Medical innovations and technological advancements in the provision of health care have contributed to changing the demographic characteristics of most industrialized nations. These advances have reduced infant mortality and morbidity and have allowed people with varying health care needs to lead fuller, more productive lives. While medical achievements have provided solutions to many of our problems, they have also presented a new challenge: How to best care for the increasing number and proportion of elderly individuals in the population.

Different nations have taken various approaches in their efforts to meet the health care and eldercare needs of their elderly. In countries where healthcare is regarded as a basic right, the governments attend to a broad range of needs. In other countries, family members are still the primary source of caregivers to their aged relatives. In spite of the different approaches being taken, the trend in eldercare is to preserve the independence of the elderly with health care needs as much as possible. Technological innovations, home and community-based care and other concepts are often looked to as a means of ensuring greater independence of choice and lifestyle for the elderly.

Characteristics of an Aging Population

A significant consequence of medical advancements has been the aging of the population. While most countries have witnessed and will continue to witness an increase of elderly in their populations, the
The greatest increases are typically seen in industrialized nations. For example, according to the United States Bureau of the Census, the percentage of the United States population that is 75 years of age or older was 5.7 percent in 1996. The Census Bureau estimates that this percentage will grow to 7.9 by the year 2025.

Other nations will experience even larger leaps in the population of elderly than that witnessed by the United States. Between 1996 and 2025, the percentage of the population of those 75 years and older will rise from 5.8 percent to 14.9 percent in Japan. Germany will increase from 6.4 percent to 11.0 percent while Sweden is expected to grow from 8.5 percent to 11.6 percent.

As the populations of industrialized nations increase in age, the number of impaired individuals with care needs will also increase. Such individuals will have medical needs and will also require assistance with activities of daily living such as bathing, toileting and feeding. In addition, assistance will be required to accomplish instrumental activities of daily living such as cooking, shopping, and housekeeping. Many of these individuals will rely on wheelchairs and other assistive devices.

The prevalence of individuals with Alzheimer’s disease will also present healthcare challenges for nations. It is estimated that, by the year 2025, more than 22 million people worldwide may suffer from Alzheimer’s disease. Like many diseases, Alzheimer’s increases with an aging population. In fact, the percentage of people with Alzheimer’s doubles every five years between the ages of 65 and 85 years.

**Increasing the Family’s Role in Eldercare**

A significant trend in caring for the elderly is the increased involvement of family members. Traditionally, many industrialized nations have focused on the provision of institutional health care services such as inpatient hospitals and nursing homes. However, these venues have proved to be costly options for eldercare. In addition, hospitals and nursing homes do not adequately address the needs of elderly individuals who are impaired but do not have acute
illnesses. In lieu of such services, nations are encouraging family members to accept more responsibility in the care of their elderly relatives.

Sweden provides an illustration of the preference of family-provided eldercare in place of institutional health care services. Universal health care and long term care coverage in Sweden provides its citizens with a wide-range of eldercare services such as nursing services, home help services and adult day care. When these eldercare services are provided directly by a family member, the family member may be compensated under a paid caregiver program.

Sweden’s paid caregiver program allows the government to employ an individual to care for a relative. The amount of payment to the relative is dependent upon the needs and acuity of the relative and is paid according to the number of hours required to provide the necessary services. In 1998, the Social Services Act recommended that municipal governments in Sweden increase the amount of payments to individuals that provide informal healthcare services to their elderly relatives.

Great Britain and Germany also offer paid caregiver programs to family members as part of their universal healthcare systems. Other nations, while not offering programs quite as extensive, also anticipate the need for relatives to provide care to their aged relatives.

The United States does not provide universal healthcare coverage but does recognize the need for family members to care for their aged relatives and has passed legislation to enable employed individuals to do so. The United States’ Family and Medical Leave Act (FMLA) became effective August 5, 1993 for most employees and employers. The FMLA provides certain employees with up to 12 workweeks of unpaid leave a year for defined family or medical reasons during which their jobs are protected and their group health benefits are maintained as if they employees did not take a leave.

Employees who are covered by the FMLA may take leave under specified circumstances. One of these circumstances is to care for
the employee’s parents. In addition, the FMLA provides that employees may take intermittent or reduced schedule leave under certain circumstances. For instance, an employee is entitled to take leave for a short period of time or to have his or her schedule reduced when it is medically necessary to care for a seriously ill family member.

**Technological Advancements to Assist the Elderly**

While technological and medical advancements have contributed to the aging of the population, such advancements will also allow elderly individuals to lead fuller lives. Technology can allow elderly individuals to access a wealth of healthcare and assistive information. In turn, technology can be used to allow the healthcare needs and status of elderly individuals to be assessed from their homes. Recent years have seen the development of a wide range of programs to test and utilize such technology.

Germany has utilized telemedicine and other communication services to provide medical information to the elderly. One project employed videoconferencing-based communications and a computer-based information system to provide rehabilitation to elderly patients. The patients in the project were able to obtain information about their care needs from a medical center staffed with physicians, physiotherapists and social workers. Whereas before this technological advancement, the patients would have to travel considerable distances to access the expertise of such professionals, telemedicine allows the patients to be evaluated from their own homes.

Technology is also being developed that remotely monitors elderly individuals’ vital signs. Engineering students in Sweden have developed a system that is worn on an individual’s arm. The vital signs monitoring system will monitor blood pressure and pulse rate and will immediately alert medical personnel of unexpected changes. Thus, the system, which has yet to be clinically tested, could inform medical personnel of a patient’s change in vital signs before the patient’s life is in jeopardy. Furthermore, patients can benefit from being monitored from their own homes.
A technological program of the European Congress which helps the elderly successfully leave their homes is the Transport Using Rehabilitation Technologies Leads to Economic Efficiency (TURTLE) Program. The program was designed to develop a public information system for the elderly and disabled. The program offers information systems that assist them in utilizing public transportation systems and purchasing products. While many elderly are intimidated to use public transportation, the TURTLE system provides for real-time transportation service information such as scheduling, station locations, route information and the whether the transportation service is physical accessible. The TURTLE program will be designed to include assistive technologies that allow the elderly and disabled to enjoy the same services and products available to the rest of the population.

**End of Life Issues**

While medical care has the ability to preserve life, it also has presented numerous issues for consideration regarding the continuation of life and the quality of life. Internationally, societies are grappling with the sensitive issues of whether a person has the right to end his or her life and, if so, what role medical professionals should occupy in such a decision. These issues are likely to be examined more closely as the world’s population increases in age.

The Netherlands has historically permitted physicians to perform euthanasia, and avoid prosecution, if they adhered to specific guidelines set by the government in 1993. In the coming months, however, the Dutch Parliament is anticipated to legalize euthanasia. Belgium and France have also begun considering whether euthanasia should be legalized.

Such measures are also under consideration in the United States. The State of Oregon has already allowed assisted suicide and the State of Maine will determine the issue this fall. As the populations of the world continue to age, euthanasia and assisted suicide will continue to remain a much debated facet of providing healthcare for the elderly.
The aging of the world’s populations will present significant challenges to its health care resources. Currently, several trends have emerged which provide a glimpse of the future of eldercare practices and policies. Family and community-based resources will continue to provide a valuable contribution to the care of the elderly. Technological innovations will also help to move healthcare out of institutions and back to the patient’s home and community. Finally, euthanasia and assisted suicide will continue to be explored as end of life options.

About the Author:


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