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Project title

Chronic Disease Trajectory --- A Tool for Patient Care and Demand Management

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Introduction

Chronic conditions cause disability and suffering. In Hong Kong, as the population ages in the coming decades, a significant increase in the number of persons with chronic conditions is expected. Hence, HA is facing pressing challenges in providing care for patients with chronic diseases.

Objectives

1. To understand chronic disease burden and trajectory so as to target health care planning for the vulnerable population
2. To provide insights on the service models for patients in different stages of chronic diseases to enhance demand management

Methodology

Based on the data in the Clinical Management System (CMS) in the HA and the Hong Kong Cancer Registry (HKCaR), together with clinicians' and specialists' input on the definition of selected chronic diseases, a virtual registry for chronic patients is built. It includes patients ever fulfilling the pre-defined definitions throughout the years who were treated in the HA, while death is the only exit criterion of the registry. In this study, selected chronic diseases include top 5 common cancers (colorectal, breast, liver, lung, prostate), diabetes mellitus (DM), coronary heart disease (CHD), stroke, hypertension (HT), chronic obstructive pulmonary disease (COPD), chronic kidney disease (CKD) stage 5, hip fracture and glaucoma. Corresponding service utilization, such as inpatient bed days occupied (IP BDO), specialist outpatient (SOP) clinic attendances, operations and procedures done etc. can also be tracked using CMS data.

Result

The number of HA patients with selected chronic diseases rises from 1.08 million in 2010-end to 1.35 million in 2014-end, representing an average annual growth rate (AGR) of 5.8%. In 2014, the proportion of male chronic patients is 48%, while the median age of all chronic patients is 65. There are 3.19 million patients treated in the HA in 2014 and 40% of them are chronic patients. Thus, chronic patients account for 85% and 54% of acute IP BDO and SOP first attendances in the Medicine specialty respectively. Longitudinal data allows the study of disease trajectory and patient journey in details. It provides insights, especially on the service models for patients in different stages of chronic diseases, and allows the analyses for pressure points, characterizing patient profiles in their care transitions for multi-morbidity trajectories and identification of effective interventions in the delivery system. These research findings allow us to target health care planning for persons with different chronic diseases in terms of hospitalization and treatment and many other potential applications.