

## Prototyping the Problem Oriented Medical Record for Connected Health Based on TypeGraphQL

**Authors :** Sabah Mohammed, Jinan Fiaidhi, Darien Sawyer

**Abstract :** Data integration of health through connected services can save lives in the event of a medical emergency or provide efficient and effective interventions for the benefit of the patients through the integration of bedside and bench side clinical research. Such integration will support all wind of change in healthcare by being predictive, pre-emptive, personalized, problem-oriented and participatory. Prototyping a healthcare system that enables data integration has been a big challenge for healthcare for a long time. However, an innovative solution started to emerge by focusing on problem lists where everything can connect the problem list forming a growing graph. This notion was introduced by Dr. Lawrence Weed in early 70's, but the enabling technologies weren't mature enough to provide a successful implementation prototype. In this article, we are describing our efforts in prototyping Dr. Lawrence Weed's problem-oriented medical record (POMR) and his patient case schema (SOAP) to shape a prototype for connected health. For this, we are using the TypeGraphQL API and our enterprise-based QL4POMR to describe a Web-Based gateway for healthcare services connectivity. Our prototype has reported success in connecting to the HL7 FHIR medical record and the OpenTarget biomedical repositories.

**Keywords :** connected health, problem-oriented healthcare record, SOAP, QL4POMR, typegraphql

**Conference Title :** ICECTIS 2022 : International Conference on Engineering, Computational and Technological Innovative Sciences

**Conference Location :** Cape Town, South Africa

**Conference Dates :** November 03-04, 2022