

UCB, Inc Medical Educational Grants
Medical Affairs
Request for Proposal (RFP)
Management of Focal Seizures in Critically ill patients in NCCU/ICU

Background:	<p>UCB, Inc is a global biopharmaceutical company focused on the discovery and development of innovative medicines and solutions to transform the lives of people living with severe diseases of the central nervous system and immune system.</p> <p>Seizure treatment and management of antiepileptic drug (AED) therein the hospital setting is a major channel in which epilepsy patients are managed. Neurointensivists and neurologists within the hospital system frequently diagnose, treat, and manage focal (partial onset) convulsive and nonconvulsive seizures¹. More than 30% in the neurocritical care unit (NCCU) experience seizures as well as up to 10% of patients in the ICU². The critically ill patients with structural lesions like stroke, traumatic brain injury and brain tumor are at risk of developing seizures in the neuro-ICU. Up to 90% of early post-stroke seizures, early post TBI seizures and almost all seizures in brain tumor patients are focal in onset with or without secondary generalization^{3,4,5}. 61% of patients in hospital with new onset seizure have a recurrent seizure during their inpatient stay⁶. A potential next seizure should be anticipated in a critically ill hospitalized patient with seizures⁷.</p> <p>Seizures in critically ill patients are associated with adverse clinical outcomes like higher risk of mortality, disability and significantly increased total length of hospital and ICU stay^{8,9}. The appropriate and safe administration of AEDs in the hospital for each individual patient is needed to lead to the best clinical outcome. Also AED selection for continued long-term treatment of focal seizures is important if the risk of reoccurrence warrants continued therapy^{1,10}.</p> <p>In the intensive care unit (ICU), the reported risk of seizures as a complication or as the principal reason for ICU admission is estimated to be 3.3%; although, the actual incidence is likely to be significantly higher with one study reporting of an incidence of 34%^{11,12}. Nonconvulsive seizures have been more recently recognized as common occurrences in the ICU, with 8%-48% of comatose patients experiencing nonconvulsive seizures, depending on the patient population studied^{13,14}. Most patients with nonconvulsive seizures have purely electrographic seizures, but other subtle signs like face and limb myoclonus, nystagmus, eye deviation, pupillary abnormalities, and autonomic instability can accompany a nonconvulsive seizure¹⁵. These symptoms are not specific for nonconvulsive seizures in critically ill patients; therefore, routine or continuous EEG monitoring is necessary for the diagnosis and treatment of nonconvulsive seizures^{1,15}.</p> <p>Patients with structural lesions like acute ischemic stroke, subarachnoid hemorrhage and traumatic brain injury have substantial number of focal seizures in hospital, to provide additional information on the occurrence of seizures in these populations, estimates for the rate of acute convulsive and non-convulsive seizures after stroke are 9%-20%^{17,18}. Additionally, the incidence of convulsive seizures within the first week (early seizures) after traumatic brain injury is estimated to be more than 15%-20 %^{17,19}. Seizures also occur in estimated 30 to 50 % of brain tumor patients²⁰.</p> <p>Unfortunately, seizures in the ICU are often subtle and predominantly non-convulsive in nature, with as little as 8% to 32% of patients demonstrating clear clinical correlates with their seizures². Electroencephalography (EEG) remains the gold standard for diagnosis of non-convulsive seizures. Identification of non-convulsive seizures gets delayed due to lack of reliable clinical markers and use of cEEG remains a highly labor-intensive process with limited technologist, physician, and equipment availability forces many ICUs to struggle with determinations about which patients are most appropriate for cEEG monitoring². Acute convulsive as well as non-convulsive seizures in the ICU should be actively and timely treated with AED therapy for several reasons. Timely administration of effective AEDs has been shown to be essential in the prevention of the emergence of</p>
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	<p>status epilepticus, which can lead to neuronal damage and permanent cerebral injury. Additionally, early treatment of seizures is associated with better patient outcomes and survival^{21,22}. In several studies, increased mortality has been shown to be associated with the occurrence of convulsive seizures in patients following an ischemic stroke²³. Prompt diagnosis and treatment of seizures in critically ill patients may prevent poor outcomes⁷.</p> <p>Microlearning tools involve presenting data in small bite-sized units and short-term learning activities, which are organized in a series format to allow for continuous learning. Mobile platform is the best engagement platform as it is available all the time, hence the URL based CME platform available on all traditional digital interface should be customized for mobile interface to provide a solution to laptop fatigue that is being experienced by physicians during the current COVID crisis, which is expected to continue during the recovery and be a reality of the new normal.</p>
<p>Eligibility Criteria:</p>	<ul style="list-style-type: none"> • The program should target the US geographic region. • The educational program must be based on microlearning principles spanning over the 5-6 episodes with a continuity of theme and availability customized to mobile platform • The education must offer credit and meet the accreditation or certification requirements and standards of the ACCME, AOA, AMA, AAFP, or ADA CERP or other recognized accrediting body. • Please share your governance and compliance processes around the CCPA /GDPR. • If accepted, the provider must attest to the terms, conditions and purposes of an educational grant as described in the electronic UCB letter of agreement.
<p>RFP Release Date:</p>	<p>Aug 10th, 2020</p>
<p>Clinical Area:</p>	<p>Seizure management in critical care patients in NCCU/ICU with emphasis on diagnosis and treatment of focal seizures in patients with structural lesions like stroke, traumatic brain injury and tumors in NCCU/ICU.</p>
<p>Specific Interest of this RFP:</p>	<p>It is our intent to financially support an independently developed comprehensive proposal that will improve health care provider knowledge and skills in treating focal (partial onset) seizures in the intensive care hospital environment. Proposals should consider learning materials that incorporate burden of focal seizures in structural lesions patients like stroke, tumor & traumatic brain injury and its impact on progression to status epilepticus, overall outcomes of mortality, disability, length of stay in ICU and hospital. early identification of seizures including non-convulsive seizures in critically ill patients with structural lesions in NCCU/ICU, updates in diagnostics and cEEG monitoring techniques, the dosing and administration of AEDs, individual patient characteristics informing AED selection, and considerations for selecting an AED at time of patient discharge from ICU/NCCU. The learning objectives for this proposal are intended for the early diagnosis and treatment of partial-onset (focal) and secondarily generalized seizures in critically ill patients in NCCU/ICU and not necessarily on the treatment of status epilepticus or prophylaxis for prevention of seizures.</p> <p>Proposals should include identification and mapping of educational gaps towards knowledge, skills, attitude, and performance including inter-professional team gaps in order to strive towards improving health care providers' skills in treating partial-onset seizures in the intensive care setting.</p> <p>Proposals with broad reach and impact to US healthcare providers will be given priority. Another key consideration is the need for more than one touch point with the audience members to assure acquisition of knowledge and skills (level 3 & 4 according to the Moore Scale) or improving performance (level 5), dependent on identified and validated clinical gaps. The proposed methodology for measuring the learning outcomes should be detailed. Innovative medical educational via digital platforms customized for a smooth interface on mobile with demonstrated effectiveness in learner engagement and long-term</p>

	<p>knowledge retention are encouraged. The proposal could also elaborate on the plans for reinforcement of microlearning objectives through an archived complete online version of the CME via webinar. The methodology for measuring the long-term knowledge retention should be detailed.</p>
<p>Target Audience:</p>	<p>US Neurointensivists, ICU hospitalists, intensive care nurses and discharge nurses, and clinical pharmacologists and neurologists in the hospital</p>
<p>Key Identified Gaps:</p>	<p>Seizures occurring in the neuro- intensive care unit (NCCU) and ICU caused from diverse structural lesions like stroke, traumatic brain injury and brain tumors, each with a distinct risk of seizures that the health care provider must understand^{2,16,17}. Outside of the ongoing acute brain insult, treatment of seizures in the critically ill patients can be further complicated by numerous elements. Some of these elements include multisystem organ dysfunction, metabolic abnormalities, hypermetabolism, the induction of therapeutic paralysis, and other patient co-morbidities and concomitant medications^{1,24}. Seizures in critically ill patients are associated with adverse clinical outcomes. Unfortunately, seizures in the NCCU/ ICU are often subtle, predominantly non-convulsive in nature with as little as 8% to 32% of patients demonstrating clear clinical correlates with their seizures². Identification of non-convulsive seizures gets delayed due to lack of reliable clinical markers and experts who can read cEEG.</p> <p>These challenges lead to difficulty in diagnosis of seizures and choosing the best AED(s) for treatment, as well as, challenges in providing the appropriate dose and distribution of therapy that will lead to effective seizure treatment within the NCCU/ICU population^{10,16,17}.</p> <p>When selecting an AED(s) for the treatment of focal seizures based on the individual acute seizure etiology, seizure type, co-morbidities, and co-medications in the ICU patient population, class one evidence with randomized, placebo controlled trials are lacking^{10,21}. There are over 25 AEDs currently available for the treatment of seizures. Some AEDs are available in a variety of dosing formulations, which could be an important consideration when choosing an AED(s)^{26,27}. Additional AED treatment considerations for the ICU patient population include the safety profile, the pharmacokinetic and metabolic properties, and the potential for drug interactions of the AED therapy^{10,32}. Outside of basic AED characteristics that help drive AED selection, comparative effectiveness data is missing within epilepsy to drive treatment selection among the AED class²⁸. Additionally, there is an absence of dosing or pharmacokinetic studies that have been conducted in the critically ill population. To help address these data gaps pharmacokinetic modeling has been applied to clinical trial outpatient data of AEDs to examine the effect of some individual characteristics on the individual AED's pharmacokinetic profile^{29,32}. As a result, current dosing and administration of AEDs in NCCU/ICU patients relies upon dosing and pharmacokinetic data from outpatient epilepsy populations and from real world reports of clinical experience^{27,30,31}. With these considerations, the choice of AED for the treatment of seizures in the ICU patient population should be individualized based upon seizures etiology, patient characteristics, and acute symptoms in order to provide the best outcomes and quality of life for patients; however, specialized skills and knowledge is needed to select and administer the correct treatment for each patient^{12,16,28}.</p> <p>The treatment of ICU patients requires the coordination, communication, and expertise of a multidisciplinary team consisting of neurointensivists, nurses, neurologists, clinical pharmacists, rehabilitation professionals, and social workers^{10,28}. This multidisciplinary team is not only tasked with managing acute seizures for each patient, but also for continued long-term treatment of seizures if the risk of reoccurrence warrants continued therapy^{1,33}. Selecting the correct therapy for the long-term treatment of seizures will have different patient considerations than the selection of an acute therapy to help assure the best long-term quality of life for patients¹². Based upon current treatment practices, knowledge and skills of the long-term epilepsy treatment considerations needed to improve patient quality of life seem to be lacking^{12,28}.</p>

	<p>The hospital is a major channel for epilepsy patient diagnosis and care impacting the early journey of the epilepsy patient. Prompt diagnosis and treatment of seizures in critically ill patients may prevent poor outcomes⁷. The goals to be achieved from the learning activity in this area clearly align to two of the prioritized gaps in care for epilepsy (Gap#1 Right drug for the right patient and Gap#4 Manifestations of epilepsy are not obvious) and key educational needs in epilepsy regarding early patient journey in hospital as identified by UCB²⁵.</p>
Outcomes:	<p>Minimum outcome measurement level will demonstrate learner competence (practical application and conceptual understanding).</p> <ul style="list-style-type: none"> • Minimum levels for measured outcomes will be set at level 3 (knowledge acquisition) and level 4 (competence). Where applicable level 5 outcomes (performance improvement) can be proposed. The proposed methodology for collecting and analyzing outcomes measures will be described. • A methodology for measuring long-term knowledge retention will be proposed. • Based on the learning outcomes obtained from this learning activity, a methodology will be proposed for identifying persisting learning gaps that need further consideration in future learning activities.
Expected Monetary Range of Applications:	<p>The anticipated program cost is expected to be achievable with a budget of no more than \$ 150,000. The final awarded amount will depend upon the review panel's evaluation of the proposal and costs involved.</p>
Key Dates:	<p>RFP release date: Aug 10th, 2020</p> <p>Full Proposal Deadline: Sept 14^h, 2020 Please note the deadline is midnight Eastern Time</p> <p>Review of Full Proposals by Review Panel: N/A</p> <p>Anticipated Full Proposal Notification Date: Sept 30th, 2020</p> <p>Period of Performance: Oct 1st, 2020 – Dec 2020 Please note an interim progress report will be requested depending upon timelines of the program</p>
Submission Instructions:	<p>Submit applications online through the UCB eRequest system which can be accessed via http://erequest.ucb.com. Applicants must register for the UCB eRequest system if you are not a current registrant.</p> <p>Select UCB.EP-RFP.Jul2020 in the RFP Number field in the application and include UCB.EP-RFP.Jul2020 within the Request Title as well.</p> <p>Select Epilepsy as the Area of Interest. Complete all required sections of the online application and upload the proposal.</p> <p>Approvals and denials will be communicated to the applicant via the eRequest system by email by the dates provided above.</p>
Application Section Requirements:	<ul style="list-style-type: none"> • Learning objectives • Needs assessment with classification of identified gaps into knowledge, skills, attitudes optionally performance according to the Moore levels of outcomes based planning • Activity type and delivery format following instructional design and microlearning principles • Intended outcome level to be achieved according to the Moore Scale

	<ul style="list-style-type: none"> • Audience • Line item budget (template provided on application) <p>Document uploads for inclusion:</p> <ol style="list-style-type: none"> 1. A formal dated Letter of Request for the funding 2. A comprehensive learning needs assessment plan 3. Detailed program plan 4. Accreditation certificate(s) 5. W-9 for payee organization 6. Outcomes measures plan <p>Be sure to review the USA FAQ document on the website for other application information</p>
Questions:	Please direct any questions that you may have to the UCB Grants Office at grants@ucb.com

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