Emergency Preparedness and Response Resources for MCH Populations

Tuesday, June 16, 2015

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Today’s webinar will be recorded and the recording will be available in the AMCHP website within a few days. A link to access the recording will be included in a post-broadcast email.

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Learning Objectives

• Describe disaster effects associated with the health of pregnant and postpartum and other women of reproductive age

• Identify unique challenges that would arise for pregnant and postpartum women during an anthrax incident

• Discuss how the Reproductive Health After Disaster (RHAD) toolkit can be used to identify the unmet MCH needs during the recovery phase of a disaster
Featuring

- **Sascha Ellington, MSPH, CPH**, Epidemiologist, Division of Reproductive Health, Centers for Disease Control and Prevention

- **Marianne E. Zotti, DrPH, MS, FAAN**, Consultant, Emergency Preparedness and Response Activity, MANILA Consulting Group, Inc.

- **Mary Ellen Simpson, R.N., Ph.D.**, Instructor of Community Health, Graham School of Nursing, Canton, Illinois
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STRENGTHENING EMERGENCY PREPAREDNESS AND RESPONSE FOR REPRODUCTIVE HEALTH

Sascha Ellington, MSPH, CPH
Division of Reproductive Health
Centers for Disease Control and Prevention
Outline

• Describe disaster effects associated with the health of Pregnant and Postpartum (P/PP) Women and other Women of Reproductive Age (WRA)

• Discuss the purpose, role, and activities of CDC’s Division of Reproductive Health (DRH) Emergency Preparedness and Response (EPR) Activity

• Describe current EPR tools and upcoming activities
Pregnant Women and Disasters

- Populations with special clinical needs*
- Disproportionate burden in some infectious diseases
- Inconsistent findings in studies on the effects of disaster on pregnant women
- Disaster exposure may be associated with:
  - Preterm birth or low birth weight infants
  - Increases in pregnancy complications
  - Increase in psychological stress
  - Separation from family and support systems
  - Exposure to environmental contaminants
  - Lack of access to health care
- Lack of surveillance

*Pandemic and All-Hazards Preparedness Reauthorization Act of 2013. Sect. 304.
Postpartum Women and Disasters

- Lack of access to contraception and reproductive health care
- Lack of access to well-child and acute care
- Effects on infant feeding
  - Exposure to contaminants can affect breastfeeding
  - Lack of access to potable water may affect formula feeding
- Loss of infant care supplies
- Increase in psychological stress
- Separation from family and support systems
Women of Reproductive Age (WRA) and Disasters

- Little known about disaster effects on WRA in US
  - Inconsistent changes in birth rate after disaster
  - No routine surveillance of disaster-affected WRA
  - Few studies on intimate partner violence
  - Inadequate studies on contraceptive use, access to medical and social services, risk behaviors, etc.
DRH Activity for Emergency Preparedness and Response (EPR)

Safe Motherhood: When A Disaster or Emergency Occurs

National Center for Chronic Disease Prevention and Health Promotion
Division of Reproductive Health

AMCHP
Reproductive Health EPR Webpage

DRH EPR Activities

- Pregnancy Risk Assessment Monitoring System (PRAMS) preparedness activity
- Anthrax preparedness
- Strategic National Stockpile (SNS) Project
- Activation of the Maternal Health Team
  - H1N1 Response
  - Ebola Response

Pregnancy Risk Assessment Monitoring System (PRAMS) Preparedness Activity

Goals
To develop and/or enhance standard PRAMS measures that increase our knowledge of preparedness behaviors among pregnant and postpartum women

Final products
There are now 4 optional questions on emergency preparedness for adoption by PRAMS states.
In 2009 AR was the first state to include an emergency preparedness question in their survey.

Impact
Leverage an existing resource to help us address knowledge gaps and mitigate negative effects in future disasters
Below is a list of things that some people do to prepare for a disaster. For each one, please tell us if you have done it or not. For each item, check No if it is not something you have done to prepare for a disaster, or Yes if it is.

- I have an emergency meeting place for family members (other than my home)
- My family and I have practiced what to do in case of a disaster
- I have a plan for how my family and I would keep in touch if we were separated
- I have an evacuation plan if I need to leave my home and community
- I have an evacuation plan for my child or children in case of a disaster (permission for day care or school to release my child to another adult)
- I have copies of important documents like birth certificates and insurance policies in a safe place outside my home
- I have emergency supplies in my home for my family such as enough extra water, food, and medicine to last for at least three days
- I have emergency supplies that I keep in my car, at work, or at home to take with me if I have to leave quickly
Anthrax Preparedness

Purpose:

To identify vaccination and treatment issues related to Anthrax in P/PP and lactating women and newborns
Strategic National Stockpile (SNS) Project

- Creation of a DRH workgroup to participate in the existing SNS annual review process
- Recommendations for contraceptive availability during an emergency response
Activation of the Maternal Health Team

Pandemic H1N1 Response 2009

- Select products for MCH populations
  - Created nine maternal health guidance documents
  - Addressed more than 4,600 maternal health inquiries
  - Published a supplement in the *American Journal of Obstetrics & Gynecology* in 2011 pertaining to lessons learned in the Pandemic H1N1 response.
Activation of the Maternal Health Team

2014 Ebola Response

- Activated from October 2014 – February 2015 to support the largest outbreak response in CDC’s history
  - Domestic and International activities

- CDC Maternal Health Guidance on Ebola
  - Recommendations for Breastfeeding/Infant Feeding in the Context of Ebola: September 2014¹
  - Guidance for Screening and Caring for Pregnant Women with Ebola Virus Disease for Healthcare Providers in U.S. Hospitals: November 2014²

- Maternal Health Team publications/presentations

EPR Tools

- Reproductive Health Assessment After Disaster (RHAD) Toolkit
- Post-disaster Indicators for Pregnant Women, Postpartum Women, and Infants
- Pregnancy Estimation Tool
- Upcoming: Online Training on the effects of disasters on reproductive health

Reproductive Health Assessment After Disaster (RHAD) Toolkit

- Goal is to give state and local health departments the information they need so local programs and policies can assist disaster-affected women.
- Web-based set of tools designed to guide users through the planning, implementation, and analysis stages of conducting a reproductive health assessment after a disaster.
- Available at: [http://cphp.sph.unc.edu/reproductivehealth/](http://cphp.sph.unc.edu/reproductivehealth/)
Post-disaster Indicators for Pregnant and Postpartum (P/PP) Women and Infants

- **Purpose:** To develop/select a list of common epidemiologic indicators for P/PP women and infants affected by disaster
  - Identify salient conditions and outcomes to be monitored via surveillance or post-disaster data collection
  - Promote use of consistent measures across post-disaster studies
  - Build scientific knowledge regarding disaster effects on P/PP women and infants
- **Final Product:** 25 Final Indicators with their 90 measures

http://webdev.nccd.cdc.gov/reproductivehealth/Emergency/PDFs/PostDisasterIndicators_final_6162014.pdf
Collecting Supplemental Info on Pregnant Women When Conducting Post-Disaster Morbidity Surveillance

- Sample protocol shows how Post-Disaster Health Indicators can be used when conducting other post-disaster surveillance

- Interviewer could ask:
  - How damaged was your home by the disaster?
  - Did you experience the following? (illness, loss of power, loss of loved one)
  - Since the disaster, have you had prenatal visits?
  - Would you accept the following help? (financial, medical, etc.)

Pregnancy Estimator

When There is an Emergency: Estimating the Number of Pregnant Women in a Geographic Area

- Provides estimation tool for a jurisdiction
- Calculates number of pregnant women at a point in time
- Uses pregnancy rates

Coming in 2016!

Reproductive Health in Emergency Preparedness and Response

Addressing the needs of women of reproductive age during and after a disaster

Provided by the Centers for Disease Control and Prevention Division of Reproductive Health

https://cdc.train.org/DesktopShell.aspx
References


Zotti et al. (2015) Post-Disaster Health Indicators for Pregnant and Postpartum Women and Infants. *Matern Child Health J.*
“By failing to prepare, you are preparing to fail.”
-Benjamin Franklin

Thank you!

DRHemergencyprep@cdc.gov
Sascha Ellington @ sellington@cdc.gov
Mirna Perez @ mperez3@cdc.gov
Marianne Zotti @ mzotti@cdc.gov

The findings and conclusions in this presentation are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.
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UNIQUE CHALLENGES OF PROTECTING PREGNANT AND POSTPARTUM WOMEN DURING AN ANTHRAX INCIDENT

Marianne E. Zotti, DrPH, MS, FAAN
Consultant, MANILA Consulting Group, Inc.
Emergency Preparedness and Response Activity
FSB/DRH/NCCDPHP/CDC
Overview

• Recognize the potential consequences for anthrax-exposed pregnant and postpartum (P/PP) women and neonates

• Find resources on how to provide post-exposure prophylaxis and treatment to pregnant, postpartum and lactating (P/PP/L) women and neonates during a public health emergency
What do we know about anthrax in pregnancy?
During 2012, Dana Meaney-Delman, MD, MPH, led a team in a worldwide comprehensive systematic literature review to describe the experience of *Bacillus anthracis* in P/PP women

- Extensive search from 1886-May 2012
- 14 articles met the inclusion criteria
- Many from the 1900’s and represent outcomes from the pre-antibiotic era

Description of the Cases

• 20 nonduplicate cases were described in women:
  – 17 pregnant, 3 postpartum
  – 9/20 cases were reported in the 19th century

• All naturally occurring cases

• Anthrax reported in 8 countries
  – 1 in US (in 1923)
  – Poland, Iran, Iraq, Turkey, India, Italy
  – Greatest number in Germany

• Most recent cases were from Turkey in 2003
Maternal Outcomes

Maternal Death Proportion = 80%

$n=16$

$n=4$

Died
Lived
Fetal/Neonatal Deaths among Pregnant Cases

Fetal Death Proportion = 65%

- Died: n=11
- Alive: n=6
Summary of Findings

• 20 cases of naturally-occurring anthrax in pregnant and postpartum women
  • Most were cutaneous
  • High maternal mortality proportion overall and higher than expected with cutaneous infections
• Obstetrical complications
  – High fetal/neonatal death proportion
  – Preterm delivery reported
  – Labor coincided with presentation in 3 cases
  – Delayed diagnosis may have contributed to disease severity
• Perinatal Transmission
  – 6/11 fetal/neonatal deaths demonstrate anthrax in fetal tissues
  – No evidence of passage of anthrax via breastfeeding in one case of anthrax sepsis
Prophylaxis and Treatment of Anthrax: Special Considerations for P/PP/L Women

• 2012
  – Worldwide review of anthrax cases in P/PP women
  – Reviewed safety and pharmacokinetics of 14 antimicrobials*
  – National meeting of subject matter experts

• 2014
  – Meeting summary and Medscape CME quiz
    http://wwwnc.cdc.gov/eid/article/20/2/13-0611_article
  – Updated guidelines for P/PP/L women

Updated CDC Guidelines for Prophylaxis and Treatment of Anthrax in P/PP/L Women—2014

• Prophylaxis Regimens
  – Because of the severity of anthrax, exposed P/PP/L women should receive a 60 day course of antibiotics as soon as possible.
  – Exposed P/PP/L women should receive 3 doses of anthrax vaccine.

• Treatment Regimens
  – P/PP/L women infected with anthrax should receive a combination of intravenous antibiotics promptly. One of these antibiotics should cross the placenta.
  – Infected P/PP/L women should receive 3 doses of anthrax vaccine.
• Clinical Considerations
  – Complications, such as preterm birth, fetal distress or fetal loss, may signal worsening maternal condition and fetal infection.

• Critical Care and Delivery Concerns
  – Pregnant women with severe anthrax should be treated in an intensive care setting that includes preparation for an emergent birth.
Updated CDC Guidelines for Prophylaxis and Treatment of Anthrax in P/PP/L Women—2014

• Infection Control Measures
  – Unless a breastfeeding woman has an active untreated cutaneous anthrax lesion on her breast, a postpartum woman may be allowed to initiate or continue breastfeeding or provide expressed milk.
In the event of a bioterrorism anthrax attack, go directly to http://www.cdc.gov/anthrax/ for all current recommendations.
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Implementing the RHAD Toolkit

IMPROVING MCH OUTCOMES AFTER DISASTER

MARY ELLEN SIMPSON, PHD, RN
November 17, 2013  EF-4 Tornado
Challenges with Tornadoes

- Large rural area: covered four counties
- Touch down & lift
- Wind speed varies
- Damage is not uniform
Questionnaire

• Women of reproductive age 18-44
• Modified toolkit version
• Epi Info 7 is for android tablets > 7 inches
Sample

• Modified 2-stage with referral (CASPER)
• U.S. Census Bureau website & excel spreadsheet
• Only 1 town was eligible due to sparse populations
Washington Sample

- 30 clusters
- 7 addresses/random homes
Recruitment of Team

- Hospital newsletter
- Posters in the hospital
- Press releases to area newspapers
- Postings on the School Facebook account
- Postings on the Washington IL Tornado Recovery Facebook account
- Postcard mailings to alumni in our two targeted counties
- Mass email to our graduates employed at Graham
- 2012 Harrisburg, IL tornado relief volunteers
Training of Volunteers

- Sessions lasted half-day
- Toolkit handouts & PPT
- Followed-up with role-playing
- Safety briefing – worked in pairs
- Tracking forms
- Referrals: 2-1-1
2-1-1
Raising Community Awareness

- Press release to papers
- Interview with paper – published in 2 papers
- Postcard mailings to alumni in affected counties
- Email contact to Graham employed alumni
- Link to information from our School website
- Facebook group postings
Lessons Learned

• Tobacco & alcohol before & after the disaster
• Sensitive questions about sex, HIV exposure and risky behavior
Lessons Learned

• Most residents were not home in the daytime
• Late afternoon and evening was best
• Saturday better than Sunday
• Protocol: 3 attempts at an address at different times of the day
• On referral sheet – change codes for NE
Partnership with MCH Coordinators

- Help locate displaced families
- Tap into self-organized social media
- Verification without HIPAA breech
- Link data to cluster
Reaching Displaced Women

• Community dinners and block parties
• Churches
• Donation centers
• Town hall meetings
Facebook Groups
Emergency Preparedness & Response

• Identify short & long term service gaps
• Evaluate response efforts
• Focus on unmet MCH needs
• Inform state emergency planning
• Strengthen preparedness recommendations
• Develop evidence-based service
Mary Ellen Simpson

msimpson@grahamhospital.org
Thank you!