PRECONCEPTION HEALTH AND CARE

“Early prenatal care is not enough, and in many cases it is too late! Adverse pregnancy outcomes continue to be higher than acceptable.” Hani K. Atrash, MD, MPH, CDC

Background
According to Dr. Atrash from the Centers for Disease Control and Prevention (CDC), improvements in maternal and infant outcomes have significantly slowed during the latter part of the 20th century. His statement holds true for many of Nevada’s maternal and child health indicators despite major advances in medicine. Clinicians have long realized that their interventions are limited by the health status each woman brings to her first prenatal visit – conditions influenced by heredity and environment. The growing obesity and diabetes epidemic in the United States, for example, has tremendous implications for maternal and infant health outcomes with their statistically increased risk for prematurity and other complications.

Preconception care is a set of interventions that identify and modify biomedical, behavioral, and social risks to a woman’s health and future pregnancies. It includes both prevention and management, emphasizing health issues that require action before conception or very early in pregnancy for maximal impact. The primary target population for preconception care is women of reproductive age.

How does data inform the public health need for preconception care?
Adverse pregnancy outcomes remain a prevalent health problem. Table 1 compares existing local and national statistics on adverse birth outcomes and adverse pregnancy outcomes.

Risk factors for adverse pregnancy outcomes remain prevalent among women of childbearing age. For example, during the five year period between 2004 and 2008, local statistics showed that 17.8% (range: 14.8-22.6%) of Washoe County women at childbearing age (15-44 years) smoked cigarettes, 7.3% (range: 6.5-14.4%) used alcohol, 40% (range: 38.4-47%) were overweight or obese and 2.4% (in 2008) had a positive test for Chlamydia, the most frequently reported sexually transmitted disease. During pregnancy, 8.3% (range: 7.4-9.1%) of pregnant women smoked.

Screening for risk factors associated with adverse pregnancy outcomes allows for early intervention as many of the pre-existing health problems in women of reproductive age can be successfully managed if identified before a pregnancy occurs. However, even if a woman is admitted to prenatal care in her first trimester, it may already be too late, as most fetal organs have already been formed by that time absent the benefit of folic acid or other preconception interventions.

The costs of care for an infant born prematurely or with a birth defect can easily approach more than $1 million over the course of a lifetime, and are associated with social and emotional burdens for parents and society.

Table 1. Comparison of Adverse Birth and Pregnancy Outcomes between National and Local Statistics

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Nationwide*</th>
<th>Washoe County**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infant Mortality Rate</td>
<td>7.0 /1,000 live births</td>
<td>5.7/1,000 live births (3.8-7.5)</td>
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<tr>
<td>Major birth defects</td>
<td>3.3%</td>
<td>1.5% (1.0-2.3%)</td>
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<tr>
<td>Fetal Alcohol Syndrome</td>
<td>0.1-1.5/1,000 live births</td>
<td>N/A***</td>
</tr>
<tr>
<td>Low Birth Weight</td>
<td>7.9%</td>
<td>8.5% (7.5-9.0%)</td>
</tr>
<tr>
<td>Preterm Delivery</td>
<td>12.3%</td>
<td>10.4% (9.3-10.9%)</td>
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<tr>
<td>Complications of pregnancy</td>
<td>30.7%</td>
<td>N/A***</td>
</tr>
<tr>
<td>C-section</td>
<td>27.6%</td>
<td>28.0% (26.1-29.2%)</td>
</tr>
<tr>
<td>Unintended pregnancy</td>
<td>49%</td>
<td>N/A***</td>
</tr>
<tr>
<td>Unintended births</td>
<td>31%</td>
<td>N/A***</td>
</tr>
</tbody>
</table>

* Data source: see reference i) and ii) data as of 2002
** Data source: NSHD birth data for Washoe County 2004-2008 Median value (Minimum-Maximum)
*** Not Available
What interventions work to improve preconception health?

The American College of Obstetricians and Gynecologists (ACOG) and the American Academy of Pediatrics (AAP) have developed clinical practice guidelines for selected risk factors in which effective intervention will prevent fetal abnormalities. ACOG and AAP have classified the main components of preconception care into four categories of intervention:

- **Physical Assessment**,
- **Risk Screening**,  
- **Vaccinations**, and  
- **Counseling**

These four components are abbreviated as **PARiSVaC**.

The following table summarizes the interventions and their proven health effects.

<table>
<thead>
<tr>
<th>Category</th>
<th>Intervention</th>
<th>Proven Health Effect</th>
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</thead>
<tbody>
<tr>
<td>Physical (Maternal) Assessment (PA)</td>
<td>Maternal phenylketonuria (PKU) management</td>
<td>Prevents births from PKU-related mental retardation.</td>
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<td></td>
<td>Oral anticoagulant use management</td>
<td>Switching medications to a non-teratogenic anticoagulant avoids harmful exposure.</td>
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<tr>
<td></td>
<td>Antiepileptic (AED) drug management</td>
<td>Changing to a less teratogenic treatment regimen reduces harmful exposure.</td>
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<tr>
<td></td>
<td>Accutane use management</td>
<td>Preventing pregnancy during Accutane use eliminates harmful exposure.</td>
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<tr>
<td>Risk Screening (RiS)</td>
<td>HIV/AIDS screening and treatment</td>
<td>Allows for timely treatment and counseling for pregnancy timing.</td>
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<td></td>
<td>STD screening and treatment</td>
<td>Reduces risk of ectopic pregnancy, infertility, and chronic pelvic pain associated with infections; reduces possible risk to a fetus of death or disability including mental retardation and blindness.</td>
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<tr>
<td>Vaccination (Va)</td>
<td>Rubella vaccination</td>
<td>Provides protection against congenital rubella syndrome.</td>
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<tr>
<td></td>
<td>Hepatitis B vaccination</td>
<td>Prevents transmission of infection, eliminates risk for infection and sequelae.</td>
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<tr>
<td>Counseling (C)</td>
<td>Diabetes management</td>
<td>Substantially reduces birth defects among women with diabetes.</td>
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<td>Hypothyroidism management</td>
<td>Medication dose adjustments protects proper neurological development.</td>
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<td>Folic acid supplementation</td>
<td>Reduces occurrence of neural tube defects by two-thirds.</td>
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<td></td>
<td>Smoking cessation counseling</td>
<td>Smoking cessation before pregnancy can prevent preterm birth, low birthweight and other adverse perinatal outcomes.</td>
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<td>Eliminating alcohol use</td>
<td>Avoidance of alcohol related birth defects.</td>
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<td></td>
<td>Obesity control</td>
<td>Weight loss prior to pregnancy reduces risk for associated neural tube defects, preterm delivery, diabetes, cesarean section, and hypertensive and thromboembolic disease.</td>
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</tbody>
</table>

What can health care providers do?

An opportunity exists to provide preconception care and risk reduction at every encounter with patients. Free patient education materials and links to ACOG and CDC publications are available at: [http://www.washoeCounty.us/Health/phpemform.html](http://www.washoeCounty.us/Health/phpemform.html) for health care providers.

“Optimizing a woman’s health before and between pregnancies is an ongoing process that requires access to the full participation of all segments of the health care system.” Committee Opinion, Number 31, American College of Obstetricians and Gynecologists, September 2005.

Upcoming Audio Conference: Integrating Preconception Care into Reproductive Health

An audio conference on “Integrating Preconception Care into Reproductive Health” will be available on March 17, 2010. Registration is due on February 24, 2010. Please see brochure (following page) for details of this audio conference and registration form.

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ii CDC. Preconception Health and Care, 2006.
Integrating Preconception Care into Reproductive Health

Wednesday, March 17, 2010
12:00 pm - 1:30 pm Pacific Time
Audio Conference

About This Audio Conference
This session will review the CDC recommendations on preconception health care with a particular emphasis on reproductive life planning. Medical, behavioral, and social risk factors that negatively affect pregnancy outcomes will be reviewed. The reasons for screening for these risk factors will be discussed as well as how providers can implement effective preconception assessment and counseling in their practice.

By the end of this session, participants will be able to:
• identify the CDC recommendations on preconception health, including reproductive life planning;
• list three ways to incorporate preconception health care in clinical practice.

Audience
Physicians, nurses, counselors and other staff working in reproductive health care.

Speaker
Alvina Long Valentin, R.N., M.P.H., has 20 years of public health nursing clinic management and program development experience in the areas of women’s health, pediatrics, adult medicine and home-based visiting in the U.S. and Guatemala. Since January 2007, she has been the Women’s Health Network Supervisor with the Women’s Health Branch at the North Carolina Division of Public Health, playing an active role in the coordination of the state’s efforts in Preconception Health.

Registration
Please send in the registration form by the deadline; payment need not be sent with registration. If payment is sent later, please include registrant name(s) or a copy of the registration form(s) so proper credit can be given. You can also register online at www.centerforhealthtraining.org.

Confirmation
Confirmations will be sent 10 days prior to the call and will include the call-in phone number, materials, as well as other details. If more information regarding registration call CHT at 510.835.3700.

Fees
Title X-funded agencies: $25 per phone line; Private/Other funding: $45 per phone line.
CELs are an additional $10. A $10 late fee will be assessed for each registration received after the deadline. Fees can be refunded if cancellation is received 5 working days prior to the session.

Registration Deadline: February 24, 2010

Continuing Education
Center for Health Training is an approved provider of continuing nursing education by the Washington State Nurses Association, an accredited approver by the American Nurses Credentialing Center’s Commission on Accreditation.
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510.835.3700
Register online at: www.centerforhealthtraining.org

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Phone Fax

Email (required)

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○ Late Fee ($10 - if received after deadline)
○ Please mail confirmation letter & materials via U.S. Mail
For agencies who will be paying for a group of participants add ($10) for each person requesting CME/MSNA credits:
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Additional listeners:
○ have listed ___ additional listeners on a separate page.

Name Job Title

Name Job Title

Name Job Title

Name Job Title

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