

Guillain-Barré Syndrome and Other Neurological Deficits Planning Resource

Updated May 18, 2016

Purpose	<ul style="list-style-type: none">▪ The intent of this document is to enhance healthcare coalition and healthcare system preparedness and response to a domestic Zika virus disease outbreak by highlighting some of the anticipated hospital resource needs essential to caring for Guillain-Barré syndrome and other neurological deficits. This planning resource will be best utilized in tandem with appropriate risk communication and education for providers and the public regarding prevention and ongoing care strategies. 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	<ul style="list-style-type: none">▪ Studies have documented a link between Zika virus infection and Guillain-Barré syndrome and other neurological deficits.¹▪ Management of Guillain-Barré syndrome and other neurological deficits requires systems for the early detection of complications to reduce mortality.²

¹ Cao-Lormeau, V. M., Blake, A., Mons, S., Lastère, S., Roche, C., Vanhomwegen, J., ... & Vial, A. L. (2016). Guillain-Barré Syndrome outbreak associated with Zika virus infection in French Polynesia: a case-control study. *The Lancet*.

² van Doorn PA, Ruts L, Jacobs BC. Clinical features, pathogenesis, and treatment of Guillain-Barré syndrome. *Lancet Neurol* 2008;7:939-50.

Operational Considerations	Sporadic Localized Transmission	Cluster Transmission with Localized Spread	Widespread Transmission
	Conventional Response		Contingency Response
<p>Medical Supplies</p> <p>What medical supplies are needed to recognize, diagnose, and treat patients with Guillain-Barré syndrome and other neurological deficits?</p>	<p>1. Laboratory testing for Zika</p> <p><u>Diagnosis</u></p> <ol style="list-style-type: none"> 1. Electrodiagnostic examination 2. Cerebrospinal fluid (CSF) testing <p><u>Treatment</u></p> <ol style="list-style-type: none"> 1. Plasmapheresis (including venous catheter lines, centrifuge-based platforms, and/or semipermeable membrane-based devices in combination with hemodialysis equipment)³ 2. Intravenous immune globulin⁴ 3. Ventilators and ventilator circuits 4. Bedside monitor (to monitor heart rate, blood pressure, oxygen saturation, temperature) 5. Arterial line (to monitor blood pressure and take blood samples) 6. Central venous catheter (medication and intravenous fluids) 7. Nasogastric tube 8. Urinary catheter 9. Sequential compression devices 		<p>Under this scenario, the following medical supplies are expected to be in short supply:</p> <ol style="list-style-type: none"> 1. Zika diagnostics 2. Plasmapheresis 3. Intravenous immune globulin 4. Ventilators and ventilator circuits <p>Contingency planning should address these potential shortages.</p>

³ The Guillain-Barré Syndrome Study Group. Plasmapheresis and acute Guillain-Barré syndrome. Neurology 1985;35: 1096-104.

⁴ Plasma Exchange/Sandoglobulin Guillain-Barré Syndrome Trial Group. Randomised trial of plasma exchange, intravenous immunoglobulin, and combined treatments in Guillain-Barré syndrome. Lancet 1997;349:225-30.

<p>Staff</p> <p>Who provides the healthcare services needed to recognize, diagnose, and treat Guillain-Barré syndrome and other neurological deficits in the hospital setting?</p>	<ol style="list-style-type: none"> 1. Initial diagnosis: Emergency Physicians, Pediatric, Adolescent Medicine, Family Practice Physicians, Internal Medicine Physicians, and subspecialists 2. Stabilizing Care: Neurologists, Intensivists/Critical Care Physicians, Critical Care Nurses, Respiratory Therapists, Rehabilitation Staff 3. Specialty Care: Pulmonologist, Cardiologist 4. Behavioral Health: Utilize hospital-based case managers, social workers, and social support staff, as well as psychologists and psychiatrists, to provide counseling to individuals diagnosed with GBS and their families and to provide ongoing identification of social services available to these individuals. 5. Rehabilitation specialists: Physical therapists, occupational therapists, speech therapists. 	<p>Under this scenario, shortages in the following spaces may occur:</p> <ol style="list-style-type: none"> 1. Critical care beds 2. Rehabilitation beds <p>Contingency planning should address this potential shortage.</p>
<p>Space</p> <p>What space is needed to treat patients with Guillain-Barré syndrome and other neurological deficits?</p>	<ol style="list-style-type: none"> 1. Patients should be treated in a critical care unit where resources are available for continuous monitoring.⁵ 2. Patients should remain under hospital observation until there is no evidence of clinical progression.⁶ 	<p>Under this scenario, shortages in the following spaces may occur:</p> <ol style="list-style-type: none"> 1. Critical care beds 2. Rehabilitation beds <p>Contingency planning should address this potential shortage.</p>
<p>Payment/Funding</p> <p>How is Guillain-Barré syndrome and other neurological deficits treatment paid for?</p>	<ol style="list-style-type: none"> 1. Guillain-Barré syndrome ICD-10 Code: G61.0 2. Medicare, Medicaid 3. Private Insurance 4. Self-pay 	

⁵ Yuki, N., & Hartung, H. P. (2012). Guillain-Barré syndrome. *New England Journal of Medicine*, 366(24), 2294-2304.

⁶ Ropper AH. The Guillain-Barré syndrome. *N Engl J Med* 1992;326:1130-6.