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Health Care Implications to an Aging Population
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Overview

The world's population is aging as a consequence of increasing longevity and decreased fertility.

It is estimated that in 2015, the percentage of the world's population aged 65 or older was 9% or 617 million persons. That population is projected to rise to 1 billion persons by 2030 and 1.6 billion by 2050.

Growth in the under 20 year old population is anticipated to be flat and moderately increasing over the next 30 years.

Europe is currently the oldest region with 17.4% of the population aged 65 or older and anticipated to encompass 25% of the population by 2050. In comparison, the same demographic is projected to triple in size in Asia, Latin America and the Caribbean, the fastest growing aging population.

Africa will have a significant rise in the older population but will remain relatively younger due to high fertility rates.

North America will retain its position as the second oldest region with projection of 21.4% aged 65 and older by 2050.

Heart disease and stroke are the leading causes of death in the U.S. population accounting for one third of the deaths in the U.S. every year affecting nearly 900,000 Americans yearly. The cost is staggering with direct costs of 214 billion dollars and a further cost of 138 billion dollars due to lost job productivity. The non-economic costs further emphasize the magnitude of the problem.

Cancer is the second leading cause of death in the U.S. accounting for nearly 600,000 deaths annually. As of 2020, the cost to the healthcare system was approximately 174 billion dollars.

Diabetes affects more than 34.2 million Americans with another 88 million having prediabetes, the precursor to Type 2 diabetes and is directly linked to diet and obesity. Diabetes leads to chronic heart and cerebrovascular disease, kidney failure and blindness which negatively affect quality of life and cost an estimated 327 billion dollars in direct cost and lost job productivity.

Obesity is endemic, affecting 19% of children and 42% of adults. Obesity is directly linked to heart disease, diabetes and some cancers at a cost of 147 billion dollars yearly.

Arthritis affects 1 in 4 adults, over 50 million persons in the U.S. It is a leading cause of work disability and a common cause of chronic pain, incurring a total cost to the health care system of 304 billion dollars as of 2013, 164 billion dollars in lost earnings alone.

Alzheimer's disease affects 5.7 million Americans and is the sixth leading cause of death in all adults and the fifth leading cause of death in the aged 65 or older population. It is estimated that the cost associated with treatment will be between 379 billion and 500 billion dollars.

Strategies

Health care expenditures will continue to rise as the population ages due to environmental factors as well as the development of chronic diseases as part of the aging process. Many of these diseases can be prevented or modified by early intervention using lifestyle measures and appropriate introduction of medications which prevent end organ damage.

For example, obesity and poor diet are the common link to metabolic diseases such as diabetes and heart and cerebrovascular disease. Hypertension, (elevated blood pressure), hyperlipidemia, (elevated blood cholesterol), and hyperglycemia, (elevated blood sugar), are the major risk factors for these diseases and can be modified if identified early and impacted by lifestyle changes initially, and medications if needed after implementation of lifestyle changes. Cigarette smoking is another modifiable risk factor for cardiovascular and pulmonary disease which is approachable by either primary preventive strategies or secondary strategies such as smoking cessation and counselling.

An appropriate exercise regimen, tailored to the patient further enhances the comprehensive approach to the patient.

The Healthy Lifestyle Program at Roper St. Francis is an example of a Cardiometabolic Program aimed at reducing risk of chronic disease, normalizing metabolic abnormalities, decreasing the need for medications and improving overall fitness and functionality of the patient.

Fine tuning the diet and setting goals for fitness are essential to this approach. Patients meet with a dietician regularly and adjust diet to a more balanced and healthy plan. Regularly scheduled small group exercise sessions with "homework" assignments on non-gym days improve fitness, overall metabolic abnormalities and improve functionality, particularly in those patients previously limited by orthopedic issues.

The program creates structure and accountability for patients, whose greatest barriers historically have been non-adherence to diet and exercise.

Implications for Cost

The anticipated rise in health care costs due to the aging population are not sustainable. Appropriate strategies to decrease the incidence of chronic diseases and the associated costs to the healthcare system are critical if we are to sustain appropriate access to our population. Even a decrease in incidence of chronic diseases by 10% would result in savings of greater than 100 billion dollars to the

health care system. Using primary and secondary prevention strategies relying upon primarily lifestyle changes are extremely cost effective and will improve quality of life for the aging population. Improved education to the at risk population, in particular, can further enhance the positive impact to cost upon the health care system.

The 21st Century Cures Act mandates that patients have unfettered access to their medical records. Navigating through the maze of lab and imaging reports and physician notes is a daunting task for patients. Providing an organized approach to this information, providing patient approved secure access to medical records to all providers involved in the care of the patient, and utilizing Artificial Intelligence, (AI), to improve patient medical literacy with be an adjunct to the clinical approach.

Remote patient monitoring of patients with chronic diseases and the development of Virtual Care paradigms will further enhance the ability of health care providers to extend and improve care to the at risk population, concentrating efforts to the “high cost” patient using Population Health.