**CS 6440 Student Project Proposal**

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| **Project Title:** FHIR Interface to Link Death Data to Other Data Sources | |
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| **Project Background:** The Division of Medicaid and Healthcare Financing (DMHF) in the Utah Department of Health is responsible for paying all Utah Medicaid claims. A recent audit of their systems showed that DMHF paid Medicaid claims for controlled substance prescriptions written by deceased providers. DMHF would like to receive notifications when licensed providers in Utah die so that they can flag the provider as deceased and avoid paying claims for deceased providers.  UDOH has a master person index (MPI) called DOHMPI. DOHMPI is used to link and deduplicate person-centric information in systems across the health department, including Utah’s electronic death registration system, EDEN. UDOH is in the process of developing a centralized provider directory known as DoC (Directory of Clinicians) that will contain up-to-date licensing and demographic information regarding clinical providers. | |
| **Project Objective(s):** Develop FHIR interfaces that will be used to flag deceased providers in the DMHF database to prevent controlled substances from being written by deceased providers and avoid paying associated claims. | |
| **Description of the Solution:**  The solution will work as follows:   1. A deceased person’s death is registered in EDEN. (In Production) 2. DOHMPI Agent pushes newly registered death to DOHMPI. (In production) 3. DOHMPI links death certificate data with other UDOH source programs, including DoC (We are in the process of linking DoC to DOHMPI) 4. A link between a death certificate and a provider in DoC triggers a death notification alert (In production) 5. A FHIR interface is used to push the deceased provider’s information to DMHF systems. (to be developed)   The above scenario has multiple other variations, for example when a death certificate links to a birth certificate or IIS in DOHMPI, we can push the death notification to the third party system. Much of the infrastructure is in place, we need the interfaces to push to external systems. | |
| **Desired Student Skills/Background:**   * Experience with RESTful interfaces, backend development, and webservers * Interest in FHIR enabling existing systems. * Interest in patient matching/entity resolution/data deduplication | |
| **Data Requirements and Potential Sources:** Public or synthetic data can be used for these purposes. | |
| **Other Comments:**  The State of Utah is a very advanced public health partner. This project provides an excellent opportunity for students interested in combating the recent epidemic in prescription drug overdoses and/or helping to reduce healthcare fraud. | |