A Guide for Bundled Payments

This document reviews the considerations in establishing a bundled payment program for services provided to patients with epilepsy. As with any alternative payment model, a great deal of thought and planning is necessary prior to implementation. The concept is that the bundled payment will cover the care through the full episode. Here are common considerations in addressing epilepsy.

**SEIZURE MANAGEMENT**

Universal to good outcomes in seizure management is compliance with therapies and lifestyle. Counseling on these topics should occur at every patient contact. Another important consideration is the comorbidities. Depression leads the list and unless recognized and addressed adds to the poor quality of life and will likely impact compliance and lifestyle decisions.

**OUTCOMES**

Currently, outcome metrics are not well defined for epilepsy. Most current quality metrics are process measures. Inherent in identifying metrics is establishing benchmarks. There are research opportunities for metrics and expectations of each phase of care. It should be emphasized that at least one dedicated individual be responsible for the data capture. The conundrum is that there are well established process measures that impact outcomes, for example the considerations around women and epilepsy. There are ongoing efforts to better define meaningful outcome measures in epilepsy.

**TRAINING**

Some personnel may require training. For example, EMTs may require training in the recognition and initial treatment of ongoing seizures. Those making home visits also need training in both the necessity of compliance and the need to educate the patient, family, and care givers.

**ADMINISTRATION AND INFRASTRUCTURE**

Inherent in a bundled payment for epilepsy is the ability in advance to be able to cost out the pre-contract cost of care and the opportunities for savings and improved care. Further, systems must capture both the metrics and cost data in a timely fashion.

A great deal of planning needs to go into the development of the monitoring system. Unlike most EHRs, the capture must be easy, intuitive, and yet comprehensive enough to be meaningful. Actually, to make the capture easy is perhaps the hardest challenge. A dedicated coordinator who covers all phases is a critical component. It is recognized that transitions in care are difficult. Staff should be educated and tasked with the transitions from the acute hospital to rehabilitation and from rehabilitation to home care.

Finally, there is need for a monitoring committee or single individual that has both the responsibility and also the authority to manage and monitor the project. Typically, this would be the epilepsy program. Yet many of the services extend well beyond the scope of the usual in office management. Experience, as well as a recent IOM report, emphasize that the greatest opportunities to lower cost and improve outcomes are in the post-discharge/follow-up phase. Oversight must extend unequivocally to this phase.

**NEW ONSET ADULT SEIZURES**

**Population**

Generally, any seizure after puberty is considered an adult seizure. To keep the group as coherent as possible, it is suggested that the cut-off age be 18.

- **Demographics:** The population can be further defined by demographics. For example, elderly patients may be excluded.
- **Type of seizure:** Potentially the types of seizures or underlying mechanism may restrict the population to be included.
• Geography: Some pilot projects restrict the population based on geography. For example, patients from only certain counties where adequate home visits are available are included.

• Point of contact: How are the patients captured, at the center, in the ER, in the extended network?

• Payer

• Concurrent illnesses: Patients with certain underlying medical conditions, such as cancer, may be excluded.

• Are patients with stable childhood onset seizures to be included when they reach adulthood?

CLINICAL SERVICES

The clinical services would include all assessment and management services for the seizures to include ER or hospital services, EEG, imaging, etc. Equally important is the exclusion of irrelevant services. A bundled payment provides the opportunity for innovative alternative methods of providing care, such as telemedicine, that currently would not be recognized in fee for services. It is critical the full team be committed to both the control of costs and quality of care.

The duration of the bundle is not easily defined but one year is suggested. This time-frame captures outcomes such as compliance, allows adequate time to try two anticonvulsants, and determines if the patient meets criteria for uncontrolled seizures. Admittedly, this is an arbitrary time but given the constraints of bundling, a year is appropriate. It is recognized that a seizure disorder may evolve over time to be considered a pharmacological failure at a later date.

Clinical services can be defined as two phases, initial assessment and treatment. The details are in the following table.

<table>
<thead>
<tr>
<th>Phase</th>
<th>Clinical Services</th>
<th>Training/Protocols</th>
<th>Infrastructure</th>
<th>Outcomes</th>
<th>Metrics/Benchmarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial assessment</td>
<td>EEG imaging, clinical evaluation</td>
<td></td>
<td>Data and metric capture, central repository</td>
<td>Current process measures</td>
<td></td>
</tr>
<tr>
<td>Follow-up</td>
<td>Management breakthrough seizures, Follow-up, medications, additional tests</td>
<td>Educators, home visits</td>
<td>Data capture, central repository, oversight</td>
<td>Compliance, seizure control, determine if intractable</td>
<td></td>
</tr>
</tbody>
</table>

UNCONTROLLED SEIZURES

Seizures are generally considered uncontrolled if a patient fails two agents. Obviously, one of the first considerations is whether or not the patient has uncontrolled seizures. Were the pharmacologic trials adequate and was the patient compliant?

Population
• Same considerations as above
• Candidate for surgery
• Willing to consider surgery

Clinical Services
• Long-term video EEG monitoring
• MRI

• Functional MRI
• PET
• Intracranial electrodes
• Neuropsych testing
• Other special investigations

Outcomes and Metrics
The goal is to determine whether the patient qualifies for a procedure and which procedure. Outcomes and metrics are presently not well defined.
Epilepsy Episodes of Care

EPILEPSY SURGERY

Population
- Same considerations as above.
- Type of procedure: Craniotomy and/or stimulation

Clinical services
The services include the procedure and hospitalization, subacute recovery and ultimate response. As such, the duration of the bundle should extend to one year. Bundled services include surgery related services and epilepsy related services. Details are in the following table.

<table>
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<th>Infrastructure</th>
<th>Outcomes</th>
<th>Metrics/Benchmarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospitalization and surgery</td>
<td>Hospitalization, surgery</td>
<td></td>
<td>Data and metric capture, central repository, oversight</td>
<td></td>
<td>Surgical quality metrics</td>
</tr>
<tr>
<td>Sub-acute recovery</td>
<td>Skilled facility, home health, management breakthrough seizures, Follow up, medications, additional tests</td>
<td>Educators, home visits</td>
<td>Data and metric capture, central repository, oversight</td>
<td>Compliance, seizure control</td>
<td>Not defined</td>
</tr>
<tr>
<td>Long-term follow-up</td>
<td>Home health, follow-up</td>
<td>Those doing follow-up if not physician</td>
<td></td>
<td>Compliance, control</td>
<td>Meet control benchmarks, functional outcome</td>
</tr>
</tbody>
</table>

EPISODE GROUPERS

To design an episode of care from scratch using a data derived model could be quite expensive. Payers would need denominator specifics (detailed ICD-10-CM codes), CPT-codes, and any applicable pharmaceutical and device specifications. Here is a list of ICD-10-CM diagnosis codes that could be used to define an epilepsy episode of care.

ICD-10 Diagnosis Code
- G40.3 Generalized idiopathic epilepsy and epileptic syndromes
- G40.309 Generalized idiopathic epilepsy and epileptic syndromes, not intractable, without status epilepticus
- G40.401 Other generalized epilepsy and epileptic syndromes, not intractable, with status epilepticus
- G40.311 Generalized idiopathic epilepsy and epileptic syndromes, intractable, with status epilepticus
- G40.319 Generalized idiopathic epilepsy and epileptic syndromes, intractable, without status epilepticus
- G40.411 Other generalized epilepsy and epileptic syndromes, intractable, with status epilepticus
Epilepsy Episodes of Code

G40.A01 Absence epileptic syndrome, not intractable, with status epilepticus
G40.A11 Absence epileptic syndrome, intractable, with status epilepticus
G40.301 Generalized idiopathic epilepsy and epileptic syndromes, not intractable, with status epilepticus
G40.311 Generalized idiopathic epilepsy and epileptic syndromes, intractable, with status epilepticus
G40.2 Localization-related (focal) (partial) symptomatic epilepsy and epileptic syndromes with complex partial seizures
G40.20 Localization-related (focal) (partial) symptomatic epilepsy and epileptic syndromes with complex partial seizures, not intractable
G40.201 …with status epilepticus
G40.209 …without status epilepticus
G40.21 Localization-related (focal) (partial) symptomatic epilepsy and epileptic syndromes with complex partial seizures, intractable
G40.211 …with status epilepticus
G40.219 …without status epilepticus
G40.1 Localization-related (focal) (partial) symptomatic epilepsy and epileptic syndromes with simple partial seizures
G40.10 Localization-related (focal) (partial) symptomatic epilepsy and epileptic syndromes with simple partial seizures, not intractable
G40.101 …with status epilepticus
G40.109 …without status epilepticus
G40.11 Localization-related (focal) (partial) symptomatic epilepsy and epileptic syndromes with simple partial seizures, intractable
G40.111 …with status epilepticus
G40.119 …without status epilepticus
G40.B Juvenile myoclonic epilepsy
G40.B0 Juvenile myoclonic epilepsy, not intractable
G40.B01 …with status epilepticus
G40.B09 …without status epilepticus
G40.82 Epileptic spasms
G40.821 Epileptic spasms, not intractable, with status epilepticus
G40.822 Epileptic spasms, not intractable, without status epilepticus
G40.823 Epileptic spasms, intractable, with status epilepticus
G40.824 Epileptic spasms, intractable, without status epilepticus
G40.10 Localization-related (focal) (partial) symptomatic epilepsy and epileptic syndromes with simple partial seizures, not intractable
G40.101 …with status epilepticus
G40.109 …without status epilepticus
G40.11 Localization-related (focal) (partial) symptomatic epilepsy and epileptic syndromes with simple partial seizures, intractable
G40.111 …with status epilepticus
G40.119 …without status epilepticus
G40.801 Other epilepsy, not intractable, with status epilepticus
G40.802 Other epilepsy, not intractable, without status epilepticus
G40.811 Lennox-Gastaut syndrome, not intractable, with status epilepticus
G40.812 Lennox-Gastaut syndrome, not intractable, without status epilepticus
G40.813 Lennox-Gastaut syndrome, intractable, with status epilepticus
G40.814 Lennox-Gastaut syndrome, intractable, without status epilepticus
G40.89 Other seizures
G40.803 Other epilepsy, intractable, with status epilepticus
G40.804 Other epilepsy, intractable, without status epilepticus
G40.815 Other epilepsy, unspecified, intractable
G40.819 …without status epilepticus
G40.9 Epilepsy, unspecified
G40.90 Epilepsy, unspecified, not intractable
G40.901 …… with status epilepticus
G40.909 …… without status epilepticus
G40.91 Epilepsy, unspecified, intractable
G40.911 …… with status epilepticus
G40.919 …… without status epilepticus