GILLICK PEDIATRIC RESEARCH LAB
Bernadette Gillick, PhD, MSPT, PT

OUR MISSION
We believe that all children with cerebral palsy have the potential to influence their level of function throughout their lifetime, applying the latest advances in neuroscience with rehabilitation.

RESEARCH OPPORTUNITY
Infants with Stroke and Brain Bleeds
Perinatal stroke affects up to 1 in every 2,300 births often with resultant long-term movement impairment. Through innovative investigation of how the infant brain recovers after stroke, we are positioned to pioneer development of interventions involving non-invasive brain stimulation and rehabilitation to minimize disability. Incorporating a novel analysis of brain recovery and development of movement in the first year of life after perinatal stroke, we aim to develop early and effective treatments during this age of great potential for change.

We are continuing to recruit infants for our Infant Stroke and Brain Bleed study. The goal of this study is to understand how the brain continues to develop after early injury around birth. We will use brain pictures to visualize pathways in the brain, and magnetic pulses to examine how areas of the brain that control movement are connected after a stroke. In addition, we use a video-based assessment to learn how the baby moves after a stroke. Participants are within their first year of life and reimbursement for involvement is provided.

This study is funded by a Cerebral Palsy Alliance Grant from Australia and also a University of Minnesota Academic Health Center Seed Grant. Visit z.umn.edu/infant for more information and a video or contact us at 612-597-2163 or nemanich@umn.edu

Sam Nemanich, Post-Doc

GILLICK PEDIATRIC RESEARCH LAB
Bernadette Gillick, PhD, MSPT, PT

Our Mission
We believe that all children with cerebral palsy have the potential to influence their level of function throughout their lifetime, applying the latest advances in neuroscience with rehabilitation.

RESEARCH OPPORTUNITY
Infants with Stroke and Brain Bleeds
Perinatal stroke affects up to 1 in every 2,300 births often with resultant long-term movement impairment. Through innovative investigation of how the infant brain recovers after stroke, we are positioned to pioneer development of interventions involving non-invasive brain stimulation and rehabilitation to minimize disability. Incorporating a novel analysis of brain recovery and development of movement in the first year of life after perinatal stroke, we aim to develop early and effective treatments during this age of great potential for change.

We are continuing to recruit infants for our Infant Stroke and Brain Bleed study. The goal of this study is to understand how the brain continues to develop after early injury around birth. We will use brain pictures to visualize pathways in the brain, and magnetic pulses to examine how areas of the brain that control movement are connected after a stroke. In addition, we use a video-based assessment to learn how the baby moves after a stroke. Participants are within their first year of life and reimbursement for involvement is provided.

This study is funded by a Cerebral Palsy Alliance Grant from Australia and also a University of Minnesota Academic Health Center Seed Grant. Visit z.umn.edu/infant for more information and a video or contact us at 612-597-2163 or nemanich@umn.edu

Sam Nemanich, Post-Doc
This past summer, the Gillick Lab extended our study on brain stimulation paired with rehabilitation. Our previous camps combined non-invasive brain stimulation with constraint-induced movement therapy, with activities focused on the more affected hand. The extended study combined the brain stimulation with bimanual therapy, with activities focusing on both hands working together.

For this study, all of the children and young adult participants focused on activities that relate to the goals they had set prior to coming for the camp. We were pleased to partner with the Center for Neurobehavioral Development here on the University of Minnesota campus. This study was also in collaboration with Burke Medical Research Institute in New York who ran a parallel study at the same time. Eight children and young adults participated here at the University of Minnesota and seven interventionists volunteered. We are busy analyzing the study results and will prepare a publication once those results are finalized to share with both the families who participated and the broader scientific community. We thank all of the participants and interventionists for making the study a success.