



Caregiver Assessment of the Impact of Non-Seizure Morbidities in Developmental and Epileptic Encephalopathies

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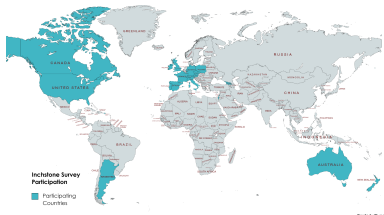
Introduction

Developmental and Epileptic Encephalopathies (DEE), in addition to seizures, are characterized by severe functional impairments and life-limiting non-seizure morbidities (NSM), which may have similar or greater impact than seizures themselves. As precision therapies begin being tested in clinical trials, selection of appropriate non-seizure outcomes must reflect stakeholder priorities regarding aspects of the disease that are most life-limiting, life-altering, and have the greatest impact on the patient and caregiver (Ref 1,2,3 i.e. FDA guidances). **The DEE Parents Speak Survey elicited caregiver insight into which NSMs may be the most common and have the greatest impact, overall and relative to seizures.** This survey is part of The Inchstone Project, a project of DEE-P Connections.

Methods and Demographics

An online survey built in CLIRINX® was disseminated to caregivers through Parent-Advocacy Groups affiliated with DEE-P Connections. **The survey addressed the impact on the affected child and on the family of 17 NSM areas and asked caregivers to identify the top three NSMs for improvement.** Eligible subjects were ≥ 1 year old and had severely impaired communication. Surveys were in English only. This is a preliminary analysis of data obtained before the survey was closed.

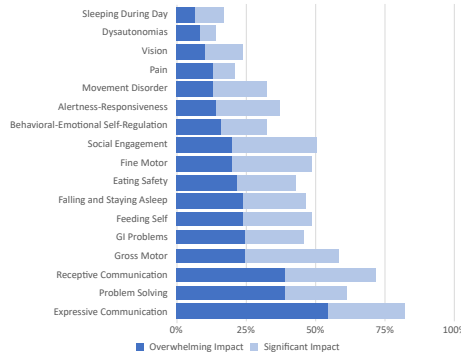
Genetic Diagnosis	Frequency	Percent
Phelan-McDermid Syndrome	44	22
SCN2A	21	11
FOXG1	18	9
ASXL1	17	9
ASXL3	16	8
Other	16	8
SCN8A	15	8
CASK	7	4
DUP15q	7	4
No	6	3
Genetic Cause		
KCNT1	6	3
STXBP1	5	3
CACNA1A	4	2
SCN1A	3	2
CDKL5	2	1
ASXL2	2	1
CLN4	1	1
COL4A1	1	1
CSNK2A1	1	1
GRIN1	1	1
GRIN2A	1	1
GRIN2B	1	1
KCNQ2	1	1
SLC13A5	1	1



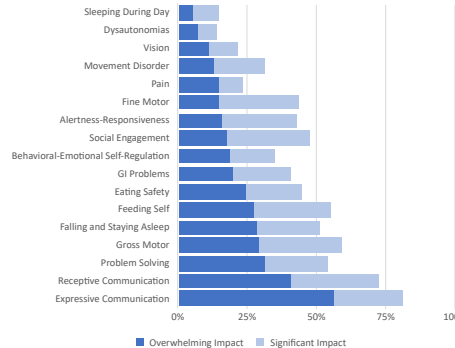
	Sex	Mean Age
♂	97 Participants (44.29%)	10.46 Yrs (8.21)
♀	122 Participants (55.71%)	



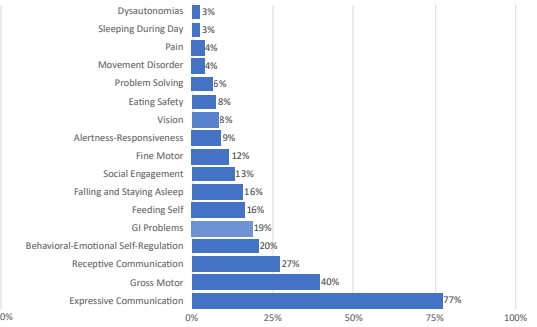
How Great an Impact Does This Area Have on Your Child?



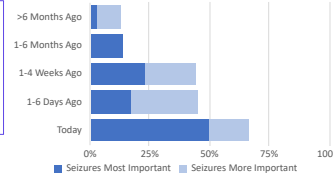
How Great an Impact Does This Area Have on You and the Rest of the Family?



Frequency of Top 3 Priority Selection



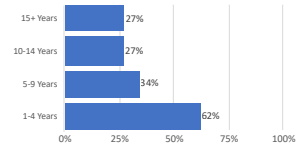
Seizure Importance by Time of Last Seizure



Caregivers were asked to rate on a scale of 1 to 5 the impact each of these domains has on both their child and their family's quality of life. They were also asked how great the impact of seizures is on their child relative to these non-seizure areas.

When caregivers were asked to choose which 3 of these NSM domains they would improve, the top 3 priorities selected were expressive communication, gross motor, and receptive communication. Of all the domains, only the selection of gross motor significantly differed by age.

Frequency of Gross Motor Selection as Top 3 Priority by Age Group



Good Days and Bad Days



People with DEEs have good days and bad days, and their caregivers can identify and describe what these days look like.

We're Proud of Our Children



Although people with DEEs have many NSMs that have great impact on their quality of life, caregivers have shared all the reasons they are proud of their children.

Conclusions

- Majority of caregivers identified several NSM domains as having overwhelming or significant impact on their child and family
- Seizure importance and recency of last seizure are positively correlated
- Top priorities for caregivers are expressive communication (77%), gross motor (40%), and receptive communication (27%) for gross motor
- Priority selections did not differ between age groups except for gross motor
- Caregivers descriptions of good and bad days may be able to provide some qualitative indicators of overall mood
- Many caregivers describe their children as showing "Resilience" and being "Hard Workers"

References

1. Federal Drug Administration. Patient-Focused Drug Development: Collecting Comprehensive and Representative Input. Guidance for Industry, Food and Drug Administration Staff, and Other Stakeholders. <https://www.fda.gov/media/139088/download>, Accessed March 15, 2023.
2. Federal Drug Administration. Patient-Focused Drug Development: Selecting, Developing, or Modifying Fit-for-Purpose Clinical Outcome Assessments. Guidance for Industry, Food and Drug Administration Staff, and Other Stakeholders (Draft guidance). <https://www.fda.gov/media/159500/download>, Accessed March 15, 2023.
3. Federal Drug Administration. Patient-Focused Drug Development: Methods to Identify What is Important to Patients, Guidance for Industry, Food and Drug Administration Staff, and Other Stakeholders. <https://www.fda.gov/media/131230/download>, Accessed March 15, 2023.

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