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PISCES: USING EHEALTH TO PROVIDE INDIVIDUALIZED SERVICES AND CARE IN EPILEPSY

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Statement of the Problem: The emerging fields of genomic medicine, patient reported outcome measures (PROMS and clinical data analytics are the fundamentals of proactive, precision, personalized healthcare (3P). Benefits of 3P include: preventing disease or averting its deterioration; addressing the underlying cause of disease rather than a set of symptoms; targeting treatment plans based on individual needs. eHealth is a key enabler for 3P healthcare. Our project, based on the National Epilepsy Electronic Patient Record (EPR) is creating the conditions for a 3P paradigm of healthcare for people with epilepsy in Ireland.

Methodology & Theoretical Orientation: The national epilepsy EPR is used by clinical services across Ireland and contains the longitudinal care records of approximately 8000 people with epilepsy. The EPR was enhanced with genomic medicine, patient portal and clinical analytics capabilities. Co-design teams of people with epilepsy, family members, healthcare practitioners, and software engineers worked to identify requirements for the 3P enhancements to the EPR. They examined

1. He collaborative clinician-genetic scientist interpretation of genomic sequence data in the context of disease predisposition and/or in predicting treatment response
2. Opportunities for improving the clinician–patient co-decision making partnership with an electronic patient portal
3. Clinically relevant questions for gaining insights about epilepsy risk factors, disease progression and response to treatment from longitudinal patient data.

Results: The EPR genomics module facilitates multidisciplinary collaboration and facilitates translation of actionable genetic variation information into clinical care; patient portal; the clinical analytics interface allows easy examination of large sets of patient data to discover insights about epilepsy risk and treatment patterns.

Conclusion & Significance: PiSCES is a pioneering eHealth project aligned with internationally emerging precision/personalized medicine initiatives.

Biography

Kevin Power is the requirements engineer and implementation manager for the Epilepsy Lighthouse Project (PiSCES). The Pisces Lighthouse project is funded by e-Health Ireland and HSE to help build an understanding of the benefits of eHealth technologies in the Irish Healthcare System. He has his expertise in investigating requirements engineering and implementation processes in the Irish health care arena.

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