High-Risk Pregnancy and Microcephaly Planning Resource

Updated May 31, 2016

Purpose	▪ The intent of this planning resource is to highlight some of the anticipated hospital and healthcare system resource needs essential to caring for high-risk pregnancies and children born with microcephaly or other birth defects that may be associated with Zika virus infection. This planning resource will be best utilized in tandem with appropriate risk communication and education for providers and the public regarding prevention of Zika virus infection and ongoing care strategies. It should be noted that while the vast majority of resource needs occur in the hospitalized setting, the long term consequences and management of these cases will involve resources that reside in the outpatient setting, as well. Healthcare systems and coalitions are not required to use this resource, but are encouraged to consider how available resources may be affected by an increase in demand for specialty services.
Background	▪ Babies with microcephaly and other birth defects can have a range of problems depending on the severity of disease. There is no cure or standard treatment.[1]
Guidelines What guidelines does CDC have available for health care providers caring for pregnant women and infants with possible Zika virus infection?	1. Update: Interim Guidelines for Health Care Providers Caring for Infants and Children with Possible Zika Virus Infection — United States, February 2016[2] 2. Update: Interim Guidance for Health Care Providers Caring for Women of Reproductive Age with Possible Zika Virus Exposure — United States, 2016[3] 3. American College of Obstetricians and Gynecologists (ACOG): Practice Advisory: Updated Interim Guidance for Care of Women of Reproductive Age During a Zika Virus Outbreak[4] 4. MMWR, Interim Guidance for Interpretation of Zika Virus Antibody Test Results, May 31, 2016

[1] http://www.cdc.gov/ncbddd/birthdefects/microcephaly.html
[2] http://www.cdc.gov/mmwr/volumes/65/wr/mm6507e1.htm
[3] http://www.cdc.gov/mmwr/volumes/65/wr/mm6512e2er.htm?s_cid=mm6512e2er_w
[4] http://www.acog.org/About-ACOG/News-Room/Practice-Advisories/Practice-Advisory-Interim-Guidance-for-Care-of-Obstetric-Patients-During-a-Zika-Virus-Outbreak

Operational Considerations	Sporadic Localized Transmission	Cluster Transmission with Localized Spread	Widespread Transmission
	Conventional Response		Contingency Response
Medical Supplies What medical supplies are needed to recognize, diagnose, and treat babies born with microcephaly or other birth defects?	1. Serial ultrasounds (to detect microcephaly during pregnancy)[5] 2. Laboratory testing for Zika 3. Based on CDC guidance, the following resources are needed for children born with possible congenital Zika virus infection:[6] • Otoacoustic emissions testing equipment and/or auditory brainstem response testing equipment • Cranial Ultrasound • Ophthalmologic evaluation 4. Based on CDC guidance, the following additional resources are needed for children born with microcephaly or intracranial calcifications:[7] • Tests for other congenital infections • Tests for blood count, platelet count, liver function, and enzyme tests • Computerized tomography scan • Magnetic resonance imaging • Electroencephalogram 5. Durable Medical Equipment, including wheelchairs, feeding pumps, respiratory suctioning, oxygen delivery equipment, etc. (adult and pediatric)		Under this scenario, the following medical supplies, which are noted for use under 'conventional response', have the potential to be in short supply: 1. Diagnostics: There are currently two commercially available diagnostic tests for acute Zika virus infection, and three CDC performed tests • Commercially available (Quest) Zika Virus RNA Qualitative Real-Time RT-PCR screen • Commercially available RealStar Zika Virus RT-PCR Kit U.S. (altona Diagnostics GmbH) • CDC RT-PCR • CDC Zika IgM Antibody Capture Enzyme-Linked Immunosorbent Assay (Zika MAC-ELISA) • CDC Plaque reduction neutralization test (PRNT) Contingency planning should address these potential shortages. Note: There are no approved vaccines or other therapeutics available for the management of Zika virus at the present time.

[5] http://www.acog.org/About-ACOG/News-Room/Practice-Advisories/Practice-Advisory-Interim-Guidance-for-Care-of-Obstetric-Patients-During-a-Zika-Virus-Outbreak
[6] http://www.cdc.gov/mmwr/volumes/65/wr/mm6507e1.htm
[7] http://www.cdc.gov/mmwr/volumes/65/wr/mm6507e1.htm?s_cid=mm6507e1_w

Staff Who provides the healthcare services needed to recognize, diagnose, treat, and provide support to high-risk pregnancies and babies born with microcephaly or other birth defects?	1. Obstetrician-gynecologists 2. Maternal-fetal specialists and perinatologists (to focus on the medical management of pregnant women with Zika virus infection)[8] 3. Neonatologists 4. Newborn/NICU Nurses 5. Pediatric neurologists (for consultation for children born with microcephaly or intracranial calcifications)[9] 6. Primary care Pediatricians, Family Practitioner's, Nurse practitioners, Physician Assistants 7. Clinical geneticist or dysmorphologist (for consultation for children born with microcephaly or intracranial calcifications)[10] 8. Pediatric infectious disease specialist (for consultation)[11] 9. Board Certified Nurse midwives 10. Doulas 11. Physician extenders (physician assistants, nurse practitioners, etc.) 12. Ophthalmology providers 13. Medical imaging specialists 14. Clinical psychologist and/or developmental pediatrician 15. Utilize hospital-based case managers, social workers, and social support staff, as well as psychologists and psychiatrists, to provide counseling to families of	Under this scenario, local shortages in the following staff may occur: 1. Maternal-fetal specialists 2. Neonatologists 3. Pediatric neurologists 4. Clinical geneticists or dysmorphologists 5. Specialized Nursing 6. Hospital-based case managers, social workers, and social support staff 7. Pediatric Rehabilitation Specialists (Physical Therapists, Occupational Therapists, Speech Therapists) Contingency planning should address these potential shortages.

[8] http://www.cdc.gov/mmwr/volumes/65/wr/pdfs/mm6502e1er.pdf
[9] http://www.cdc.gov/mmwr/volumes/65/wr/mm6507e1.htm
[10] http://www.cdc.gov/mmwr/volumes/65/wr/mm6507e1.htm
[11] http://www.cdc.gov/mmwr/volumes/65/wr/mm6507e1.htm

	children born with special health needs and to provide ongoing identification of social services available to these children (see: Supporting Children with Special Health Care Needs planning resource) 16. Pediatric Rehabilitation Specialists (Physical Therapists, Occupational Therapists (e.g. feeding), Speech Therapists)	
Space What space is needed to treat babies born with microcephaly or other birth defects?	1. For severe microcephaly, neonatal intensive care beds may be needed	Contingency planning should address the potential, but unlikely, shortage of beds that would be required for the hospitalization of neurologically compromised babies who were exposed to Zika virus in utero.
Payment/Funding How is microcephaly or other birth defects paid for?	1. ICD-10 Code for microcephaly: Q02 2. In Puerto Rico, Administrative Order #348 requires all insurers to absorb costs relating to Zika testing 3. Medicaid 4. Private Insurance	

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