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Assessing speech & swallowing therapy needs of childhood cancer survivors

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Introduction

Approximately 420,000 childhood cancer survivors are currently living in the United States. The rise in survival rates makes the need for professionals to help improve quality of life for pediatric cancer survivors a high priority.

Speech and swallowing can be largely impacted in children receiving radiation therapy for cancers of the head, neck, or brain (hereafter referred to as HNBC). Cancer tumors themselves, as well as cancer treatments, cause acute and long-term side effects that cause pain, restricted range of motion, and decrease in overall function of the structures necessary to communicate, eat, and drink.

To help design interventions to minimize these side effects, it is first necessary to gain normative data on this population and compare it to age and gender match pairs.

Literature Review

Cancers of the brain and spinal cord are the second most common among pediatric cancers; head and neck cancer accounts for 12% of all pediatric cancer cases. Many of these children will undergo radiation therapy and are subject to even more late effects (neuropathy and fibrosis) than adults because they are being treated during a critical time of growth. These children tend to have increased impairment in attention and processing speed, memory, organization and emotional regulation.

Methods

We are currently in the process of conducting phone surveys with parents of children with HNBC by asking them questions pertaining to:

1. Their child’s speech in comparison to other children
2. Their child’s level of confidence
3. What types of therapy they believe their child is in need of
4. Their future goals for their child
5. Their perception of pediatric cancer in general

Figure 1 – 5-Year Pediatric Cancer Survival Rates

Pediatric cancer treatment has improved immensely over the past few decades. Approximately 80% of children diagnosed with cancer in the United States each year are reaching the 5-year survival mark or beyond. This is a vast increase since the mid-1970s, when the 5-year survival rate was about 58%.

Expected Results

Based on the literature reviewed, it is expected that children who have previously received treatment for HNBC, when compared with gender and age match controls, will exhibit decreased speech-language and swallowing abilities and other long-term side effects. These findings will provide a foundation whereupon other research projects may stem. These projects will eventually lead to normative data, increased understanding, and ultimately interventions specifically designed to help this population.

Figure 2 – HBNC Diagnoses Rates

Brain and CNS cancers are the second most prevalent among children.