Patient-Centered Outcomes Research (PCOR) and Dravet Syndrome

WEBINAR

MARY ANNE MESKIS/NICOLE VILLAS
DRAVET SYNDROME FOUNDATION
This webinar was made possible through a Patient-Centered Outcomes Research Institute (PCORI) Eugene Washington PCORI Engagement Award (7881-DSF).
Audio Instructions

Your Participation
Open and hide your control panel

Join audio:
• Choose “Mic & Speakers” to use VoIP
• Choose “Telephone” and dial using the information provided

Submit questions and comments via the Questions panel
Agenda

1. What is patient-centered outcomes research/CER?
2. The importance of an engaged community
3. Making PCOR meaningful in Dravet syndrome
4. What are the next steps to participate?
Patient-Centered Outcomes Research (PCOR) helps people and their caregivers communicate and make informed healthcare decisions, allowing their voices to be heard in assessing the value of healthcare options. This research explores patient-centered issues such as:

- Assessing the benefits and harms of treatments to inform decision making
- Establishing outcomes that matter to patients, such as symptoms and quality of life
- Including an individual’s preferences and needs
- Incorporating a wide variety of settings and diversity of participants to address individual differences and challenges
- Optimizing outcomes while addressing the burdens to patients
Answers questions such as:

“Given my personal characteristics, conditions, and preferences, what should I expect will happen to me?”

“What are my options, and what are the potential benefits and harms of those options?”

“What can I do to improve the outcomes that are most important to me?”

“How can clinicians and the care delivery systems they work in help me make the best decisions about my health and health care?”
1 Examples of PCOR

Chronic Disease and Care Transitions

Patient-Centered Program Improves Care Transitions for Patients with COPD

Around one in five patients hospitalized with chronic obstructive pulmonary disease (COPD) are readmitted within 30 days of their discharge, creating an ongoing burden for themselves, caregivers, and the healthcare system. The BREATHE program provides a combination of tailored support and COPD self-management to help patients transition from hospital to home. This study found that BREATHE helped patients improve their quality of life and avoid rehospitalization better than standard discharge education and care.

The program also resulted in better health outcomes six months after discharge. Because the study was conducted in only one health system, further testing is needed to determine if it works as well in other care settings. The results appear in JAMA.

To that end, a PCORI-funded research team tested a program called I-PASS that includes parents as active participants in pediatric unit rounds at eight hospitals to see whether it would improve hospital safety. As The BMJ reports, the program reduced harmful medical errors—preventable adverse events—by 38 percent. The research team now plans to expand the program to more hospitals through a second PCORI award. In this video, project Principal Investigator Christopher Landrigan, MD, MPH describes his study.
Traditionally, it is accomplished by “Comparative Effectiveness Research” (CER), which compares two *already proven* approaches in the frameset of the patient.
What research is NOT patient-centered?

QUESTIONS such as:

“How does circadian rhythm affect mice with Dravet syndrome?”

- Offers no practical solutions that patients haven’t tried

“Which medications are best for treating Comorbidity A or Comorbidity B?”

- Assumes patients are interested in adding medication, when many would prefer practical approaches

“Is CBD effective in treating seizures in Dravet?”

- Does not address side effects or potential harms

STUDY DESIGNS that burden patients/caregivers:

- Too many appointments requiring travel
- Too much outside work required (elaborate diaries, therapies, etc.)
- Invasive procedures or tests
- Large placebo groups or not being allowed to adjust treatment when necessary for the health of the patient
- Outcome measures/questionnaires that do not adequately measure issues in Dravet
What research IS patient-centered?

Seizure burden in severe early-life epilepsy: Perspectives from parents

Anne T. Berg, 1, 2 Karen Kaiser, 3 Tracy Dixon-Salazar, 4 Andi Elliot, 5 Nancy McNamara, 6, 7 Mary Anne Meskas, 8 Emily Gillbeck, 9 Priya Tatchar, 1, 2 Linda Lau, 1, 2 Carrie Raja, 9 Janice Stanley, 10 April Luna, 11 and Christian Rozek 12

Abstract

Objectives

Seizure burden is typically measured by seizure frequency yet it entails more than seizure counts, especially for people with severe epilepsies and their caregivers. We aimed to characterize the multifaceted nature of seizure burden in young people and their parents who are living with severe early-life epilepsies.

Methods

A one-day workshop and a series of teleconferences were held with parents of children with severe, refractory epilepsy of early-life origin and providers for children with epilepsy. The workshop sessions were structured as focus groups and aimed to identify components of seizure burden and their impact from the perspective of parents and providers. Data were gathered, organized, and refined during the workshop using an iterative 4-step process that drew upon grounded theory.

Results

Three primary components of seizure burden were identified: frequency, severity, and unpredictability.

QUESTIONS such as:

“Is seizure frequency or severity more burdensome?”

Prioritizes which to treat

STUDY DESIGNS that accommodate patients/caregivers:

- Short, infrequent visits
- Inclusive recruiting and participation (socioeconomic, regional, race, gender, age)
PCOR/CER in Dravet

Common diseases

- Comparative
- Clinician-reported data

PCOR/CER that effectively helps patients make educated decisions about their individual healthcare

Not comparative
Patient-reported data & outcomes

Dravet

No PCOR/CER to help caregivers make informed decisions

CER
PCOR
2 Engaging the Community

“Nothing FOR us... WITHOUT us”
2 Engaging the Community

Small/disorganized patient groups → Disengaged/unprepared community
## Engaging the Community

<table>
<thead>
<tr>
<th></th>
<th>Strategies for effective engagement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ask the community what’s important! Polling, etc.</td>
</tr>
<tr>
<td>2</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
</tr>
</tbody>
</table>
Making PCOR Meaningful in DS

A Day in the Life

Access full video at: https://www.youtube.com/watch?v=9o2kH8OCrn0
Unfortunately, not much is proven effective in Dravet... So we have to start from the beginning:

PCOR Process

- Prioritize Concerns (What?) 2016
- Select Topic (What?) 2017-2019
- Design (How?) 2019
- Participate (Do!) 2019-2020
- Disseminate (Teach) 2021
2016: Online caregiver survey identified, prioritized, and described caregiver concerns:

<table>
<thead>
<tr>
<th>Concern</th>
<th>(n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speech/communication (cannot vocalize pain)</td>
<td>43</td>
</tr>
<tr>
<td>Sibling impacts</td>
<td>42</td>
</tr>
<tr>
<td>Cognitive/developmental delay/regression</td>
<td>39</td>
</tr>
<tr>
<td>Behavioral issues including violence and autistic traits</td>
<td>34</td>
</tr>
<tr>
<td>Long-term care when parents are gone</td>
<td>27</td>
</tr>
<tr>
<td>SUDEP or death</td>
<td>21</td>
</tr>
<tr>
<td>Lack of independence/constant care</td>
<td>19</td>
</tr>
<tr>
<td>Anxiety/depression/isolation (parent)</td>
<td>19</td>
</tr>
<tr>
<td>Mobility</td>
<td>17</td>
</tr>
<tr>
<td>Finances (parent)</td>
<td>15</td>
</tr>
<tr>
<td>Quality of life (family)</td>
<td>15</td>
</tr>
<tr>
<td>Medication side effects</td>
<td>8</td>
</tr>
</tbody>
</table>

*Caregivers were asked to “List the top 3 concerns for the patient or family” after seizure control in open response. Responses were categorized post hoc.*
Making PCOR Meaningful in DS

2017: Stakeholder working group discussed top caregiver concerns and categorized them by feasibility of research

- Sleep
- Seizures/Status Epilepticus
- Behavior
- Gait
- SUDEP
- Nutrition/GI
Making PCOR Meaningful in DS

2017: Day of Dravet caregiver workshops discussed stakeholder categories and possible research questions:

Sleep:
- Is melatonin or clonidine better for improving sleep?
- Is medicine or behavioral therapy better for improving duration of sleep?

Behavior:
- Is ABA therapy or medical management (SSRI or drugs for OCD medications) more effective for addressing behavior?
- Is there an abbreviated behavior test?

Gait:
- Is increasing L-Dopa (an amino acid) better than other treatments (aggressive PT i.e.) for gait?
- Is aggressive PT effective for improving gait or delaying the onset of gait disturbance?

Nutrition/GI:
- What is the best approach to improving nutrition?
- Best management of constipation?
  - What is the best way to manage SE, clusters, and NCSE – typical rescues or other less traditional medications?

Seizures/SE
- Does a rescue plan assist with ED management of SE? Does it help with clusters?

SUDEP
- What is the best way to talk to families about SUDEP? (parents, providers, or both?)
- What is the best way to prevent SUDEP? (co-sleep, pulse ox, monitor, etc. Outcome would be psychological.)
### Making PCOR Meaningful in DS

**2018: Facebook survey prioritized 6 research categories**

<table>
<thead>
<tr>
<th>Category</th>
<th># of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seizures/SE</td>
<td>110</td>
</tr>
<tr>
<td>SUDEP</td>
<td>105</td>
</tr>
<tr>
<td>Behavior</td>
<td>90</td>
</tr>
<tr>
<td>Gait</td>
<td>74</td>
</tr>
<tr>
<td>Nutrition/GI</td>
<td>54</td>
</tr>
<tr>
<td>Sleep</td>
<td>40</td>
</tr>
<tr>
<td>Cognition*</td>
<td>73</td>
</tr>
</tbody>
</table>

*Cognition was not a given category, but was written in by several respondents*
Making PCOR Meaningful in DS

2018 Conference continued these conversations
Making PCOR Meaningful in DS

2018 Day of Dravet workshops started to focus on OUTCOMES

Outcomes must be:  

- Well-Defined  
- Measurable

Because they determine the study’s Failure/Success
Making PCOR Meaningful in DS

2018 Day of Dravet workshops started to focus on OUTCOMES
Next Steps

2019 Day of Dravet Caregiver Workshops

FALL 2019
Save the date

Sept 14 - Los Angeles, CA
Sept 21 - Richmond, VA
Oct 5 - Hackensack, NJ
Oct 26 - Ann Arbor, MI
Nov 9 - Houston, TX
Next Steps

2019 Day of Dravet Caregiver Workshops

Objectives:
• Continue 2017 *Priority Area* discussion
• Continue 2018 *Outcomes* discussion
• Continue Natural History Design(s) and participation discussion

**Butterfly Observational Study** (Stoke Therapeutics)
https://www.dravetfoundation.org/stoke-butterfly-study/

**Gait Study (Tbd)**

**White Papers**
• Summaries of work so far
• Position papers on importance of the patient voice in Dravet

**Natural History Study (non-US)**
Questions & Discussion
Thank you!