## Part 1: "Elevator" Introduction

**Elevator Pitch:** EpiFinder, Inc. (<a href="www.epifinder.com">www.epifinder.com</a>) provides proprietary clinical decision support software that helps doctors to diagnose epilepsy syndromes at the point-of-care. EpiFinder collects data from the latest peer-reviewed research papers, screens the information with evidence-based research data and provides a guided differential diagnosis of epilepsy syndromes.

EpiFinder's algorithms are translational in that they map clinical signs and symptoms directly to the basic science pathways that are the potential root causes. The algorithms perform an analysis of electronic health records databases to come up with differential diagnoses. This process results in improving the consistency of seizure classification and the accuracy of epilepsy diagnosis. By providing quicker and more accurate diagnoses for a specific epilepsy syndrome, EpiFinder reduces healthcare costs for hospitals, enables doctors to provide personalized medicine, and helps to improve the quality of life of their patients on a global scale.

Neel Mehta (2017: Arizona Business Leader in Healthcare Innovation and 35 entrepreneur 35 and younger) and Robert Yao (2016: 40 under 40 and Outstanding Graduate Student Leader) have formed a cross-functional and multi-disciplinary team, which comprises of 18 members with expertise in artificial intelligence, machine learning, computer science, statistics, biomedical informatics, and business.

Press: http://www.epifinder.com/press/ | Awards: http://www.epifinder.com/awards/ | Video: http://bit.ly/VM\_EpiFinder

## Part 2: Market and Industry Analysis

Market size and segment: Epilepsy is a neurological disorder characterized by seizures. There are over 50 individual epilepsy syndromes that occur in children and older adults, affecting 1 in 26 people at some point in their lifetime. There are over 65 million people worldwide who suffer from epilepsy. In the US alone, 3 million people have epilepsy and there are over 200,000 new incidences every year. Due to its complexity, epilepsy is an extremely difficult-to-diagnose condition because no guidelines exist to diagnose the specific epilepsy syndromes consistently. It can take as many as 10 years to correctly diagnose the correct syndrome and bring seizures under control for a patient. Epilepsy misdiagnosis is a problem that has cost the health care system \$9.6 Billion.

**Market growth:** Our software provides our solution to potentially a \$16.8 million market growing at a rate of about 7% each year. We are well positioned to capture 30-40% of the digital healthcare market in the neurological sector resulting in a market value approaching \$150 million in the next 5 years.

**Competition:** EpiFinder currently has four similar players in the space. Epocrates, Isabel, Up-to-date and SimulConsult. The primary reason why EpiFinder is different than the rest is that our software leverages translational biomedical informatics ontology for clinical decision support and personalized medicine, machine learning, and advanced algorithms to gather more specific symptoms from the patient and provide the doctor with a list of the best matching epilepsy syndromes. While the software is currently focused on epilepsy, it is scalable towards other hard-to-diagnose neurological conditions.

## Part 3: Go-to-Market Plan

**Customers:** Our customers consist of healthcare professionals and hospitals that encounter, triage, or treat epilepsy, seizures and other rare or hard to diagnose conditions. Through discussions with healthcare professionals we have identified that there is a lack of guidelines for the diagnosis of epilepsy and a dire need for accurate and real-time clinical decision support at the point-of-care. Our v1.0 app is currently used at Mayo Clinic, Honor Health, Barrow Neurological Institute, Austin Epilepsy Care Center, Imagine Colorado, and other private practices locally.

**Customer Acquisition:** EpiFinder is actively being developed with the help of potential customers. Through the strategic connections of our mentors, the team has key partnerships with Phoenix Children's Hospital, ASU, Barrow Neurological Institute, Mayo Clinic, Stanford University, and University of Alberta, Canada. We are doing an inaugural launch through the members of the Epilepsy Foundation of Arizona and scaling up through our early adopters network in Q1 2017.

Channel/ Partnership strategy: What sets us apart from the competition is that our application can take information about the patient and compile it into a knowledge framework that will provide a list of differential diagnoses. We expect to reach over 1000 patients by the end of this year through our Mayo Clinic and Phoenix Children's Hospital strategic partnership. In addition, we are formalizing a co-development partnership with Mayo Clinic Ventures Program. We will also leverage their networks in order to spread word of our product to other hospitals and clinics nationwide.

## Part 4: Technical Product Description and Plan

**Product:** Our software uses natural language processing and machine learning to collect the latest peer-reviewed research papers and evidence-based data. It then screens the information through a robust translational biomedical informatics structure, and with advanced Artificial Intelligence algorithms, guides the doctor in the diagnosis of epilepsy syndromes in a manner that helps to implement personalized medicine. This process results in improving the consistency of seizure classification and epilepsy diagnosis. This enables medical doctors to make quicker and more accurate diagnoses which helps to improve the patient's lives.

Technology Validation: We have worked with industry leading neurologists at several hospitals, including Mayo Clinic and

Phoenix Children's Hospital, to do the final phase of our validation process. We are reviewing the feedback and updating our UI and algorithms. In addition, we are discussing multi-year licensing agreements with several hospitals and private practices.

**Risk Management:** We are getting continuous feedback on our v1.0 from various epileptologists and neurologists locally and nationally. Based on all the feedback, we are developing our commercial v2.0, which we plan to release in Feb 2017. We are also bringing an experienced technology development company as a consultant to make sure that the development is completed per the industry standard. Our business and sales team has already formed partnerships with major clinics and private practices to license our technology to the doctors.

**Advantage:** EpiFinder's proprietary software uses a knowledge framework where doctors can input patient symptoms and within minutes the application compiles it into an easy-to-understand list of epilepsy syndromes. There is no other clinical decision support software that enables doctors to gather seizure symptoms and diagnose epilepsy syndromes at the point-of-patient care. By providing a simple, elegant, and intuitive app that fits in the doctor's workflow, we help to save the doctor's time by guiding and narrowing the list of symptoms at the point-of-care. Furthermore, we provide them clinical decision support through a list of possible epileptic syndromes and their defining features. On the other hand, our competitors provide a list of common diagnoses with little more than a Google search of research papers for the doctor to read through. Our clinical decision support software helps neurologist by focusing their attention on how to best help the patient.

Our key features include:

- Translational: EpiFinder's software is built on a framework that maps the root causes of disease directly to the clinical signs and symptoms. It does this by seamlessly integrating multiple facets of basic science pathways and information directly to clinical signs and symptoms.
- Evidence-based: Our system uses the latest evidence-based information located in textbooks, peer reviewed research papers, and de-identified electronic medical records.
- Ontology: It utilizes biomedical informatics techniques in knowledge representation.
- Personalized Medicine: Potential to tailor treatments to the individual patient
- Point of Care: Software is available as an App (<a href="https://appsto.re/us/KvqE9.i">https://appsto.re/us/KvqE9.i</a>) or Website that can be used by doctors during the patient examination in Hospitals/Emergency Department/Clinics/Urgent Care centers.

**IP:** We have used a lock-and-key model to protect our intellectual property. This currently includes a provisional patent and trademarks. We are currently filing for copyrights, design trademarks, and trade secrets. We are in the process for filing full patent application in Q3 2017.

**Barriers:** Deploying a new technology in the hands of neurologists can be a non-IP barrier but we now have epileptologists and neurologists from Mayo Clinic, Honor Health, Barrow Neurological Institute, and other private practices in Arizona who are using our app. Additionally, we took our first step outside of Arizona to Texas with the Austin Epilepsy Care Center.

Part 5: Risk vs. Talent Narrative

**Risk Mitigation:** Product development and usability risks were mitigated through customer interviews, demonstrations, and clinical advice with neurology experts. Investment risks were mitigated through interactions with legal attorneys and getting accredited angel investors and micro venture capital group on board. FDA pre-collaboration and clinical research was the next major risk, which were mitigated by working with experts at BioAccel and MediCoventures. Scaling of our technology to other neurological diseases will be mitigated through the implementation of machine learning and artificial intelligence methods.

Team: Our key team members are mentioned below:

- Robert Yao, co-founder and CEO, was recognized as the "2016 Outstanding Graduate Student Leaders" and "2015 Changemaker Entrepreneur of the Year" for his creation, leadership, and management of EpiFinder.
- Neel Mehta, co-founder and Strategy Officer, was recognized as one of the "2017 Arizona Business Leader in Healthcare Innovation" and was recently awarded "35 Entrepreneurs 35 and younger" by AZ Central. He received awards from Governor of the state of Arizona, Doug Ducey and President of the Arizona State University, Dr. Michael Crow. Both Robert and Neel received 2016 40 under 40 by Phoenix Business Journal.
- · Dhawal Soni iOS development; Dhruv Parmar, Mit Rohit Web development and HIPAA compliance management
- Harsh Patel Sales, and Marketing; Edgar Salinas, Lidia Cernek Clinical research, Al, and Machine Learning.

**Needs:** We have formed a well-versed team to carry out clinical research, technology, and business development. We currently have a waitlist for several positions and so we will hire people based on our needs and growth strategy.

Advisors: Our key advisors are mentioned below:

- Joseph Sirven MD, PhD, Chair of Neurology, Mayo Clinic, clinical feedback and connections
- Diego Tovar MD, Neurologist and Epileptologist, Austin Epilepsy Care Center
- Dan Tyre, Sales Director, HubSpot, sales and marketing advice
- Pat Sullivan, CEO, Ryver, Inc., technology and strategic business advice
- Jonathan Coury, partner at Hool Coury Law Group, legal and business advice
- Dean Sawyer, CEO, Sentrian, strategic connections to investors in California
- Courtney Klein, Co-founder and CEO, SeedSpot, business connections and investor pitch advice