

MURC 2019

Presentation ID: 149

Presentation Format: 10-Minute Oral Presentation

Presentation Title: Charting the Territory: An Analysis of Potential Drug Interactions in Children with Severe Neurological Impairment

Charting the Territory was a three-year, multicenter, prospective, longitudinal cohort study that examined the clinical progression of children with progressive neurologic, metabolic or chromosomal conditions affecting the central nervous system. These children often experience pain and irritability, constipation, seizures and have difficulties breathing, feeding and sleeping. Treatment is aimed at controlling their multiple symptoms, largely via medications. As a result, many of these children are on a cocktail of medications and nutritional supplements. The analysis aims to identify the risk of drug-drug interactions in this vulnerable patient population and to classify those interactions based on severity and action required. Data from Charting the Territory was used to calculate the total number of medications for the 275 participating children. The children with the most medications, illustrative of the most complex cases, were selected for analysis. The mean number of drugs for all study participants was 5.4. The top 5% of children averaged 17.6 medications each (median=17, range=12-28) and were at risk of 18 drug-drug interactions. Of the interactions analyzed, 3.6% require complete avoidance, 23.5% require therapy modification and 72.9% require monitoring. It is unknown if children experienced adverse drug reactions or received monitoring. A typical example of a drug interaction requiring close monitoring is amitriptyline and ondansetron, which increases the risk of serotonin syndrome and its symptoms: high fever, tachycardia, confusion, agitation, and tremors. Two children were at risk of this interaction. A proactive approach is warranted for the management of drug-drug interactions in this highly complex and vulnerable pediatric population.

Themes:

Check (highlight) the most applicable theme according to the abstract.

<input type="checkbox"/> Innovation and Technology	<input checked="" type="checkbox"/> Health and Wellness	<input type="checkbox"/> Culture and Society	<input type="checkbox"/> Sustainability and Conservation
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Comments: Very well written abstract and interesting study! It is clearly articulated without jargon and easily comprehensible to a generalist audience.