose LARC. The CHOICE website describes study methods and findings, **http://www.choiceproject.wustl.edu/#CHOICE**

REFERENCES

1. Berenson AB, Wiemann CM. Contraceptive use among adolescent mothers at 6 months postpartum. Obstet Gynecol 1997;89(6), 999-1005.
2. Teal SB, Sheeder J. IUD use in adolescent mothers: retention, failure and reasons for discontinuation. Contraception 2012; 85(3), 270-274.
3. Moreau C, Bouyer J, Bajos N, et al. Frequency of discontinuation of contraceptive use: results from a French population-based cohort. Hum Reproduct 2009;24(6):1387-1392.
4. Lewis LN, Doherty DA, Hickey M, et al. Implanon as a contraceptive choice for teenage mothers: a comparison of contraceptive choices, acceptability and repeat pregnancy. Contraception 2010; 81(5):421-426.
5. Trussel J. Contraceptive failure in the United States. Contraception 2011;83(5):397-404.
6. Winner B, Peipert JF, Zhao Q, et al. Effectiveness of long-acting reversible contraception. N Engl J Med 2012; 366:1998-2007. Available from: **http://www.nejm.org/doi/full/10.1056/NEJMoa1110855#t=articleTop**
7. Speidel JJ, Harper CC, Shields WC. The potential of long-acting reversible contraception to decrease unintended pregnancy. Contraception 2008;78(3):197-200.
8. Finer LB, Henshaw SK. Disparities in rates of unintended pregnancy in the United States, 1994 and 2001. Persp Sexual Reproduct Health 2006;38:90-6.
9. Jones J, Mosher WD, Daniels K. Current contraceptive use in the United States, 2006–2010, and changes in patterns of use since 1995. National Health Statistics Reports, 2012, No. 60. Available from: **http://www.cdc.gov/nchs/data/nhsr/nhsr060.pdf**
10. Finer LB, Jerman J, Kavanaugh ML. Changes in use of long-acting contraceptive methods in the United States, 2007–2009. Fertility Sterility 2012; 2012, 98(4):893–897.
11. Guttmacher Institute. Unintended pregnancy in the United Statues [factsheet]. 2013. Available from: **http://www.guttmacher.org/pubs/FB-Unintended-Pregnancy-US.html**
12. American Congress of Obstetricians and Gynecologists (ACOG), Committee on Adolescent Health Care, Long-Acting Reversible Contraception Working Group. Adolescents and long-acting reversible contraception: implants and intrauterine devices. Available from: **http://z.umn.edu/acoglarcadol**
13. Mestad R, Secura G, Allsworth JE, et al. Acceptance of long-acting reversible contraceptive methods by adolescent participants in the Contraceptive CHOICE Project. Contraception 2011;84:493–8.
14. Baldwin MK, Edelman AB. The effect of long-acting reversible contraception on rapid repeat pregnancy in adolescents: a review. J Adol Health 2013;52(4), S47-S53.
15. Tocce KM, Sheeder JL, Teal SB. Rapid repeat pregnancy in adolescents: do immediate postpartum contraceptive implants make a difference? Am J Obstet Gynecol 2012;206:481.e1-7.
16. Stevens-Simon C, Kelly L, Kulick R. A village would be nice but…: it takes a long-acting contraceptive to prevent repeat adolescent pregnancies. Am J Prev Med 2001;21(1):60-65.
17. Pinzon JL, Jones VF, Blythe MJ, et al. Care of adolescent parents and their children. Pediatrics 2012;130(6): e1743-e1756.
18. CDC Vital Signs: repeat births among teens—United States, 2007–2010. Available from: **http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6213a4.htm?s_cid=mm6213a4_w**
19. McNicholas C, Peipert JF. Long-acting reversible contraception for adolescents. Curr Opinion Obstet Gynecol 2012; 24(5):293-298.
20. Beeson T, Wood S, Bruen B, et al. Accessibility of long-acting reversible contraceptives (LARCs) in Federally Qualified Health Centers (FQHCs). Contraception 2014;89(2);91-6.
21. Population Council, International Conference on Family Planning, November 2013. Available from: **http://www.fpconference2013.org**

Wendy L. Hellerstedt is the Director of the Center for Leadership Education in Maternal and Child Public Health and an Associate Professor in the Division of Epidemiology & Community Health, School of Public Health, University of Minnesota.

Integrating Mental Health Services into Family Planning Clinics:

North Dakota's Family Planning Suicide Prevention Project

by Sheilah McGrath and Wendy L. Hellerstedt, MPH, PhD

Two innovative public health professionals in North Dakota identified a need for preventive services in their state—and an opportunity. Micki Savelkoul, MA, directs the Suicide Prevention Program and Kristal Dockter, RN, BSN, directs the Family Planning Program at the North Dakota Department of Health. While there appears to be no clear link between the two programs, both program directors share a goal. "We represent two programs that want to better serve our populations and our inter-office working relationship," Dockter said.

Their collaboration to offer depressive symptom screening, referral, and counseling in family planning clinics was a logical one. "One of family planning's priorities is preventive care as it relates to ALL aspects of health," Dockter said. One important source of morbidity and mortality among young people is suicide and suicide attempts. Both have the potential for prevention if underlying issues, like depression, are addressed. Savelkoul, and the former Family Planning Director in North Dakota, Dubi Schwanz, started this collaboration. Now, with their combined public health experience and suicide prevention knowledge, Dockter and Savelkoul continue the collaborative Family Planning Suicide Prevention Project, which was launched in November 2012.

> *"…the goal of this program is more than screening…. I don't want this information to just sit in a chart somewhere."*

Suicide and Depression

Suicide is the ninth leading cause of death in North Dakota and the second leading cause of death for North Dakotans aged 15 to 24 years.[1]

Suicide is a "tip of the iceberg" condition: suicide attempts are about 20 times more common than suicide deaths,[2] making suicide attempts an important source of morbidity. People who attempt suicide are often seriously injured or need medical care. Data about suicide attempts are difficult to collect because not all affected individuals seek medical treatment and thus their attempts are not reported in any public or medical databases. The estimated one million suicide attempts/year in the US[3] is likely an underestimate.

Suicide—and suicide attempts—have multiple etiologies but they are usually

associated with mental health and/or substance use disorders. A recent analysis of data from the National Hospital Ambulatory Medical Care Survey about emergency room visits for attempted suicide and self-inflicted injury in the US between 1993–2008 showed that 54% of the patients had a previously identified mental health problem and 34% had a previous diagnosis of depression.[4] These data represents the "tip of the iceberg" as they reflect a subgroup of those at risk for suicide—those who had previous diagnoses of mental health problems. Many individuals with mental health disorders are undetected because they have not been screened or they lack medical care access.

Despite the fact that many affected individuals may be undiagnosed, depressive disorders are one of the leading causes of disability and poor health worldwide.[5] In the US, the reported lifetime prevalence of depressive disorders is about 70% higher—and the 12-month prevalence is about twice as high—in women compared to men.[6] About one in four women will experience at least one major depressive episode in her lifetime.[6] The median age of onset is 32 years old,[6,7] with the highest overall prevalence during peak reproductive years.

Integrating Depressive Symptom Screening, Counseling, and Referral in North Dakota's Family Planning Clinics

North Dakota's Family Planning Suicide Prevention Project makes sense for many reasons, including:

- Suicide—and the much more prevalent suicide attempts—have great potential for preventability. Suicide and suicide attempts usually do not happen without warning. Because of this, suicide prevention is a major focus of public health policy.
- Suicide is an important source of morbidity and mortality for otherwise physically healthy young people.
- While suicide rates are higher for men than women, suicide attempts are higher for women in the US.[4]
- Suicide attempts are highest for individuals between 15–29 years old,[4] which are also peak reproductive years.
- Depressive symptoms, which are often treatable, are highly correlated with suicide and suicide attempts.[3,4]
- Health care providers do not need to be mental health specialists to assess or assist someone who has depressive symptoms. Knowledgeable non-mental health care professionals can provide first-line screenings and referrals.
- Because mental health and physical health are highly correlated, leading health care leaders in the US[8] and internationally[9] encourage the integration of mental health services into primary care. Many barriers to such integration have been identified, such as payment problems and lack of primary care expertise in mental health.[8,9] Another important barrier is that high-risk individuals may not have access to primary care providers.

NORTH DAKOTA'S FAMILY PLANNING SUICIDE PREVENTION PROJECT: PARTICIPATING CLINIC AND SATELLITE SITES

- Central Valley Family Planning in Jamestown. Satellite clinics in Valley City, Ellendale, Carrington, Valley City State University. and Stutsman County Correctional Center
- Community Action Partnership Family Planning in Dickinson. Satellite clinic at the Southwest Multi County Correction Center
- Fargo Cass Public Health Family Planning Clinic in Fargo. Satellite clinic at the Cass County Jail
- First District Health Unit Family Planning in Minot
- Lake Region Family Planning in Devils Lake. Satellite clinics in Rugby and Fort Totten
- Richland County Family Planning in Wahpeton. Satellite clinic in Lisbon
- Upper Missouri District Health Unit Family Planning in Williston. Satellite clinics in Crosby, Stanley, and Watford City
- Valley Health and WIC in Grand Forks

Savelkoul and Dockter identified a major source of morbidity and mortality for young adults and further identified an opportunity to reduce population risk. They decided to bring depressive symptom screening and services to a potentially high-risk, accessible population who may not have universal access to traditional primary care services.

What better site for depressive symptom screening than the clinics that people use and trust for their reproductive health care? Importantly, North Dakota's family planning clinics serve women and men who are often difficult for primary care providers to reach. Savelkoul and Dockter felt that including depressive symptom screenings in familiar and safe settings that people already access for their reproductive health needs had the potential to increase the rate of screening. Familiarity with the provider is critical. "A lot of our clients have been our clients for years. They really feel comfortable with us and will open up to the clinician," Dockter said. Savelkoul agreed, adding that, "People are much more likely to talk to people they trust about mental health concerns."

Program Goals and Accomplishments

"One of the federal priorities for family planning is to provide quality preventive health services," Dockter said. "Our collaboration does just that." It also provides a model of a feasible, relatively low-resource effort: the collaboration involves universal screening for depressive symptoms and some online and in-person training of family planning staff in depressive symptom assessment, counseling, and referral.

During clinical or counseling care visits, clients at the participating family planning clinics and satellite sites (*see* table on this page for a list of sites) receive either the short and/or long version of a depressive symptom self-administered screening tool, the Patient Health Questionnaire (PHQ). The 2-item PHQ-2 is administered as an initial assessment for depressive symptoms. If it is positive, the 9-item PHQ-9 is administered. Beyond these assessments for depressive symptoms, the family planning staff members (who are not mental health care professionals) are trained to address depression and suicidality and make appropriate mental health care referrals.

Eight of the nine family planning clinics

(and 13 satellite sites) in North Dakota are participating. "We're reaching a lot of people," says Savelkoul, "but the goal of this program is more than screening. An important component for continuation of care is an appropriate referral. I don't want someone to receive a positive screen without any action on our part. I don't want this information to just sit in a chart somewhere."

In 2013, the program performed 12,538 screenings (some clients were screened more than once) with the PHQ-2. Of those:

- 657 clients were counseled at the family planning sites;
- 461 clients were referred for additional services;
- 446 clients were subsequently screened with the PHQ-9; and
- 100 clients were referred to a "call-back" program. Family planning staff members, with client permission, will call or fax the client's contact information to the program. The program provides follow-up counseling for 6 to 8 weeks and referrals.

Expanding Efforts in North Dakota

Unrecognized or untreated mental health disorders threaten the well-being of individuals and families. North Dakota has identified this health threat and provides an innovative and feasible model for reaching high-risk individuals in the family planning clinics they trust. By integrating screenings into multiple types of care settings, public health professionals expand their potential to identify and treat affected individuals. Savelkoul is also integrating mental health screening efforts into other programs, including North Dakota's Optimal Pregnancy Outcome Program (OPOP), a primary prevention program for low-income women to promote healthy birth outcomes. Expanding their efforts to this program—and perhaps to other postpartum programs—will allow them to assess pregnancy-associated depressive symptoms.

For More Information

1. North Dakota Suicide Prevention Program. Available from: **http://www.ndhealth.gov/suicideprevention**

2. North Dakota Family Planning Program. Available from: **http://www.ndhealth.gov/familyplanning/**

3. A copy of the Patient Health Questionnaire can be found at **http://www.integration.samhsa.gov/images/res/PHQ%20-%20Questions.pdf**

REFERENCES

1. North Dakota Suicide Prevention Program. Available from: **http://www.ndhealth.gov/suicideprevention**
2. World Health Organization (WHO). Suicide prevention (SUPRE). Available from: **http://www.who.int/mental_health/prevention/suicide/suicideprevent/en/**
3. Centers for Disease Control and Prevention. Suicide [factsheet]. Available from: **http://www.cdc.gov/violenceprevention/pdf/Suicide_DataSheet-a.pdf**
4. Ting SA, Sullivan AF, Boudreaux ED, et al. Trends in US emergency department visits for attempted suicide and self-inflicted injury, 1993–2008. Gen Hosp Psychiatr 2012; 34(5):557-65.
5. Ferrari AJ, Charlson FJ, Norman RE, et al. Burden of depressive disorders by country, sex, age, and year: findings from the global burden of disease study 2010. PLoS Med 2013; 10(11): e1001547.
6. Kessler RC, Petukhova M, Sampson NA, et al. Twelve-month and lifetime prevalence and lifetime morbid risk of anxiety and mood disorders in the United States. Int J Methods Psychiatr Research 2012; 21(3):169-84
7. Kessler RC, Berglund PA, Demler O, et al. Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication (NCS-R). Arch Gen Psychiat 2005;62(6):593-602.
8. Agency for Healthcare Research and Quality. Experts call for integrating mental health into primary care: Research Activities, January 2012, No. 377. Rockville MD: Agency for Healthcare Research and Quality, 2012. Available from: **http://www.ahrq.gov/news/newsletters/research-activities/jan12/0112RA1.html**
9. World Health Organization and World Organization of Family Doctors. Integrating mental health into primary care: a global perspective. Available from: **http://www.who.int/mental_health/policy/Integratingmhintoprimarycare2008_lastversion.pdf?ua=1**

Sheilah McGrath is an MPH student in the Maternal and Child Health Program in the Division of Epidemiology & Community Health, School of Public Health, University of Minnesota. Wendy L. Hellerstedt is the Director of the Center for Leadership Education in Maternal and Child Public Health and an Associate Professor in the Division of Epidemiology & Community Health, School of Public Health, University of Minnesota.

Iowa Department of Public Health:
Assessment of Performance Measures for Contraceptive Use

by Denise Wheeler, MS, CNM, ARNP, and Debra J. Kane, PhD, RN

Public and private health care providers use performance measures to monitor, document and report on the quality of care that they provide. In collaboration with the Centers for Disease Control and Prevention (CDC), the Iowa Department of Public Health (IDPH) is addressing an important issue in family planning: the development of meaningful performance measures for the delivery of contraceptive services.

Family planning providers use a number of performance measures for quality assurance and reporting purposes. For example, the following are some of the Healthcare Effectiveness Data and Information Set (HEDIS) measures family planning providers use to reflect the variety of services they provide to youth, women and men:

- Body mass index (BMI) screening;
- Human papillomavirus (HPV) vaccination of female adolescents;
- Cervical cancer screening (including a new measure to specifically document the percent of 16-20 year old females who were not screened);
- Chlamydia screening in women younger than 25 years;
- Breast cancer screening; and
- Immunization and flu vaccinations.

Performance measures specific to contraceptive services do not exist, despite their potential to improve the quality of services provided and focus provider attention on family planning. Performance measures about contraceptive services are essential because the need for high-quality, evidence-based family planning services is universal.

Performance measures specific to contraceptive services do not exist, despite their potential to improve the quality of services provided and focus provider attention on family planning.

The Family Planning Councils of America (FPCA) developed performance measures for Title X family planning service providers. The FPCA system is a proprietary product that allows Title X family planning service providers to measure quality improvement and assure the provision of high quality clinical services, monitor and document achievements, and evaluate program effectiveness through the use of objective data.

Proposed Contraceptive Performance Measures

To be adopted, performance measures must be acceptable to end-users. They must be usable for accountability and performance improvement activities in order to achieve the goal of high quality, efficient health care for individuals and populations. The data must be consistently and conveniently collected, readily available, easily compiled and meaningful to stakeholders. In Iowa, data are compiled and entered into an online family planning database using a Client Visit Record (CVR) that is completed by the provider at the time of the visit. The collection process currently requires double entry into both the client record and the online database. However, as more practices adopt electronic health record systems and complete the required health information technology requirements, the data should be readily available for extraction from the client record.

The CDC and the Office of Population Affairs (OPA) are preparing an application for National Quality Forum (NQF) endorsement of two performance measures for contraceptive services: the proportion

WHAT ARE HEDIS PERFORMANCE MEASURES?

Performance measures in public health are often synonymous with quality and efficiency measures and are embedded throughout the US health-care system. Performance measurement is the process of collecting, analyzing and/or reporting information regarding the activities of an individual, group, organization, or system to see whether the outcomes are in line with what was intended and to identify specific opportunities for improvement.

The Healthcare Effectiveness Data and Information Set (HEDIS) measures are the most commonly known performance measures. Endorsed by the National Committee on Quality Assurance (NCQA), HEDIS measures are defined as "a set of standardized performance measures designed to ensure that purchasers and consumers have the information they need to reliably compare the performance of health care plans." They are the most commonly used measures by all payer types (i.e., commercial, Medicare, Medicaid). See **http://www.ncqa.org/tabid/59/Default.aspx** for further information about HEDIS and performance measures.

of female clients aged 15–44 years who received contraceptive services in the past 12 months, who adopt or continue use of (1) a most effective or moderately effective, FDA-approved contraception method; and (2) an FDA-approved, long-acting reversible contraception method (LARC).

The NQF is a nonprofit organization that reviews, endorses, and recommends use of standardized health care performance measures. Currently, there are no NQF-endorsed measures for contraceptive services. NQF endorsement of contraceptive performance measures will increase the likelihood that public and private family planning service providers will adopt the measures and use them to improve the quality of care. Funders can also use the performance measures to establish funding levels and evaluate performance by contractors.

Assessing Proposed Contraceptive Performance Measures at the Iowa Department of Public Health (IDPH)

IDPH is conducting several activities to support NQF endorsement of the two proposed contraceptive performance measures. NQF requires an assessment of the reliability of the measures, which includes a demonstration that the measures are well defined and calculated consistently to allow for comparability across clinics.

To provide evidence of this, in July 2013, IDPH collaborated with OPA and CDC to conduct an inter-rater reliability assessment of the two proposed performance measures. Two independent raters reviewed 215 paper-based medical records from one Iowa Title X clinic and 215 electronic records from a second Iowa Title X clinic (results are pending). From the data collection process, the IDPH learned something that is critical to good performance measures: it is feasible to abstract the needed data elements from both paper-based and electronic CVRs at Title X family planning clinics in Iowa.

IDPH will also show the relevance of the performance measures in identifying gaps in clinic services or access to care. Using Client Visit Record (CVR) data (maintained by Ahlers and Associates), the IDPH will analyze client data by Title X family planning clinic type, client age, client race and ethnicity, as well as client residence (rural vs. urban). In doing so, IDPH may be able to identify performance gaps or variation in the use of long-acting reversible contraceptives (LARCs) and the most or moderately effective contraceptive methods. Gaps or variations in use could reflect (1) clinic resource or training needs, (2) provider/client barriers to contraceptive counseling or prescription of more effective contraceptives and LARCs, and/or (3) client preferences.

The IDPH also plans to conduct a contraceptive performance gap analysis using Medicaid claims data by examining the receipt of services by provider type (family practice, midwives, and OB providers), Medicaid client county of residence and Medicaid client age. As a final step, the IDPH will conduct a return on investment (ROI) analysis using the Iowa Title X family planning data to assess the value of LARC and most or moderately effective contraceptive methods to payers like Medicaid.

The IDPH hopes to conclude all analyses by December 2014. Through this process, IDPH has developed a protocol that could be used to assess other proposed performance measures in the future and—in the near future—will be able to determine how well Iowa's Title X clinics are meeting the contraceptive needs of their clients.

For More Information

The activities of Iowa's Department of Public Health's Family Planning Program are described at **https://www.idph.state.ia.us/hpcdp/family_health_family_planning.asp**

Denise Wheeler, CNM, MS, ARNP, is the Family Planning Coordinator, Bureau of Family Health, Iowa Department of Public Health. Debra Kane, PhD, RN, is the MCH Epidemiologist, Bureau of Family Health, Iowa Department of Public Health.

National Listserv for MCH Students & Grads

A listserv for current and past Maternal and Child Health (MCH) students (from all disciplines) was made available by the Maternal and Child Health Bureau through the Association of University Centers on Disabilities. This listserv will allow MCH graduates and students to continue the strong connections they have made during their graduate programs and connect with MCH-ers from other disciplines and programs. This listserv is a great opportunity for members to collaborate on research, to network, and to share practices and questions with peers. The listserv subscription form and more information is at: **http://www.aucd.org/resources/alltrainee_subscription.cfm**

Interested in Making a Difference?

Consider a Master's in Public Health (MPH) Degree in Maternal and Child Health

by Shoua Vang

Liane Grayson

Liane Grayson will receive her Masters in Public Health (MPH) in Maternal and Child Health (MCH) from the University of Minnesota's School of Public Health in 2014. She is a clinician who is interested in the well-being of vulnerable children. Prior to enrolling in the MPH program, she received her PhD in Speech and Language Pathology (SLP) from Northwestern University in Evanston, Illinois.

"There are two parts to me," Grayson said, "the clinician who really wants to make sure services are high quality and that all children get the best services. The other part of me enjoys using data to inform policies." When Liane found a brochure about the online MPH-MCH program at the University of Minnesota, she had found her match. She felt that the strengths of the MPH-MCH program would help her develop her public health expertise.

Grayson's experience in SLP early intervention services stimulated her to learn more about poverty and its effects on child outcomes. "I worked with many families who lived in poverty and found that in many instances, the intervention needs of the child were not high on the list of family priorities. From one session to the next, families had disconnected phones or had moved," she said. She wanted to learn all she could about poverty, social policy, and child outcomes. To do so, she left her job in SLP to work on research and evaluation projects related to welfare reform in the School of Applied Social Sciences at Case Western Reserve University. After her work at Case Western Reserve University, Grayson headed for South Dakota. "I wanted to learn about rural poverty. What better place than South Dakota where there are five of the top ten poorest counties in the US?" she said. Grayson served as an Assistant Professor at the University of South Dakota in the Department of Communication Sciences and Disorders for three years before realizing that teaching was not her passion. She realized she could not ignore her concerns about children in poverty and disparities in health and well-being. "I loved my work as a home-visitor [...] and enjoy doing work with data, solving problems, and thinking about what they mean," she explained. As a clinician, she has had the opportunity to improve individual and family health. As an MPH MCH student, she is developing the skills to improve population health.

"I remain committed to understanding how social determinants operating across the life course drive health disparities in the MCH population. …"

Grayson's experience as a part-time online student in the MPH-MCH program has been invaluable. "I've really enjoyed the interactions with other professionals in the MCH program. Everyone brings so much richness to the coursework because they have so many different experiences," she said. Through an MCH faculty member, Grayson applied for and obtained a field experience position at the Maternal and Child Health Bureau (**http://mchb.hrsa.gov/**). Her field experience allowed her to connect with other health professionals and programs. "I learned a lot about the Affordable Care Act (ACA) and how the Maternal and Child Health Bureau (MCHB) fits into the Health Resources and Services Administration (HRSA)," she explained. The focus of her work with MCHB was to improve the quality of services received by vulnerable populations served by Title V. She said she was able to transfer the knowledge and skills she acquired from her MPH-MCH courses to engage in meaningful discussions with colleagues at her field experience. She has kept her connections with the HRSA-funded MCH training program in Minnesota by facilitating the distribution of its *Healthy Generations* volume about the ACA to HRSA colleagues **http://z.umn.edu/hgfall2013**

Grayson's passion for improving individual and population health has grown since she started the MPH MCH program in 2010. After graduation, she hopes to find a position where she can use data to inform policies that facilitate access to quality health care for mothers, children, and families. "I remain committed to understanding how social determinants operating across the life course drive health disparities in the MCH population and how health care financing systems impact the quality of services received particularly in this era of the Affordable Care Act," she said.

Shoua Vang is an MPH student in the Maternal and Child Health Program, Division of Epidemiology & Community Health, School of Public Health, University of Minnesota.

WHAT IS MCH? WE ARE MCH!

Do you ever wonder how to explain the depth and breadth of MCH public health work? Our HRSA training grant colleagues at the University of South Florida/Tampa developed a series of Prezi presentations to address this issue. Each presentation begins by posing the question, "What is MCH?" It then describes MCH in terms of our work with individuals, families, and communities. The Prezi presentations end with brief "stories" that were submitted by our University of Minnesota Center for Leadership Education in MCH, and other HRSA-funded training grant colleagues across the nation, to describe our varied work. There are four Prezi presentations available at the following links. The main one is the longest version; the mini-Prezis can be quickly viewed and each has different stories from the main Prezi. Take a look—you might recognize a story from someone you know!

- "We are MCH" Main Prezi: **http://prezi.com/rz0qkn_wwzvp/we-are-mch/**
- "We are MCH" Mini #1: **http://prezi.com/c7e6u6hpyk2u/we-are-mch-mini-1/**
- "We are MCH" Mini #2: **http://prezi.com/wc9jvevjv3nz/we-are-mch-mini-2/**
- "We are MCH" Mini #3: **http://prezi.com/kyjdfgl9b17o/we-are-mch-mini-3/**

Photo Credits

Cover Photo: Frosted Leaf. By Carol L. Wiebe, cwiebe162@gmail.com.

Page 1:
Winter Cattails. By Liz West, http://www.flickr.com/photos/calliope/. Creative commons license information at: http://creativecommons.org/licenses/by/4.0/legalcode.

Page 6:
Icy Delights. By Sharrox2000, http://www.flickr.com/photos/55467945@N06/. Creative commons license information at: http://creativecommons.org/licenses/by/4.0/legalcode.

Page 9:
Iowa Winter 2010. By Carl Wycoff, http://www.flickr.com/photos/carlwwycoff/. Creative commons license information at: http://creativecommons.org/licenses/by/4.0/legalcode.

Page 11:
The Pond With Snow on the Rocks. By Rabble, http://flic.kr/p/truRJ. Creative commons license information at http://creativecommons.org/licenses/by/4.0/legalcode.

Page 14:
West Virginia Gristmill Waterfall Winter Snow. By Forest Wander, http://flic.kr/p/7qWaV4. Creative commons license information at: http://creativecommons.org/licenses/by/4.0/legalcode.

Rebecca Shlafer. By Brady Willette, http://willettepictures.com.

Page 16:
Winter 6. By Philip Bitnar, http://www.flickr.com/photos/philipbitnar/. Creative commons license information at: http://creativecommons.org/licenses/by/4.0/legalcode.

Page 19:
Winter 2009-2010 in Saarbrücken, Germany. By Andreas Wieser, http://www.flickr.com/photos/andilicious/. Creative commons license information at: http://creativecommons.org/licenses/by/4.0/legalcode.

Page 22:
Natures Winter Bouquet. By Chris Breeze, http://www.flickr.com/photos/92833011@N00/. Creative commons license information at: http://creativecommons.org/licenses/by/4.0/legalcode.

Oja's First Shoot. By mynameisharsh, http://www.flickr.com/photos/mynameisharsha/9240212796/in/photostream/. Creative Commons license information at: http://creativecommons.org/licenses/by/4.0/legalcode.

Page 24:
Winter in Fischerhude. By Fihu, http://flic.kr/p/wNi3. Creative commons license information at: http://creativecommons.org/licenses/by/4.0/legalcode.

Winter Waterfall Ice Snow Rocks. By Forest Wander, http://flic.kr/p/9et1Uh. Creative common license information at: http://creativecommons.org/licenses/by/4.0/legalcode.

Graphic design/art direction: Carr Creatives www.carrcreatives.com

Center for Leadership Education in Maternal and Child Public Health
School of Public Health
Division of Epidemiology and Community Health
University of Minnesota
1300 So 2nd St Suite 300
Minneapolis, MN 55454
www.epi.umn.edu/mch

NONPROFIT ORG.
U.S. POSTAGE
PAID
TWIN CITIES, MN
PERMIT NO. 90155

If you do not wish to receive a print copy of *Healthy Generations* in the future, please send an email to: mch@umn.edu; in the subject line, please write "Unsubscribe *Healthy Generations*" and include your name (or the name on the mailing address) in the text. *Healthy Generations* is published 2-3 times/year. Thank you.

Save the Date: Conferences and Events

APRIL 1–2, 2014*
Iowa Governor's Conference on Public Health
Ames, IA
http://www.iowapha.org/IGCPH

APRIL 4–6, 2014
Women's Health 2014: the 22nd Annual Congress
Washington, DC
http://www.bioconferences.com/Conferences/WomensHealth

APRIL 10, 2014*
Health Disparities Roundtable/School of Public Health, University of Minnesota
Minneapolis, MN
http://www.sphresearch.umn.edu/hdwg/

APRIL 27–30, 2014
National Family Planning & Reproductive Health Association Annual Conference
Alexandria, VA
http://www.nationalfamilyplanning.org/NC

APRIL 29–MAY 1, 2014
Public Health Informatics Conference
Atlanta, GA
http://phiconference.org/

MAY 1–2, 2014*
TeenWise Minnesota Annual Conference
Brooklyn Center, MN
http://teenwisemn.org/annual-conference/

MAY 1–3, 2014
Population Association of American Annual Meeting
Boston, MA
http://paa2014.princeton.edu

MAY 6, 2014
The Center for Advanced Studies in Child Welfare Spring Conference: Attending to Well-Being in Child Welfare
Minneapolis, MN
http://cascw.umn.edu/calendar/?cid=all&mc_id=8

MAY 19–21, 2014
National Network of Public Health Institutes Annual Conference
New Orleans, LA
http://www.nnphi.org/news-events/events/2014/05/19/2014-nnphi-annual-conference

JUNE 4–5, 2014
Minnesota Public Health Association Annual Conference
Minneapolis, MN
http://www.mpha.net/Default.aspx?pageId=1242643&eventId=839367&EventViewMode=EventDetails

JUNE 9–12
2014 STD Prevention Conference
Atlanta, GA
http://www.cdc.gov/stdconference/

JUNE 23–24, 2014
Society for Pediatric and Perinatal Epidemiologic Research
Seattle, WA
http://www.sphresearch.umn.edu/hdwg/

JULY 8–10, 2014
NACCHO Annual Conference: The New Era of Public Health
Atlanta, GA
http://www.nacchoannual.org

* Co-sponsored by the Center for Leadership Education in Maternal and Child Public Health