# Brain Injury Responsiveness Recovery Program at Kennedy Krieger Institute

# **About Our Program**

The Brain Injury Responsiveness Recovery Program within the Center for Brain Injury Recovery at Kennedy Krieger Institute was developed to evaluate and treat children and adolescents with a history of brain injury or neurological illness resulting in a disorder of consciousness. Disorders of consciousness are characterized by severely altered arousal and/or awareness of the self and the environment, and include coma (characterized by no eye opening), vegetative state (characterized by periods of eye opening and reflexive responses) and minimally conscious state (characterized by an inconsistent and limited ability to respond and communicate).

Our interdisciplinary responsiveness recovery team includes pediatric rehabilitation medicine physicians, neuropsychologists, behavioral psychologists and traditional rehabilitation therapists (physical and occupational therapists and speech-language pathologists), all with expertise in brain injury, including disorders of consciousness.

Responsiveness recovery team members work with patients admitted to our inpatient rehabilitation unit or who receive intensive outpatient coordinated care. In some cases, patients are initially evaluated in our outpatient Brain Injury Clinic by an interdisciplinary team of physicians, psychologists and therapists to help determine whether inpatient or intensive outpatient coordinated care is recommended.

Once a child has been admitted to the Responsiveness Recovery Program, the team completes an initial assessment of arousal, responsiveness, sleep, motivators and functioning, which is used to develop a plan for intervention using state-of-the-art treatment techniques that include therapy, medication management and environmental interventions.

Communication and a data-driven approach are hallmarks of our program. Our entire responsiveness recovery team meets weekly to discuss data collected during detailed serial patient



assessments. These data are used to determine the efficacy of current interventions and to identify needed adjustments to the therapeutic regimen.

In addition to direct work with patients, our team strives to expand existing knowledge about brain injuries and responsiveness through clinical research. Our experts bring "best-practice thinking" into the discussion about care for patients with brain injuries. Responsiveness recovery team members present their work and teach others at national and international professional meetings and through publishing peer-reviewed articles in professional journals.

We are all born with great potential. Shouldn't we all have the chance to achieve it?



# **Primary Program Goals**

Our expert physicians and therapists make it possible for our program to address goals for patients with limited to no response to their surrounding environment. We currently admit two types of patients:

**Acute rehabilitation patients:** Acute rehabilitation patients are children experiencing their first bout of rehabilitation following a new injury or illness. For an acute rehabilitation patient, goals of the inpatient admission include optimizing the child's responsiveness and function, in addition to preparing the family to care for the child at home.

Chronic rehabilitation patients: Chronic rehabilitation patients are children with chronic effects of injury or illness who have previously been discharged from an inpatient rehabilitation setting or who have never received acute inpatient rehabilitation. For a chronic rehabilitation patient admitted from home, specific goals are identified before admission and are addressed with a focused treatment plan that typically spans two to four weeks. Common goals include optimization of medication management, strengthening of potential means of functional communication, maximizing positioning and promoting motor functioning.

Our interdisciplinary team has extensive experience evaluating and treating patients with disorders of consciousness from infancy through young adulthood. Members of this team include:

**Physicians:** Pediatricians and pediatric rehabilitation medicine physicians oversee medical management and rehabilitation, including addressing conditions such as motor dysfunction, sleep dysregulation, and impaired arousal and awareness. Special attention is given to managing medications in an effort to reduce sedating medications, while considering medications to promote arousal, such as amantadine, methylphenidate and zolpidem.

**Neuropsychologists:** Neuropsychologists provide systematic evaluation of a patient's arousal and responsiveness through the use of standardized clinical assessment techniques and individualized measurements. Neuropsychologists gather information that is used to evaluate the effectiveness of current medication and therapeutic interventions.

**Behavioral psychologists:** Behavioral psychologists analyze data about a patient's sleep to determine the need for medical or environmental recommendations to improve daytime arousal and nighttime sleep. Our behavioral psychologists also obtain information from family members and therapists regarding a patient's likes and dislikes. These preferences are systematically evaluated and incorporated into daily therapy as motivators.

**Rehabilitation therapists:** Physical and occupational therapists and speech-language pathologists with expertise in disorders of consciousness work intensively with patients to address goals related to swallowing, functional mobility, optimal positioning, functional communication and responsiveness.

### **Contact Information**

**Brain Injury Responsiveness Recovery Program at Kennedy Krieger Institute** 

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For more information or to schedule an appointment, please call **443-923-9400**, or call toll-free at **888-554-2080**. TTY users, please contact us at **443-923-2645**, or dial **711** to make a Maryland Relay call.

### KennedyKrieger.org

Physicians and Healthcare Professionals
To make a referral, call our Physician Referral
Line at 443-923-9403.

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