Streamlining the Application Process for Long Term Care Facilities

Enabling The Silver Tsunami

Background

Seniors have to go through a long and inefficient process when it comes to applying to the long-term (or short-care) facility of their choice. The process of looking for a short-term care facility after a medical procedure or looking for a long-term care (LTC) facility when you need community and care to combat mental and physical decline is one that needs to be effortless and efficient.

The current state of the American LTC facility provider space is similar to other aspects of the American healthcare ecosystem. LTC facilities use multiple healthcare IT and inventory management systems[1]. Many LTC facilities have low process maturity - still relying on manual mechanisms as the safe default way of performing their jobs. The LTC facility provider ecosystem has no standard way of onboarding prospective residents.

Before the pandemic, LTC demand significantly exceeded supply, there was a shortage of staff at LTC facilities, LTC facility occupancy averaged ninety percent annually, and the timeframe for application and approval was taking several months[2], on average. During the pandemic, "long-term care is becoming an escalating crisis for aging Americans"[3]. COVID-19 has worsened and amplified each of these issues.

> "… the current system as structured is being stressed to its limits and its functioning is inadequate, with serious problems in cost and financing, and in access to and quality of, long-term care services"[2]
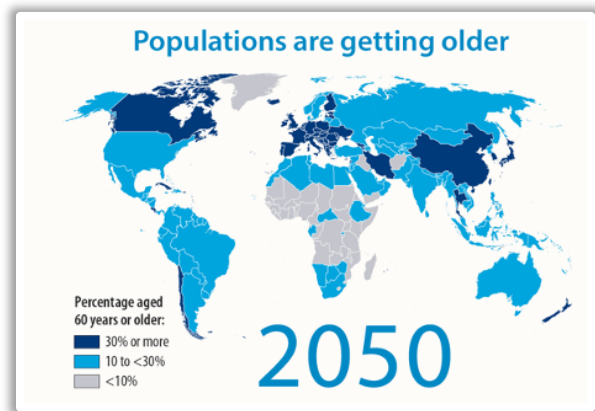
Source: World Health Organization

This issue directly impacts three (3) of the 5 Points of Health Care, i.e. Patients, Providers, and Payers, and will require the attention of Policymakers and Purchasers in the near to medium term. Inefficient intake and onboarding of seniors does not only take a mental and emotional toll on seniors, it also puts a strain on provider staffing, resources, and planning. Additionally, it causes delays and complications for Medicare, Medicaid and others.

Problem

Domestic and global demographic shifts are creating a perfect storm for a larger problem that could overwhelm many parts of America's health and social systems.

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[1] Patricia MacTaggart, and Jane Hyatt Thorpe. "Long-Term Care and Health Information Technology: Opportunities and Responsibilities for Long-Term and Post-Acute Care Providers". Perspectives in Health Information Management, Fall 2013.

[2] Institute of Medicine, "Toward a National Strategy for Long-Term Care of the Elderly: A Study Plan for Evaluation of New Policy Options for the Future". National Academies Press.

[3] Affinity Law Group. "The Current State of Long-term Care: Problems, Policies, and Proposals". September 4, 2020.

Speed of population ageing
Time for percentage of population **over age 60** to double
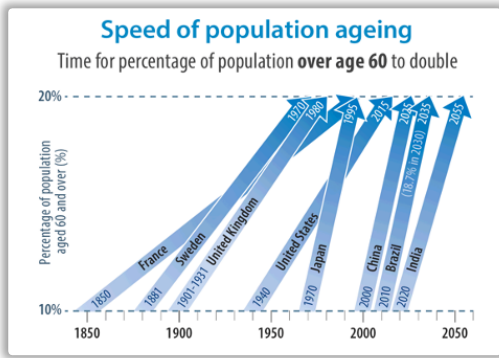
Source: World Health Organization

There are around 50 million Americans older than 65; with approximately 10,000 people turning 65 each day. Globally, this population segment is the fastest growing age and consumer group.

Between 2015 and 2050, the proportion of the world's population over 60 years will nearly double from 12% to 22%. Currently, the number of people aged 60 years and older outnumbers children younger than 5 years. The pace of population ageing is much faster than in the past.

This will translate into greater local and global need for long term care. Given that care capacity, facility staffing, payment processing, payment management, and care management concerns have all been identified as priority areas and are currently being worked on, this project focuses on a tractable element in this ecosystem of problems – speeding up the intake and onboarding for a senior entering a care home. This will reduce the data collection burden on the LTC facility provider and will decrease the cognitive load on seniors from data assembly and customization.

Solution

The long term goal of the project, LTC_CAP is to develop a FHIR resource specification, and associated enabling technologies, for a senior that has found a care home and is in the process of securing their place in that home. The intention is to enable the seamless exchange between the senior and the LTC facility – removing the current pains and burdens currently being experienced.

To ensure that this effort is collaborative and transparent, the LTC_CAP project is open source and accessible via Github. The project's solution approach involved using existing knowledge and tools, while collaborating with LTC facility providers on a useful end-result for them.

LTC_CAP leverages insight from the Office of the National Coordinator for Health Information Technology's electronic Long-Term Services and Supports (eLTSS) Initiative and the PACIO project. The project uses CMS Data Element Library and the IGPOP and FHIRBase tools from Health Samurai.

The project engaged with 19 LTC facility providers – that span the spectrum of service offerings; from Independent Living to Assisted Living to Skilled Nursing to Memory Care - in order to collectively agree on the minimal set of data elements necessary for a successful application process.

Status & Next Steps

Our interactions with our cohort of providers identified an initial set of common data elements. This set was cross-referenced against the work done by the PACIO project and the CMS Data Element Library to determine the FHIR resources that need to be incorporated. Then a draft LTCFacilityApplication FHIR specification was documented.

Health Samurai's IGPOP was used to craft a draft FHIR implementation guide. Also, the co-created data schema was imported into FHIRBase. The use of FHIRBase allows the data from Pearl Long Term Care Solutions ("Pearl") to be read by our authorized provider partners. There is ongoing work to create a translator (in Python) that converts from Pearl's internal data system (a mix of MySQL and Mongo DB) into the draft FHIR spec.

Next steps include input from the FHIR community.

Given that there are well over 15,000 LTC facilities in America, our initial cohort of 19 is probably not as inclusive and diverse as desired. We hope that LTC facility owners and managers will reach out and provide input on the data they require during their application process – in order to improve the draft spec over time.

Given the number of IT systems used by LTC facilities, there is a high probability that a LTC facility may not be using a system that can currently ingest FHIR. This is a conjecture. To confirm or refute this, the LTC_CAP project wants to 1) engage with LTC facility operators to perform an inventory of their systems, and their FHIR capabilities, and 2) engage with IT vendors for LTC facilities willing to work on "translators" from the proposed LTCFacilityApplication FHIR specification to their solutions.

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