

Introduction

The United Nations defines population aging as the process by which older individuals become a proportionally larger share of the total population. Population aging in the twentieth century was limited to developed countries. However, at the beginning of the twenty-first century, there are already more people living above age 65 globally compared to those under age five, which means population aging is in progress and will likely remain the future trend.

Understanding the shift in the aging of the global population and its implications for economic, political, social and health policies, the World Health Organization (WHO) dedicated its World Health Day (WHD) theme for 2012 to population aging under the motto 'good health adds life to years'. This was the theme of the address by the keynote speaker Dr. Jacob Kumaresan, the Executive Director of WHO New York, at the conference.

The Jean Mayer USDA Human Nutrition Research Center on Aging (HNRCA) at Tufts University, based on its mandate of promoting healthy and active aging research, hosted the day and half long conference 'Population Aging and Urbanization – A Meeting of the Minds' to commemorate WHD 2012. The conference was organized in collaboration with the WHO, Pan American Health Organization (PAHO), Massachusetts Executive Office of Elder Affairs, Harvard University Graduate School of Design, and the MIT AgeLab. In her welcome message, the Director of the HNRCA, Dr. Simin Nikbin Meydani addressed the important work the center is conducting dedicated to population aging and invited future collaborators to work with HNRCA to support the work of WHO. The Provost and Senior Vice President ad Iterim of Tufts University, Dr. Peggy Newell in her opening remarks, addressed the importance of such a gathering, the contributions of the HNRCA and delivered a congratulatory message from President Antony Monaco of Tufts University.

The conference participants addressed various topics related to healthy aging: Dr. Rosenberg, former HNRCA Director, addressed the physiology of aging related to chronic diseases; Dr. Fielding presented 'sarcopenia', Dr. Meydani, addressed nutrition and aging in developed countries; Dr. Uauy addressed diet and nutrition in developing countries; Dr. Greenhalgh-Stanley discussed access to nutrition; Dr. Fickenscher discussed paradigm shift in care of and delivery of services to the aging population; Dean Mostafavi presented the ecology of urbanization and the need for public space to meet the needs of the aging population; Ms. Neuhaus presented health disparities and the human rights issues related to disability and aging; Dr. Power focused on the importance of continuing education and community based activities; Mr. Osuna discussed the challenges the global community face in addressing quality of life for the older poor.

Mr. Bob Blancato and Ms. Kathleen Otte, presented various programs currently provided by the United States Government to older populations. Ms. Otte delivered a congratulatory message from Assistant Secretary Kathy Greenly of the US Health and Human Services. Secretary Ann Hartstein of the Massachusetts Executive Office of Elder Affairs presented Governor Deval Patick's Proclamation declaring the 7th April to be WHD in Massachusetts, to the WHO and HNRCA. Dr. Kumaresan and Dr. Meydani received the proclamation (see the following page).

The conference concluded with a panel discussion addressing best practices, trends and future collaborations. Panel participants were: Ms. Iris Adler, Program Manager of WBUR-Boston, Dr. Joseph Coughlin, Director, MIT AgeLab; Mayor Joseph Curtatone, City of Somerville; Secretary Ann Hartstein, of the Massachusetts Executive Office of Elder Affairs; Dr. Michael McBurney, Head of Scientific Affairs, DSM Nutritional Products; Dr. Simin Nikbin Meydani, Director, HNRCA, Mohsen Mostafavi, Dean, Harvard Graduate School of Design and Dr. Karen Sealey, Special Advisor, WHO/PAHO

PROCLAMATION

Commonwealth of Massachusetts



A Proclamation

His Excellency Governor Deval L. Patrick

Whereas The United Nations World Health Organization (WHO) was established on April 7, 1948 in Geneva, Switzerland; and

Whereas The World Health Organization is committed to advancing global health and primary health care for all, as issued in the Alma Ata Declaration of 1978, to promote the highest attainable standard of health as the fundamental right of every human being; and

Whereas This year's theme, Good health adds life to your years, emphasizes the importance of a healthy lifestyle, which includes physical activity, access to healthcare and social engagements that can enhance the quality of life, independence, and productivity of older adults, help them lead productive lives and be a resource for their families and communities; and

Whereas All throughout the world older populations are growing faster than the overall population, which necessitates cooperation between social, economic, political, government, business, civic organizations and academia in order to address the challenges that stem from a rapidly aging population; and

Whereas It is appropriate to recognize the policy makers, business and non-profit leaders, and health care professionals that help to further the World Health Organization's mission,

Now, Therefore, I, Deval L. Patrick, Governor of the Commonwealth of Massachusetts, do hereby proclaim April 7th, 2012, to be

WORLD HEALTH DAY

And urge all the citizens of the Commonwealth to take cognizance of this event and participate fittingly in its observance.

Given at the Executive Chamber in Boston, this twenty-eighth day of March, in the year two thousand and twelve, and of the Independence of the United States of America, the two hundred and thirty-fifth.

By His Excellency

[Signature of Deval L. Patrick]

DEVAL L. PATRICK GOVERNOR OF THE COMMONWEALTH

[Signature of William Francis Galvin]

WILLIAM FRANCIS GALVIN SECRETARY OF THE COMMONWEALTH



God Save the Commonwealth of Massachusetts

Keynote Address: Population Aging, Urbanization and Health

Jacob Kumaresan, Executive Director, World Health Organization, New York

When a 100-year old man finishes a marathon, as happened last year, we have to rethink the conventional definition of what it means to be 'old'. - Dr. Margaret Chan, Director-General, WHO.

There are many first time declarations and discoveries in Massachusetts, not just in promoting healthy aging at the HNRCA but also in many other sectors. It is also the first time that World Health Day is being celebrated in an academic environment and WHO and PAHO is pleased and honored to receive the Massachusetts Governor's Proclamation in commemoration of WHD, the first in the nation. WHO commemorates the WHD event annually on the 7th of April to create awareness throughout the world about health related issues. In 2010, urbanization was addressed and in 2012, global population aging was selected under the motto 'good health adds life to years'. We are pleased that this conference is addressing population aging and urbanization and we commend the HNRCA for organizing this important event. A 1997 Lancet report projected that the world's population was aging, and that the number of people living above age 65 was to triple between 1990-2020. We consider this to be significant as most of this growth is anticipated to be in developing countries. In 2010, the United Nations Population Prospectus projected a 1004% increase in persons living over 100 years by 2050, an increase of 351% in those 85 and older, and a 188% increase in those above age 65. This represents for the first time in human history a demographic shift - where there will be more people above age 65 compared to those under the age of 5. There is also significance in the pace of this change as it took nearly a century in Europe for the percent of older people, age 65 and above, to double from 7% to 14%; while it is expected to take only two decades for South Korea, China, Thailand and Brazil to do the same. In a period of 40 years, from 2010-2050, the population aged 65 and above in China is expected to grow from 110 to 330 million people and in India from 60 to 227 million people.

Urbanization is also changing rapidly. In 1900 only 15% of the world population lived in urban areas but, by 2008, more than half of the world population was living in urban areas and the projections for 2025 and 2050 are 60% and 70% respectively. According to the World Health Report of 2008, this represents an alarming trend with high risk of health inequalities in cities as 3 out of 4 people will be living in urban area. Further, smaller cities are now merging to form mega regions (60 million people live in Tokyo, Nagoya, Kyoto, Osaka and Kobe), urban corridors (600 kilometers from Ibadan to Lagos, Cotonou, Lome, and Accra) and city regions expand (200 kilometers of expansion around the Bangkok hinterland). If preparations are not made for this growth, there will most assuredly be wide range of negative health impacts generated by water shortages, increased pollution, violence, access to nutrient dense foods, lack of physical activity, harmful use of alcohol and tobacco, disease outbreaks and increases in non-communicable diseases (NCDs) associated with life style choices. Thus, the ten leading causes of the burden of disease in 2004 are not expected follow the same ranking by 2030. In 2004, as a percent of daily adjusted life years (DALYs), lower respiratory infection was ranked as number one but by 2030, it is expected to be number 6. Ischemic heart disease will move to number 2 in 2030 from number 4 in 2004. Road traffic accidents will move to number 3 in 2030 from number 9 in 2004. Diabetes mellitus will move to number 10 in 2030 from number 19 in 2004. HIV/AIDS will drop to number 9 in 2030 from number 5 in 2004. Diarrheal disease will drop to number 19 in 2003 from number 2 in 2004. In other words, traffic injuries will kill 1.2 million people annually; lack of physical activities for urban residents will result in 1.9 million deaths per year (losses of 19 million years of healthy life); and urban air pollution will result in 1.2 million deaths per year. Therefore, in each country-income group specific risk factors must be studied.

Access and availability of healthy food will be limited to urban poor residents who have a less active lifestyle and must also rely on energy-dense diets and 'fast foods' that are unhealthy. Age related diseases would affect the urban poor the most. Visual impairment, hearing loss, osteoarthritis, ischemic heart disease, dementia, chronic obstructive pulmonary disease, cerebrovascular disease, depression and rheumatoid arthritis are all handled better in

high income countries but are challenging for middle and low income countries. The UN General Assembly in 2011 held a high level meeting on NCDs and declared NCDs as a priority with invitations to member states, UN agencies, NGOs, including the private sector and academia, to work together to come up with a global strategy that will be spearheaded by the World Health Organization.

We acknowledge that we face many challenges, some familiar and some not so common. For example, Osaka, with all the facilities and services that it has available has the highest rate of tuberculosis prevalence compared to Sapporo, a smaller city. In Kolkata, India, where almost 33% of inhabitants are classified as living in 'slums,' the leading cause of death for adults over 40 years is cardiovascular disease and cancer. As far as achieving the Millennium Development Goals of universal coverage of skilled birth attendance, urban poor in India will never meet the targeted date of 2015 and the same is also true for the prevention of stunted growth. Developed countries mortality rates per 100,000 people show variations and therefore, each city must be analyzed separately. For example, there is high prevalence of pneumonia/influenza in New York City; diabetes in Los Angeles and HIV related deaths in San Francisco, requiring different approaches. How do we translate intervention mechanisms for policy makers? Special matrixes must be developed to show policy makers exactly where the problems exist and what combinations.

As an illustrative example we developed this matrix Ulaanbaatar, Mongolia: **physical environment and infrastructure** (safe water, road traffic accidents); **social and human development** (literacy rate, underweight children); **economics** (unemployment rate and access to credit); and **governance** (health spending and insurance coverage). The matrix clearly showed that the Nalaikh area of Ulaanbaatar was the most deprived and that the literacy rate was weak in all areas in addition to unemployment and access to credit. A more complex iteration of this example could be applied to all cities as a tool to assist policy makers.

The World Health Organization is committed to promoting good health and behavior by minimizing the consequences of chronic disease through early detection and quality care; creating physical and social environments that foster the health and participation of older people; and changing social attitudes where older people are respected and valued. We are happy to share our data and longitudinal and other studies on aging. We are committed to adding life to years:

For the video presentation click: <https://tuftsemc.box.com/shared/static/d14114be0357c88f13ac.mp4>

Physiopathology of Aging

Irwin Rosenberg, Laboratory Director, JM-USDA HNRCA at Tufts University

"Age-related dementia (Alzheimer's disease) and sarcopenia are leading causes of disability with age. Sarcopenia is an age-associated loss of skeletal muscle mass and function. The causes of sarcopenia are multi-factorial and can include disuse, endocrine functions including insulin resistance, chronic disease, inflammation, neuropathy, and nutritional deficiencies.

By understanding the physiology of aging and focusing on prevention of chronic diseases we could improve the quality of life and also extend health span, which is adding health to years. Physiopathology helps us understand the aging process, which has been the hallmark of the work at the HNRCA. The WHO is tracking various chronic diseases, which are increasing in their frequencies globally. It was estimated that by 2030, the older population will reach 2 billion and the traditional population pyramid is expected to change to a cylindrical form by 2050 for several countries. Unless we pay special attention to the physiopathology of aging and age-related chronic diseases we can expect the costs of healthcare to increase substantially.

Our studies of aging illustrate the progression in physical and cognitive decline as people age. Researchers at the HNRCA have already coined the term *sarcopenia*, as the loss of skeletal muscle mass and function associated with aging. They concluded that by promoting increased levels of physical activity it is possible to reduce the decline in strength and mobility, as well as mental fitness. For example, research at the HNRCA showed that, a 90 year old male who lost muscle mass and strength and underwent targeted exercises showed reversal and muscle gain. In a study published in *The New England Journal of Medicine* HNRCA researchers also showed that the control group and the group that received nutritional supplements did not show changes but the group that received combined exercise and nutrition supplementation showed a significant improvement in strength and even muscle mass. These results show increases in quality of life and eventually a decrease in healthcare costs. This would also mean decreases or delays in entry to nursing homes.

The history of senile dementia is as old as recorded history. In the 1900s, Alzheimer and Kraepelin talked about the gradual strangulation of the blood supply to the brain and organic brain deterioration. In other words, they described a vascular phenomenon related to dementia. In 1907, Alzheimer discovered a peculiar disease of the cerebral cortex, arteriosclerotic dementia, which was rediscovered in the late 1970s. Alzheimer noticed age related dementia in a 51-year-old patient who had significant plaque deposits on his brain and general atrophy and loss of function. Although, Alzheimer described arteriosclerotic dementia, later references to his work often did not address the aspect of vascular dementia. It is important now to expand the scope of age-related dementia research to include the vascular changes as well. For example, in the Framingham Study it was noticed that dementia incidence is high in those who have high-levels of homocysteine in their blood. This could mean aging leads to metabolic changes which contribute to vascular decline, brain atrophy, and cognitive changes. We should now be able to reduce age related chronic diseases, including: heart homocysteinemia; damages to carotid and cerebrovascular arteries to prevent not only heart disease and strokes but also dementia. Other changes in physiopathology of nutrition with aging include: Deficiencies of B vitamins which may prevent efficient oxygen delivery to the brain; Seasonal vitamin D deficiencies which affect older people as the ability to absorb vitamin D decreases with age; damage to lens proteins that increase cataract symptoms; and decline or loss of immune functions which prevent chronic disease, risks of infection, cancer and death.

For the video presentation click: <https://tuftsemc.box.com/shared/static/3b5830fcb9d5d8508511.mp4>

Physiology of Aging

Roger Fielding, Laboratory Director, JMUSDA HNRCA at Tufts University

Aging causes an inflammatory process and also increases and causes skeletal muscle atrophy or breakdown. While cachexia may be a component of sarcopenia, the two conditions are not the same."

Sarcopenia is an important but not fully understood clinical syndrome in older adults. We already know that physical activity can improve physical functioning and may prevent disability in at risk populations of older adults. Most importantly, physical activity can be successfully integrated into existing services for older adults. The previous speaker, and former HNRCA Director, Dr. Irwin Rosenberg first coined the term Sarcopenia in 1989. It was drawn from two Greek words: sarx (flesh) and penia (loss). Sarcopenia is the most important age-related decline that affects ambulation, mobility, independence and even respiration. In 1995, Evans defined sarcopenia as a decline in skeletal muscle mass. Studies conducted at the HNRCA confirmed muscle mass declines as people age, which also includes skeletal muscle changes and muscle function, declining protein turnover, neurological changes and decline in circulating anabolic hormones.

Muscle mass matters because the total muscle size affects strength but the relationship between muscle mass and muscle strength is complex. For example, interventions that increase lean mass do not necessarily increase strength and voluntary weight loss leads to reduction in skeletal muscle mass but not necessarily changes in strength. There is, however, a correlation between change in lean mass vs. strength in older adults as illustrated in our longitudinal study conducted over three years involving 3,000 older adults. Interest in sarcopenia studies has increased in the last 10 years as more and more evidence shows the high cost of sarcopenia. In 2000, the cost associated with sarcopenia in the USA reached an estimated USD 18.5 billion, which was 1.5% of all healthcare costs. Just a reduction of 10% of sarcopenia incidence could reduce the cost by USD 1.1 billion (Janssen et al. 2004). However, despite high prevalence and major implications, sarcopenia has neither been given a broadly accepted definition, nor does there exist a consensus diagnosis, ICD 9 Code or treatment guidelines. There are movements to define sarcopenia and the current popularly accepted definition is 'age-associated loss of skeletal muscle mass and functions'. However, while acceptance lags behind, awareness of sarcopenia as a clinical syndrome is increasing. Currently, there are limited therapies available including. One of which is androgen therapy to improve muscle mass, however the safety of this therapy is not fully understood. Resistance training could also strengthen muscle mass, but the response is limited in frail older adults. Several SARM selective androgen receptor modulators and anti-myostatin therapies are now in Phase II development.

We think clinical trials of nutrition and physical activity should address functional limitations and/or disability to prevent disability and dependency. Interventions must include physical activity, nutrition, pharmacology and therapies leading to self-care, independent living in the community in addition to mobility at home and within the community. Why do we target physical activity? Because the amount of physical activity engaged in by older adults decreases dramatically starting in middle age, and these increased periods of sedentary time gradually lead to moderate to severe functional limitations. Future studies should focus on large-scale, well-designed trials to ascertain whether physical activity programs can prevent disability as people advance into old age, but life style interventions are also important. The HNRCA has already developed a year-long simple test, based on physical activities that include aerobics, walking, strength training, flexibility, balance and behavior change counseling for older adults 70-89 years old who are sedentary but able to walk 400 meters. The study concluded that the intervention was safe and that significant change in successful aging was observed.

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Demography of Aging

Dr. Ricardo Uauy, Institute of Nutrition, INTA University of Chile and London School of Hygiene and Tropical Medicine, London

The trend of extended life expectancy for Homo sapiens has been increasing mainly based on decreases in infant mortality, but also due to increases in better nutrition and better diets. Eventually it will depend more on decreases in chronic diseases and caloric restriction.

Before 1919, very few people lived above age 100; between 1920-1949 there was some progress; between 1960-1990 there were considerable increases and between 1960-1999, the number of people living beyond 100 years increased by 3.5%. This confirms that the global population is increasing and growing older.

While 90% of countries that have increased life expectancies by 15, 20 or 30 years have done it by decreasing infant mortality, the reality is that civil strife and malnutrition continues to cause drops in life expectancy. In the United Kingdom an increase of 25 years in life expectancy took almost 120 years, from 1890–2010, however China will only require about half that time to increase its life expectancy by 25 years (between 1975-2030). Nutrition plays an important role in delaying morbidity and mortality, but famine is still a reality that impacts longevity and good health in many countries, especially in Sub-Saharan Africa. In Sub-Saharan Africa, consumption of fresh vegetables is low as is the average BMI (approximately lower than 23). While 1 out of 5 people in Europe, in addition to several other countries, have attained an overall life expectancy of 80-85 years, the majority of the world population lives between 60-70 years and a considerable number, especially in Sub-Saharan Africa die before age 55. Therefore, the life expectancy range for the global community in 2008 ranges indicate two sets of groups –80 years and –55 years,. The prediction for 2000-2050, according to the United Nations, is an increase in the aging of the world population with those over age 65 outnumbering those below age 15. Most of the increases will be in Europe: 35%, North America: 25% and Africa: 5-10%.

Demographic transition and the expanding North-South economic gap impacts population aging. We are making progress, but we have more people stuck in poverty now than ever. As a general rule, women live longer than men as they are better protected biologically. In Africa, this is not the case. The average life expectancy of women illustrates this concept (Japan 86, global 76 and Africa 48). That statistics for the infant mortality for girls runs parallel to this trend.

Chronic diseases generally affect people above age 70 but 14 million deaths occur in developing countries from Non-communicable diseases (NCDs) where life expectancy is still low. High rates of premature deaths from NCDs also occur in Sub Saharan Africa. The WHO estimates that work on the prevention of NCDs, could save 36 million lives. Therefore, prevention of NCDs should be a priority in order to promote healthy aging. Disability related to preventable NCDs not only carries the obvious, associated health implications but also have implications on economic development. Many of the causes of NCDs are preventable (i.e. eliminating tobacco). It is also known that one third of cancers are caused by obesity. Obtaining energy from high-fat foods and the consumption of high levels of sodium could also be decreased. The current trend is leading towards overall increases of NCD incidence in developing countries. Now is the time to slow the onset. In 2008, global mortality rates were attributable to: blood pressure due to over-consumption of sodium, high cholesterol, being underweight, high BMI, physical inactivity, alcohol, unsafe drinking water, indoor smoke, iron and vitamin A deficiencies, unsafe use of drugs and unsafe sex.

People with low incomes tend to demonstrate higher consumption rates of sodium; leading to high blood pressure and stroke. They are also more likely to consume larger quantities of saturated fats compared to those in high-income groups and thus are more susceptible to cardiovascular disease. The future trend is for deaths from non-infectious disease to increase in Africa and South East Asia by +27% and +21% respectively while deaths from infectious disease are predicted to increase only by +6% and -16% respectively. The problem is that malnutrition

throughout life affects people in later years. When early malnutrition is not eliminated children the result is stunting. When, as adults, they try to catch up, they gain weight, not height, and this results in adult stunting. More than 171 million children are now affected by stunting and they will eventually be obese. As shown in a study in India, early malnutrition results in stunted children and stunted obese adults with accelerated BMI and increased diabetes by 150%. We can modify socioeconomic, cultural, political and environmental determinants including globalization and urbanization. We can also modify risk factors by eliminating unhealthy life style risk factors including high blood pressure, reduced blood glucose, abnormal blood lipids and eliminate obesity, diabetes, and some NCDs in addition to increasing physical activity. The one thing we cannot change in the aging process is heredity. Investments in early childhood development nutrition and health in order to prevent of loss of function later in life and will promote productivity and longevity and increase benefit to all. Promoting healthy aging requires taking care of fetal life, infant and child health, adolescent health as well as adult health because aging does not start at 40 but at birth.

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Nutrition and Aging

Simin Meydani: Director, JMUSDA-HNRCA at Tufts University

A significant portion of older Americans is afflicted by both under-nutrition and over-nutrition, contributing to higher incidence of mortality and morbidity from chronic non-infectious and infectious diseases.

We have already discussed the importance of genetics, environmental factors and lifestyle on healthy aging and longevity. We know by modification of extrinsic factors such as nutrition, exercise and changes in lifestyle and psychosocial outlooks we can improve quality of life.

Under and over nutrition have been identified as the root causes of many age associated chronic diseases and death including cancer, cardiovascular disease, cataract & macular degeneration, dementia, diabetes, infection, osteoporosis and sarcopenia. In the US, these diseases are the leading causes of death and they are significant among the older population. Ironically, micronutrient deficiencies and over-nutrition coexist at the same time in the same person but are preventable. In the United States, a significant portion of the older population has nutritional problems exhibited as both under-nutrition (micronutrient deficiencies) and over-nutrition (obesity). At the HNRCA we are fully engaged in addressing the problems of under and over nutrition in older adults to promote healthy aging and longevity. It is important to know that factors contributing to these nutritional problems in the elderly include: disease, decreased physical activity, inability to chew food adequately, polypharmacy, living alone and having limited income.

Micronutrient deficiencies associated with older adults include Vitamin D, E, B12, B6, Folate, Zinc, Selenium, Iron and calcium. These deficiencies occur due to low intake or low absorption and they influence availabilities of nutrients. In the United States, only 25% of the population is meeting the RDA for Vitamins B6 and B12. Vitamin B deficiencies are associated with coronary artery diseases, stroke, Alzheimer's, Parkinson's and cancer. Folate deficiency is also known to increase colorectal cancer. Low levels of homocysteine, as presented by Dr. Rosenberg, results in dementia. Very few of the elderly population meet the required standard for vitamin D, this along with reductions in calcium intake and absorption also cause issues with bone health.

With aging there is an imbalance in antioxidant/oxidative stress, which is identified as a contributing factor to chronic and infectious disease. For example 30% of nursing home residents were shown to have low serum Zinc levels. Zinc is a key nutrient for optimal immune response. The elderly have increased susceptibility to and mortality from infectious disease because of impaired immune response. Studies at the HNRCA showed that nursing home residents with low zinc levels have significantly higher incidence of pneumonia and a higher amount of days spent with pneumonia when they contract it. We also know that supplementation with vitamin E improves in vivo and in vitro indices of immune response. A randomized study conducted by HNRCA scientists showed that supplementation with vitamin E resulted in significant reductions in upper respiratory infections (35-37% reduction). Age associated macular degeneration risk factors were also reduced with the help of supplementation of vitamins C and E, zinc, Xanthophyll/carotenoids, lowering glycemic index and increasing fruit and vegetable intakes to 5-9 daily servings.

Over nutrition also impacts healthy aging. In the US elderly population, those age 60 and above, 30% of women and 45% of men are overweight and 30% of women and 22% of men are obese. High caloric intake, and low physical activity are the leading causes of obesity. Obesity is associated with chronic inflammation which has been identified as a contributor to many age-associated diseases. Weight reduction, on the other hand, is associated with reduced inflammation and reduced risk of chronic diseases. HNRCA scientists showed that those who consume whole grain products have significantly lower levels of inflammation compared to those who do not. HNRCA is participating in a multicenter study sponsored by NIH/NIA that addresses the impact of two years of caloric restriction on biological markers of healthy aging. Results from the pilot phase of the study conducted at the HNRCA on caloric restriction involving men and women age 25-45 for 6 months showed a significant reduction in inflammatory markers and

improvement in cell mediated immune response. Conclusions on the long-term effect of caloric restriction in humans await the results of the above-mentioned larger clinical trial.

Provisions of adequate and nutritious food to maintain optimal weight and meet nutrition requirements for the elderly is a cost-effective strategy that adds life to years, promotes good health and healthy aging. One way that HNRCA scientists are helping to promote optimal nutrition for older adults is through development of the "My Plate for Older Adults" which provides simplified information to help older adults make healthy food choices.

For the video presentation click: <https://tuftsemc.box.com/shared/static/5213de23d7dccb8c79d0.mp4>

Nutrition and Aging

Dr. Nadia Greenhalgh-Stanley: Assistant Professor of Economics, Kent State University

The elderly population has strong attachments to their local neighborhoods, which may have shortages of fresh foodstuffs and they may have physical limitations and chronic health problems that make it difficult for them to travel outside their neighborhoods to find fresh and healthy foods. Therefore, access to nutrition for the elderly while improving dietary health outcomes must be a priority.

We have to acknowledge the correlation between food deserts, (neighborhoods where there is limited access to fresh food and vegetables) and poor health outcomes for the elderly. Older people may be uniquely affected by food deserts because they have limited transport options to get to food markets and grocery stores. Despite the fact they live on fixed incomes to purchase additional nutrient rich foods, only 34% of the eligible elderly population in the US access food stamps but the take up rate of the general eligible population is 64%. Also vision impairments and other chronic illnesses may limit them from accessing foods because they are sometimes not able to drive."

The United States Department of Agriculture uses government data to define food deserts and how it impacts the elderly population using three criteria: 1) Low income census tracts based of the Treasury's New Market Tax Credit Program defines poverty based on incomes. 2) Estimate the number & percentage of people with low access to food: in Urban areas those who live >1mile from a super market and in rural areas those who live >10 miles from a super market and 3) Target areas with greater needs: those who have at least 500 people or at least one third of the population with low income.

In 2006, USDA surveyed the entire country and found that an estimated 13.5 million people have low access (11.1 million urban, 2.4 million rural), which has major health consequences. Therefore, policy makers must address food deserts because recent findings on causes and consequences of food environments showed: 1) fast food establishments are convenient but lead to obesity and they coexist with food deserts but are known as food swamps (high levels of unhealthy options). 2) Food deserts showed mixed results in obesity, while on one hand food deserts result in reduced nutrition and food insecurity, they also showed lower BMI due to limited access to food. The authors use the 2006 Health and Retirement Study (HRS), which started in 1992 and included 26,000 elderly adults. The research focuses on the most at-risk adults 60 years and older without high school diplomas and compares it to food desert census tracts defined by the USDA. While it requires additional investigation, this study used a cross-sectional analysis and already showed a positive correlation between those elderly who live in food deserts and those with poor health. Those who live in food deserts report higher levels of food insufficiency, higher incidence of receiving subsidized meals, are more likely to skip prescriptions due to financial constraints, and had more total health conditions with lower BMIs.

We now know that the elderly populations who live in food deserts are worse off compared to those who do not. More work is needed to determine whether food deserts cause worse diets and negative health-related outcomes or poor elderly are more likely to live in food deserts. The 2010 food desert map will show a lot more that was not covered in the 2006 map. The new map, commissioned by the US Congress in 2008, will include additional locations of farmers markets and groceries.

For the video presentation click: <https://tuftsemc.box.com/shared/static/df89463d1fee4c725798.mp4>

Obesity and Aging

Dr. Kevin Fickenscher, President/Founder CREO Strategic Solutions, LLC

On the delivery side of healthcare we face a lot of issues globally and if we continue as we have for the last 50 years we will not be successful. We need to change how we deliver healthcare.

Jonathon Swift in 1711 said: "Vision is the art of seeing things invisible." And Marcel Proust said: "The real voyage of discovery consists not of finding new lands but of seeing the territory with new eyes." One of the problems we have in healthcare is that we have a lot of physicians, nurses and pharmacists who need to see things differently. A tsunami is not noticeable when you are in the middle of the ocean because it dissipates into the depths of the ocean but when it is closer to the shore nothing can stop its destruction. This is a good metaphor that illustrates the US healthcare system.

Who helped the US save the most money in healthcare costs in the last century? Elvis Presley did when on October 28, 1956; he had his polio immunization shots given by Dr Salk on live TV. This singlehandedly increased the immunization rate from 0.6% to 80% in just a year and a half. More importantly it changed the attitudes towards all immunizations including measles, mumps, rubella and now we are immunizing for influenza. As a result the country dramatically decreases the rate of infectious diseases, and hugely reduces healthcare costs. We could target obesity for this kind of approach in this century.

The world is shifting to economic power that puts fiscal pressure on governments, and market expectations are now based on cultural diversity and the demand on integration of various values. The US used to be the sole leader of the global economy but this is no longer true. On the other hand, the US has never faced economic limitations but is now facing a tsunami-like event that affects the US in addition to countries like China and Brazil. We will see consolidation of healthcare delivery systems and a breakdown of traditional boundaries, convergence of cross-industries and technology as well as the globalization of the workforce. Advances in technology allow work to be done on one project in multiple contexts simultaneously. For example, the reading on an x-ray taken in the US can happen instantaneously in Calcutta (expanding the outsourcing of healthcare services). However, there are still many challenges. Society demands quality goods and services at low cost, but health care industries are inconsistent and dysfunctional, causing challenges. The baby boomers are aging and the average age of nurses in the United States is 55. One third of all physicians are retiring in the next 10 years. Further, the US faces deficits in health care providers, which will get worse over time. Between 2000 and 2012, the US had deficits in technicians (2,959) providers (1,849) and others (1,088). How does this affect healthcare? It is not possible to train physicians fast enough. The projected shortage for physicians will increase from 7,400 in 2008 to 130,600 in 2025. It is almost impossible to train enough physicians to meet that shortage but, at the same time, the patient pool is increasing, more and more people are living longer and disease incidence is also increasing.

Industries must adapt to changes and this applies also to the healthcare industry. Normally, healthcare spending correlates with economic development in each nation as reflected by per capita spending, but the United States falls outside the norm as it spends significantly more on healthcare compared to the rest of developed countries. Debt to GDP ratio must be proportional and as a result Medicare is now at the center of debt discussions. How do we tap into the available global workforce? Higher education participation is 10% in developing countries but will likely shift to the 50% level of developed countries. If the more modest target of 35% participation is achieved that would mean 50 million additional students in a globalized world, far more than today's global total. The healthcare system must work in the same manner as for other supply/demand markets. Scarce commodities attract higher prices. Wherever there is a low volume of providers, they can charge almost any amount. The US medical guild is now obsolete, as drug stores are now providing primary healthcare services and social media, the emerging information democracy, is empowering consumers while simultaneously disempowering healthcare providers. Further, there are amazing breakthroughs every day. Biosensors that allow diagnosis and earlier intervention through remote monitoring can

make future living rooms into future hospitals in the case of congestive heart failure as symptoms appear 48 hours before current admission for treatment. For example, 15% of the entire healthcare budget is spent on readmission of congestive heart failure patients. According to the University of Kentucky Medical School, 32% of the congestive heart failure patients are those patients who failed to show up for their post discharge medical appointments who were readmitted within 30 days. Approximately 42% of urban patients and 47% of rural patients who are 60 years and older are also likely to be readmitted within 30 days. Therefore, to save their lives and reduce the cost of healthcare, patients who had suffered congestive heart failure and were hospitalized need monitoring and interventions where they live, not readmission.

The Cleveland Clinic has issued what they consider the five 'normals': normal weight, normal glucose level, normal cholesterol, no smoking and keeping vaccinations up-to-date. Using their employees, the Cleveland Clinic instituted annual check-ups, a tobacco cessation program, normal BMI levels and diabetes, cardiovascular and cholesterol screening. Extrapolating from their findings, if just 10% of Medicare patients follow the five 'normals', the US could save \$1 billion a year: if 75% follow the five 'normals' it will result in savings of \$200 billion a year or 10% of the nation's healthcare costs or \$1 trillion over 10 years.

For the video presentation click: <https://tuftsemc.box.com/shared/static/46cbc405d5a2f3e40265.mp4>

Urbanization and Aging

Mohsen Mostafavi, Dean, Harvard Graduate School of Design

It is possible to build new cities, and to convert existing cities, to make them age friendly and to accommodate all age groups, young and old together.



Figure 1: A promoter of beer drinking, William Hogarth, 18th century engraver, in one of his engravings, depicted the terrible consequence of drinking gin as the cause of all ills. Despite his bias, his engraving illustrated an urban environment that was crowded and industrialized.

The growth of cities often causes anxiety as it reveals all kinds of interrelated problems, including issues relating to pollution and public health. People have been speaking about the cleansing and purification of cities as far back as medieval times. Many of the early planners argued about the unhealthy outcomes of locating slaughterhouses and cemeteries inside cities, for example, and as a consequence these facilities began to be built outside city boundaries.

Despite this separation of town and country, some notable examples emerged in the nineteenth century that combine them. Regent's Park in London, for example, contains elements of town and country, including a large development of parks surrounding palaces—which were actually large developments of private homes designed to look like palaces. This also highlights the correlations between the Protestant work ethic and its emphasis on nature. At the end of the 19th century, the garden city movement started in England. The garden city promoted the establishment of smaller cities, with core activities based on radii connected by railroads. The idea was to connect cities to countryside. Early examples include Letchworth Garden City, founded in 1903, and Welwyn Garden City, both in Hertfordshire, north of London.

In the 20th century, the concept of healthy cities emerged but the 19th century palaces were replaced by high rises built in the middle of parks. (At one time, in Hong Kong, a single structure housed 30,000, people.) In Paris in the early 1930s, the Salvation Army Hostel was built to house the poor, which led to the construction of other institutions for housing an aging population. Even though it resulted in building institutions, the main idea was caring for those who needed help.

Frank Lloyd Wright developed the concept of Broadacre City where each inhabitant would receive one acre of land and become autonomous and self-sufficient. Central to this idea was the concept of individualization and private ownership of domiciles. The concept was anti-urban but it could be argued that it inspired the opposite: diverse suburban towns promoting individualism emerged and sidewalks and parking areas were introduced. These towns were developed to move away from crowded cities.

A recent study led by Professor Nancy Krieger at the Harvard School of Public Health and discussed in an essay entitled, "Ecological Urbanism and Health Equity: An Ecosocial Perspective" provided an ecological perspective that also addresses issues of urban injustice and inequalities. Maps produced by the study demonstrate the discrepancies between longevity and neighborhoods. Some parts of Boston have much higher rates of longevity than others. To achieve health equity, the study argues, we need to "1. Improve daily living conditions, 2. Tackle the inequitable distribution of power, money, and resources, and 3. Measure and understand the problem and assess the impact of action." The idea the study promotes includes the need to understand the city first in order to build better cities. For example, in order to establish better integration programs, it is important to understand the type of inequity a city produces.

We must now think about how the design of the city can address issues of an aging population and urbanization and plan to use urban land as a catalyst to generate more societal engagement, for example to foster relationships between young and old residents, and indeed all age groups. We know the more economically advanced countries have more elderly people. New structures could be built with imagination, and existing structures could be transformed, to incorporate and promote access for all ages. New cities could be built, or more pleasure and enjoyment sites incorporated into old ones.



Figure 2: Playing chess in Brisbane. © Judith Parrott.

In other words, activities and performances could be incorporated into new buildings and existing cities for the benefits of aging citizens. There are already best practices: parking buildings have been converted into multipurpose centers that include restaurants and residences. In some areas, cemeteries are now being used for recreation (Mount Auburn Cemetery in Cambridge, Massachusetts is one of the first and finest examples of the fusion of cemeteries with recreation). Public spaces are being used as places for alternative socialization areas based on the needs of aging communities such as providing areas for group exercises, among other examples. A new kind of relationship between aesthetics and sustainability is also being considered. Recent studies have looked into the sensuality and smell of cities rather than just the program and physical form.

It is possible to build new cities, and to convert existing cities, to make them age friendly and to accommodate all age groups, young and old together. Cities and urbanization in the contexts of an aging population is an exciting and important topic and requires collaboration between various disciplines in order to promote healthy aging in urban settings.

For the video presentation click: <https://tuftsemc.box.com/shared/static/de5d8ffe85b19f6569a0.mp4>

Poverty and Aging

Raúl Cárdenas Osuna, Founder and Director, Torolab

When more than half of the people live in poverty and more than a tenth of live in abject poverty, it is safe to assume that the elderly are impacted the most.

Poverty in Mexico has three dimensions: patrimonial, capacity and nutritional poverty. No accurate census is available and it is very difficult to design and implement any programs to alleviate poverty, particularly in the older population. People are not counted properly because the system ignores them. The level of poverty in Mexico is high: 52% live in poverty and 12% live below the poverty level. Further, Mexico has the second highest prevalence of obesity in the Americas next to the USA. Diabetes and inflammatory diseases combined with poverty are major problems in Mexico. Nutrient deficiencies are high in Mexican diets, especially for the poor.

Similar to the rest of the global community, life expectancy is increasing in Mexico, but population programs are focused on the younger population, under 18 years. Since 8 out to 10 older people live in poverty, it will be problematic to assess the quality of life for the elderly group. Although, the consequences of poverty affect quality of life, preventable chronic diseases are not addressed. Despite the fact that the older poor are also affected by a higher prevalence of mental health issues and depression, these issues too are rarely addressed.

In Tijuana, an experimental program of small food delivery interventions helped change how people consume food and what they thought about what they are eating. Urban projects must have economic and health benefits to the community. Urban intervention, including architecture, and city designs must be representative of the people. Collaboration is the basis for building the community.

For the video presentation click: <https://tuftsemc.box.com/shared/static/0b8bfc676d2040e21bdc.mp4>

Disability and Aging

Ms. Rhonda Neuhaus, Policy Analyst, Government Affairs, Disability Rights Education and Defense Fund

To close the gap in disparities in health and other services, it is not the individuals with disabilities or who are older that must change but society that must make the necessary accommodations. It is now more important than ever to make the necessary changes because there are now an estimated one billion people with disabilities globally.

Health Disparities Among People with Disabilities and Public Policy Implications

Rhonda Neuhaus, is a lawyer and a policy analyst who works in Washington D.C., for Disability Rights Education and Defense Fund (DREDF) spoke as a lawyer, international development professional, policy analyst and a person with a disability (bilateral amputee since birth) and framed her perspective on disability and the different models that existing in the world.

The first view of people with disabilities was through the charity model—people with disabilities as objects of charity, mainly through the church. The second model is the Medical Model—through which people with disabilities are seen needing to be cured/fixated. And, the 3rd, which I operate under is the Social/Civil Rights Model where it isn't the person who needs to be fixed – but society that is not always inclusive of all members. This approach starts with the high expectation of people with disabilities enjoying all of their civil rights to education, employment, political participation, access to healthcare and the range of civil and human rights protections. This is the model fueling the American's with Disabilities Act, ACA, and other civil rights legislation domestically as well as the UN Convention on the Rights of Persons with Disabilities internationally – and the work I have done both internationally and domestically.

It also yields to the discussion of universal design—that, again, it's not the person that needs to change—but that society—buses, schools, buildings, places of employment, hospitals, etc are built to be accessible to all (people with disabilities, seniors, pregnant mothers, etc). It is estimated that there are over 1B people with disabilities in the world; and approximately 47.5M in the US—at about 18-19%. And, we heard yesterday of the staggering statistics of the rise of seniors now with the baby boomers and into the future domestically and especially globally.

Defining disability from a public health standpoint, the way disability has been defined for public health purposes is by the ICF definition—and this is being used globally, again in the health context. This definition recognizes that people have physical and mental impairments (diseases, disorders, injuries, traumas...) – and how those impairments impact you are because of various contextual factors (including environmental, civil rights provisions, personal attributes). This definition sees disability on a continuum, incorporating the personal and the environmental -- that there will always be changes relevant to the lives of all people and at different times in their lives—disability is not something that happens only to a minority of humanity—it is a common and natural feature of the human condition. The 2 things we do know equals if people live long enough there will be people with disabilities; and younger people with disabilities are aging.

The ADA definition also recognizes that in addition to physical or mental impairments that there are societal barriers, including negative stereotypes and architectural and communication barriers (or the failure to provide reasonable accommodation) that can give rise to the denial or limitation of opportunities [physical or mental impairment that substantially limit 1 or more major life activities, record of such impairment or is regarded as having such an impairment. Who is covered continues to evolve under law.]

Currently, there is a big move to recognize that disability is understood as a relationship between impairment and environmental factors—not just residing within the individual- and not something that is inherently “bad.” This goes back to the social/civil rights model of disability – that disability is not just an impairment to be fixed—but it's society, how we see people with disabilities in the public health context being adopted worldwide—and how we think about solutions funding,

etc—to all the issues I will discuss today. This is a large shift over time—to disability not as a diagnosis or disease process - but more of a function of what is happening in the outside world related to that impairment.

Numbers and statistics on disability are challenging. Data collection methods, self-disclosure, understanding of disability all varies. With regards to seniors, older persons, for example, may not self-identify as a person having a disability, despite having significant difficulties in functioning, because they consider it appropriate for their age. But, my definition, many – though not all – seniors are people with disabilities. Seniors often may refuse to use wheelchairs, hearing aids, or other accommodations when things change with regards to their mobility or independence—but it's just different. And, it's that perception by society creates many of the same realities in healthcare and living in society as does being a person with a disability. The difference is then whether someone considers themselves a member of the disability community and brings with them it's culture and history.

At the international level, we have the CRPD (ratified in 112 countries; and signed by 153, including the US). The CRPD does not define disability, purposely, leaving it up to each country to define in their implementing legislation - but puts forth 30+ enumerated articles of all rights—including right to healthcare. Now, before I jump into specific healthcare issues- I want to just say that as a person with a disability, attorney and advocate, I was surprised yesterday to hear negative references to disability, as in it not meaning one can have a full or good quality of life. With the ADA, ACA, CRPD giving much attention to equality internationally, I believe that prevention and civil rights work can work together to incorporate these viewpoints.

Link to healthcare and disability (and health disparities)

With that context, seeing healthcare as a matter of basic human and civil rights, for the last 40 or more years, there has been a shift in the trend toward de-medicalizing disability. For that reason, there hasn't been a lot of focus on the intersection of health and disability for people of any age. However, in the last 5-10 years, this has started to shift politically. Now, advocates in the disability rights movement have been more actively addressing the intersection between health and disability issues. As said earlier, it's important to think about this shift by separating out the pure medical part and the civil rights and disability end of healthcare. To frame the issues via equity and civil rights, the disability movement rejects the idea that people with disabilities are seen as "sick." Practically, though, we must address some serious implications about how people receive healthcare and there are severe health disparities.

Link between disability and aging

There are many similarities and differences between seniors who are aging and people with disabilities. It isn't right to say they are all the same or very different—but there is overlap and it's important to understand the issues on a spectrum. First is the concept of health disparities. The report and framework, Healthy People 2010 identified that pwd have health disparities and identified disability as a demographic issue and, because of this report has gained currency in the public over the last decade. 10 years ago this, for the first time, legitimized the notion that people with physical and mental impairments face similar issues in accessing healthcare as that racial and ethnic groups do—who also don't receive sufficient or consistent healthcare. Also, that action is needed on behalf of the public health community that disability is a reality and that, in addition to prevention of disability (and the secondary conditions of people who already have disabilities), there must be additional steps taken to be aware of the needs of pwd. This has been a new idea – and is still slowly being understood in the public health community—and in the race, ethnicity and gender communities. It definitely has not gained widespread understanding or acceptance yet.

(Health disparities coalition – Health Equities Act)

- breaking down silos—it's been really important in my work to raise the issues of disability in other context—with race and ethnicity and gender groups. For example, when working on newly introduced Health Equity Acts in the House and Senate, it's been important for disability and GLBT groups to talk about the intersections of pwd who are women or of an ethnic or racial minority (same with GLBTQ). It's getting people to think outside of their community, their silo, when doing this work – and it's the same in the disability and senior communities.

What are the core concerns in terms of the right to healthcare and healthcare equity for pwd and seniors?

1. **Perception:** Another thing to be conscious of related to these two communities is how people with disabilities and seniors perceive their positions and their disabilities. People in the disability community see things often through the

rights lens—and requesting accommodations. Seniors may just think they are “old”. But, these are just different reactions to the same problem. Solutions should be the same for everyone—but the person going in for the care perceives their situations differently. It is the burden of the HC professionals to address the issues across the board, regardless of how it is framed by the individual. For example, the issues of exam table access, hearing impairments at any age—HC professionals need to step up and realize that these accommodations need to be provided. HC accommodations MUST be wrapped up in best practices and equality issues. This is a link that isn’t often understood or grasped. Globally- people with disabilities are often invisible – in HC, in political participation and many other area. Seen as asexual – or hyper sexual. In the global context, it’s extremely important for people with disabilities to be on the agenda of development programs—for example, many community trainings on reproductive health or other health issues, the disability communities are not included—RFP’s from State and AID must be inclusive of disability, as is with gender. I’ve been working for many years with the InterAction disability working group to work towards of inclusion of people with disabilities at all levels (staff, volunteers, beneficiaries of programs). And, in creation of programs, it’s essential to include people with disabilities (and seniors) as stakeholders in the process. This is a larger topic for another presentation but I wanted it to be mentioned here for those of you who are working internationally.

2. **Stereotypes:** In the disability world, often stereotypes drive bad healthcare—mainly because of faulty assumptions about someone’s disability. This is widespread and creates a lot of obstacles for the assertion of someone’s rights to receive sufficient and comprehensive healthcare.
 - a. **Examples** from NCD report-
 - b. Women with disabilities need health services related to sexuality, reproductive care, and childbearing just like all women—but social misperceptions and stereotypes around disability make it difficult for women to get such services—routine OB/GYN appointments, STD screening, contraception, etc.
 - c. Seeing women with disabilities as either asexual or highly sexual. Also, myths around women with disabilities and HIV/AIDS.
 - d. Going along with this is the fact that there is limited training among HC providers in medical school on these issues. Any trainings that do occur are more often than not given by advocacy groups- and not medical schools themselves.

The knowledge that medical schools do not educate on disability competency—so doctors don’t know the kinds of accommodations that they need to provide. This goes back to the entrenched nature of disability stereotypes and how it relates back to medical training – and then how people with disabilities (and seniors) are treated. This trend is changing through advocacy but VERY SLOWLY. 3 years ago during the report by the National Council on Disability (NCD)—they found there were 90 med schools offering some kind of course, but all but 1 was voluntary and they were not funded by the university.

3. **Physical and programmatic access:** One of our biggest concerns is the extent to which people have appropriate access to services—from the programmatic access perspective. Going to a physician’s office—climbing on a table, MRI machine, scale, etc. There’s also communication access and cultural competency concerns – extra time for people with developmental or intellectual disability; alt formats for people who are visually impaired; ASL or other communication access for people who are Deaf and hard of hearing—something where people at least recognize is both a senior and disability issue. Inaccessible transportation to medical facilities is also a barrier.

This is so important because people with disabilities will often not seek out routine medical treatment because of the barriers but then miss an early diagnosis, leading to more severe health outcomes—and also greater cost for our HC systems.

In the US at the moment the Access Board is in the process of receiving comments for an NPRM on Medical and Diagnostic medical equipment—but in the international world, this is not even a blip on the radar screen.

Regarding the question of seniors who acquire disabilities- to best serve this population it may take more active outreach on the part of providers, as people don’t self ID as pwd or know their rights. They may not want to “make

waves” or see themselves as “trouble.” Not being able to get onto exam tables may just be chalked up to being “old” – but it’s actually accommodation issues.

Under this there are a few things to also mention. Doctors often give exams to people in their wheelchairs instead of getting them on the inaccessible tables. This can have drastic effects of things being missed. And, access to healthcare also links to other areas of civil rights for pwd—for example, transportation. We know from studies we have done that waiting for paratransit or difficulties getting to offices, appointments may be missed. Finally, relating to communication and other barriers—there is a significant loss of information between patient and provider. But, all of this is covered in our legislation- as a civil right—the ADA, ACA, and others and must be addressed systemically.

Implications for public policy

There are numerous implications related to public policy stemming from these issues – and they all stem from the civil rights and equity concerns of people with disabilities and seniors. Reports like Healthy People 2010, laws like the ACA and studies like those done with the CDC say that this is an issue—and they are now being actively worked on at the federal level.

1. One issue I work closely with is the area of LTSS- long-term services and supports and HCBS – Home and community based services, one of the federal pushes to wrap policies around these issues. The main idea is for individuals (both seniors and people with disabilities) to live at home and not in institutions. To live independently and happily as people with disabilities. This is linked to the assumptions above because the assumption is that if you develop an impairment, you cannot live at home.
2. The question politically and economically is how to finance LTSS both publically and privately. This issue of community living is critical – and it links together the relationship between supports and it’s interaction with the delivery of medical care, particularly for low income and poor people with disabilities, regardless of age. Seniors also want to ward off institutionalization in the same way younger people do, but it’s often framed differently. PWD frame it politically – and are working politically rebalance the system – and get funding into the community. At the same time, the federal government puts money into institutionalization as the disability is fighting to get community services. But the big point here is that states are moving towards HCBS and LTSS because of the cost drivers – this is one of the good things to actually come out of budget cuts is momentum in this area—states are learning that there are huge savings if combining expenses. Community care is saving more money (both in HC and services) – and improving lives for both pwd and seniors. Now, we just have to monitor closely after all the financial gains are realized from reducing institutionalization.

I also want to mention the concept of choice—which is another commonality between the disability and senior communities. Here is that accommodation in healthcare and living at home cut across everyone—the difference is how it is implemented:

- We find young people want control—want to hire and fire their attendance; are going out and living in the communities actively- go to bars, hear music, etc.
 - Seniors may or may not have the same aims—often prefer to stay home, be with friends. But, although lifestyles may be different, the desire to choose is the same across all age groups. The particulars might change in areas like—how to manage the hiring and firing of assistance, pay for them, address MH or cognitive issues, etc. The developmental disability community has been working on this for a very long time—and could provide some excellent models for the senior community—if the silos between the communities weren’t so solid.
 - The disability advocacy community has been arguing these issues for the last 40 years – which has yielded the new trend toward de-institutionalization.
3. A final point I want to make is that once a persona has a disability, there are also extreme barriers to prevention—that people cannot be part of studies—we must think to solutions to address inequities, barriers to HC and increased quality of life.

Challenges ahead:

1. The next meaningful step for both seniors and people with disabilities is having a meaningful quality of life in the community – and gaining access to community services. From a health standpoint, for both people with disabilities and seniors, a big challenge is in creating community. Especially with seniors who lose function and then they often stay home and lose their ties to the community. We know there is well-documented problems and abuses in institutions, but sometimes, even in the community, there can be isolation—i.e. Only seeing meals on wheels or something like that. Again, the disability community (especially young persons with disabilities) have worked out how to utilize the infrastructure mechanisms for being able to get out and about.
2. Also going forward with the Affordable Care Act- the ACA for the first time creates provisions for people with disabilities and seniors that offer a lot of opportunities for reform—to address the issues we have been discussing:
 - standards for medical equipment
 - Money follows the person rebalancing incentive money—allows states to get more money if they do more de-institutionalization.
 - More efforts at data collection on accessibility and training—data that will be collected (though hasn't yet) could significantly inform public policy in the future.
3. Another big issue is the issue of pre-existing condition where people cannot get HC (which, as we all know, is a big issue in the ACA challenges this month). The exchanges set up under the ACA will make products available to people buying privately. Feds are supporting people in purchasing the policy. This will be of significant impact to people with disabilities, as currently 17-29% of people with disabilities do not have insurance. There is also the issue of people being underinsured, with HC costs being high. This then brings people back into the charity model mentioned earlier, of relying on the aid of family, even if they are happy or willing to do so, but not as people with disabilities in their power to control their own choices and lives.
4. Finally, there's another overlap issue for people with disabilities and seniors- and that's related to what we call the "Duals" or dually eligible. The ACA has sparked a move towards trying to combine services under these two programs—in order to improve care and have better care coordination. With this, there will also be greater monitoring of low-income individuals with disabilities and seniors under these programs. The feds are creating incentives for states to engage in this coordination—currently, 14 states have submitted proposals (including MA) and there are more expected. The Feds are thinking to move on approvals for combining these programs this year.
5. Other misc issues that I will not have time to cover today include (ONLY IF TIME):
 - Caregiver support issues- has it's own issues.
 - Specific health disparity issues related to ethnic and other minority groups with disabilities—i.e. there is support for more blacks with disabilities being in institutions while more Caucasians are receiving HCBS.

Conclusion:

The issues related to persons with disabilities and seniors are similar but may also require different ways of addressing the issues – and it will take a shift in perspective. Going back to the question of identity- models of disability, the concept of universal design- aimed at building a society that works for all people, not just seniors and people with disabilities. It's important to say one more time that impairments change over time—as people with disabilities age or as seniors develop impairments -- we live in an aging world where it is more probable than not that people will get a disability. There must be recognition of this too in research and policies. The real issue is how do we look through a civil rights and equity lens at the programmatic and physical barriers; combat the stereotypes and lack of HC – in order to shift the system and not as a cause of disability. There are many solutions to this—but to do this, the silos must be broken down—we must see that people with disabilities and seniors are women, men, LGBT, part of ethnic, racial and religious minority groups—and disability needs should be addressed in all—and often are part of many of the groups referenced. The prevention piece must be developed along side working to meet the needs of people with disabilities and seniors as they age through services, supports and community living. The silos must come down for communication and advocacy. We must communicate and find solutions together to the challenges discussed and the steps being taken to move forward.

Lifelong Learning

Dr. Maureen Power, Executive Director, Intergenerational Urban Institute - Worcester State University

Health is about wholeness, making connections with oneself, acknowledging one's own gifts and talents and living in a community as well as a place that one wants and needs, which includes: being a part of something, learning, making a differences developing friendship, having fun and becoming oneself.

In 1983, the Commonwealth of Massachusetts passed a law that allowed the elderly population to attend universities without paying tuition and the Intergenerational Urban Institute (IUI) was established which created a community for all ages, income and education levels not just for the elderly population. The IUI focuses on educating, engaging and energizing elders by creating secure communities for them. The mission of IUI is to harness the talents of college students of all ages to meet the challenges that face our urban environments by creating a learning community of young, middle age and older students. The IUI fosters growth in knowledge, skill development, and interpersonal relationships that enable people to work effectively in service to the community. And the mission has been achieved many times over.

For example, graduates of IUI include a WWII genocide survivor. Since a common pathway out of isolation is through language, young and old alike are eager to participate in the elder immigrants' tutoring program which uses former ESL teachers. The teachers and students are energized and happy to be part of the community and continue their contribution to society. Recent retirees find purpose anew. The elders and the young connect; representing their respective cultures means a lot to all. Team leaders discover their own connections and strengths. New discoveries, new friendships are formed and make people feel important. They share what it feels like to be citizens and part of their new community.

The Intergenerational Hunger Program focuses on projects in policy and community advocacy, and has received a Commonwealth grant to end hunger. This created a new work force and campus-wide hunger awareness programs were established; creating the Hunger Outreach Team (HOT) to promote education and advocacy work. This team will make a difference because we know many seniors are hungry as only 35% of eligible seniors are enrolled in the Supplemental Nutrition Assistance Program (SNAP), formerly food stamps. We help seniors understand that it is their right to participate in entitlement programs like SNAP. For every \$5 spent on SNAP, almost double that amount is brought back into the local economy (\$9.35). This is a good incentive for all to embrace.

Already the HOT has done important work addressing the changes that impact seniors. Educate the team in all policy and legal issues and educating others and provide direct assistance to seniors helping them complete necessary applications for social programs including recreational programs.

For the video presentation click: <https://tuftsemc.box.com/shared/static/13e9009ce6294c238dde.mp4>

The Governance of Aging

Ms. Kathleen Otte, Region Administrator, United States Administration on Aging

I would like to deliver greetings and best wishes for a successful conference from Kathy Greenly, Assistant Secretary for Aging. Kathy Greenlee works closely with Kathleen Sebelius, the Secretary of Health and Human Services and wants to assure you that the Federal Government is your partner for all aging related programs.

I also want to assure you that we are serving the public in various ways that you already recognize. Congregate meals and Meals on Wheels are among the many services we provide to our elderly population. The Federal Government is a partner to the states and the states are partners to the providers.

The Federal Government is now fully engaged in promoting chronic disease self-management programs for the elderly utilizing software developed by Stanford University. The programs are: consumer based and consumer directed self-management of diabetes, fall prevention and obesity prevention; all of which allow us to monitor progress once someone enters the program. Wellness and prevention are the focus of the self-management programs, which makes medical doctors partners, not just sole providers of medical care for the elderly. I am pleased to report that in just two years, 48 states are participating in this program and I am also pleased to report that we have received a report of a 75% completion rate for the 6 week orientation/training program for the elderly.

The face of aging is changing. Aging now is not what used to be. It is important to note that we are all seniors in aging and we should become role models and lead the way to reduce dependency and the cost of aging in the future. Educational and scientific opportunities should be put forward to promote healthy aging. The Federal Government would like to partner with you and we should all worked together to promote healthy aging.

For the video presentation click: <https://tuftsemc.box.com/shared/static/095478f3cf7847f107e4.mp4>

The Governance of Aging

Robert Blancato, Executive Director, National Association of Nutrition and Aging Services

According to the 2010 report of the American Academy of Nutrition and Dietetics, 87% of older people have one or more preventable, common, non-communicable chronic diseases, but good nutrition can help reduce the onset of chronic disease as well as reduce the cost of healthcare.

Thirty percent of the population 65 and older lives in urban areas and hunger and food insecurity has increased for this group. The challenges are how to make sure no qualified older person is left out and reduce food deserts in urban settings. In the United States, examples of good government policies that promote and support good nutrition and health for older Americans, especially for those who have limited incomes are:

1. ***The Older Americans Act.*** Established in 1965, the Act has been reauthorized 15 times and today serves 9 million older Americans a day with some degree of social and human service. The current reauthorization bill includes nutrition because: 250 million meals are delivered every year, 60% are home delivered to the elderly and the rest are congregate meals. Important services provided include: reduction of food insecurity/hunger in the older population, provision of information and counseling about healthy nutrition and commodities to promote health and wellbeing. In the home delivered meal program, 52% are in the high nutritional risk category. For this group, the home delivered foods and congregate meals provide half to a third of their overall nutrition and nutrients. The recent reauthorization increases nutrition funds by 50% and promotes preventive health service with emphasis on nutrition and aims to spend 40% of the amount on congregate meals, 35% on home delivered meals and 25% to be given to states.

2. ***Renewal of the Farm Bill:*** Less than 1/3 of eligible older persons participate in the food stamp program. However, there has been an increase in enrollment by 45% due to the recession between 2009 and 2012. Now, 46 million people participate in the program. In 2009, it received an infusion of funds from the stimulus budget, which helped reduce the poverty rate by 8%. The program has commodity supplemental programs, food packages, a senior farmers' market program, an emergency program and an Indian reservation program. Priority is given to protecting older Americans from hunger and helping them increase consumption of fresh farm products.

3. ***The Affordable Care Act.*** Regardless of the robust discussions and US Supreme Court decision in June 2012, the delivery system will remain. For example, transition of nursing to home-based care and community-based services as well as medical nutrition therapy will emerge unaffected.

4. ***Funding decision:*** Based on debt-ceiling agreements, a 10-year spending plan which started in 2011, scheduled several programs for cuts, but Medicaid, Social Security and Supplemental Security Income are exempt.

Sixty-four years ago, the US adopted the Universal Declaration of Human Rights, which includes food as an important component of individual rights. We must improve access and services to older people and create coordinated programs for nutrition and health. We must recognize the value of nutrition for healthy aging and the need to distinguish investment from expenditure and acknowledge that all those programs mentioned here are investments that will save money down the road for Medicare and Medicaid.

For the video presentation click: <https://tuftsemc.box.com/shared/static/58ce5694438c6df7524d.mp4>

Panel Discussion: Governance and the Business of Aging

Panelists:

Ms. Iris Adler, WBUR Program Manager, National Public Radio
Dr. Joseph Coughlin, Director, Massachusetts Institute of Technology AgeLab
The Honorable Joseph Curtatone, Mayor, City of Somerville
The Honorable Ann L. Hartstein, Secretary, Massachusetts Executive Office of Elder Affairs
Dr. Michael McBurney, Head of Scientific Affairs, DSM Nutritional Products
Dr. Simin Nikbin Meydani, Director, JM-USDA HNRCA at Tufts University
Dr. Mohsen Mostafavi, Dean, Harvard Graduate School of Design
Dr. Karen Sealey, Special Advisor UN and Partnerships, Pan American Health Organization/World Health Organization

Moderator:

Dr. Angelo Azzi, JM-USDA HNRCA Senior Scientist

Question I: *Within your field of competence (economics, diet, nutrition, exercise, socialization, healthcare access, architecture, urban planning, disability, governance, media, etc...), what has been already done relative to the issues of population, aging and urbanization? Where is the most urgent need for action? Are there regional/national/cultural representations, which are already demonstrating success and innovation with these issues?*

Iris Adler: Public news has been paying attention to the aging of the baby boomer generation. A lot of discussion has emerged out of the social media focusing on those aged 50 and over. Democratization and digitalization of the media have helped empower many to debate and discuss issues that are relevant to the aging population. Traditionally, the ratings by younger populations of news and programs mattered significantly, but that has changed recently. As more and more people age, older the proportion of consumers in older brackets has shifted.

Joseph Coughlin: Quoting a 119-year-old woman who was once asked by a journalist why she enjoyed living so long, she replied that she had her health and could do things. To promote healthy and active living, the focus should be on transportation. The greatest challenge is how to engineer, design and build those things and institutions to enable us to manage our health and do things. Aging and disability are publicly defined to be the same. This definition is not incorrect as it is incomplete. Transportation is the glue that holds everything together. Therefore, we need to focus on how to redesign housing and transportation to make it easier for the elderly to remain mobile. If the elderly are not able to walk around or get rides and find things at their disposal in their communities, we are not doing our jobs. Europe and Portland, Oregon are the best examples of city design in this regard.

Joseph Curtatone: I once worked for a nursing home, and understand the isolation factor. Therefore I have focused on how to make Somerville a place to grow up and age. The Mayor's initiatives are based on who lives there: all age groups and all ethnic backgrounds. Working with Tufts University, Somerville established one of the most successful active and healthy living initiatives, known as 'Shape up Somerville'.

Anne Hartstein: We have known about the baby boomers for a long time. They have changed how schools and healthcare service are delivered and structured but they are now aging and are also changing retirement policies. At this time, two-thirds of the world population has reached age 65 years, which is unprecedented and has a global implication. It is important to know that aging is not about being sick and being sick is not about being old. We have to change the language by simply looking at ourselves and change what we are saying about others. For example, the media is saying 60 is the new 40 but it should be 60 is vibrant and healthy. We now know when young people have negative attitudes about aging; they live at least 5 years less compared to those who have positive attitudes

about aging. In Massachusetts, we understand that there are people who need assistance and we have established the Aging Network to help them.

Michael McBurney: Aging is a lifelong experience and should not be about the baby boomers but about all of us. One hundred years ago this year, the term vitamins was coined and sixty-four years ago Jean Mayer, Tufts University's 10th President, wrote his dissertation on Vitamin A. We have made tremendous progress in advancing healthy nutrients globally including adding iodine and folic acid to salt and food respectively, to mention just a few of those essential nutrients recommended for good health. We have come a long way and US, Canada and Europe have the best, safest and cheapest foods. However, questions remain if individuals are making the right choices, and if we should promote access to nutrients for so many who are still deprived, in addition to making sure that people are living in safe communities.

Simin Meydani: We have learned a lot about the nutritional status of the older population in the US and similar nations. The HNRCA has provided recommendations to improve nutrition for older populations, but we do not communicate well to policy makers, teaching them about the impact of what we are doing. We need to be more aggressive in how we disseminate information to the public. We also know that the fastest growing population of older adults is in developing countries but they have limited services currently. The results from the study we conducted in elderly Ecuadorians surprised us as we discovered that they have micronutrient deficiencies while simultaneously being overweight; also presenting with metabolic syndrome which is a high risk factor for non-communicable, preventable diseases that we only expected to find in developed countries. Unfortunately data such as this relating to the nutritional and health status of elderly in less developed countries is limited. This is a definite gap which needs to be addressed. Further we need to get rid of the notion that problems related to aging only affects the developed world.

Mohsen Mostafavi: Urban design should address 'the right to the city' as first described by Henri Lefebvre, the French sociologist. Aging and its relation to physical space is not very clear. Can't the city and its design provide, or enable 'rights' to its citizens through access? Architects, city planners and designers should consider these possibilities in the future. We are living in the concept of 'extremes'. We don't have the means in terms of design and implementation to address certain issues. 'Anticipatory spatial practices' need to be developed to think proactively on upcoming issues so as to be able to plan for them in advance in the fabric of our cities to prevent risks of encountering major problems; thinking in particular of how and where New Orleans was built. Therefore, in the future, city designs should be collaborative, anticipatory endeavors.

Karen Sealey: In 2008, the World Health Day theme was urbanization and the 2012 World Health Day theme was on aging. This has brought urbanization and aging together in discussion, but challenges remains on the implementation side. In 2011, a high level meeting attended by 192 countries committed to addressing risk factors for non-communicable diseases (NCDs) and the success of this will lead to healthy aging as well. As we move forward working with countries we have to prepare them continuously, under the NCDs umbrella, to show them what to do for their aging populations. We have global and regional strategies and WHO/PAHO helps countries to implement these strategies building on what they already have by providing more information to assist them to create better policies. The Organization of American States (OAS) will be coming up with a convention, a legal instrument, on the rights of older persons. As we rethink aging we also need to build mechanisms to strengthen community-based primary healthcare services to enhance access, safety and quality of various services including vision and dental care and beyond. We are also working on a special initiative on healthy cities that includes a network of cities including New York. New York is a good example that illustrates a government taking a template to roll out guidelines to establish healthy cities and improve physical access to services and cultural programs, which is rare. Soon, WHO will provide access to an interactive website to involve more cities in this initiative.

Question II: *How do we re-conceptualize 'aging' in order begin to see older adults as a resource rather than as a burden to society? Through what mechanisms can we proactively alter the often-negative stereotypes*

associated with aging? How can this growing subset of the population contribute such that they prolong the self-actuality of relevance and usefulness, while continuing to give back to the economic and social vitality of the communities in which they live.

Iris Adler: Media personalities are now mostly baby boomers and have context to understand aging. There are tremendous challenges. In the visual media, gender disparity exists as older women are not favored for TV anchors and TV advertisements. Esthetics of older people is not considered offensive in print media but ironically there are more TV watchers that are older. It is critical that people reinvent themselves as they age and move along the age span. Their stories must be represented and must be told as opposed to presenting them as burdens, old and decaying. Embracing technology for the older population will make them current and we must make sure that older people participate in digital technology.

Joseph Coughlin: If they are not engaged in technology, they are not at fault, the technology is. Aging is a call to innovate. Baby boomers expect to live longer and we should, therefore, reinvent our community. To reinvent our urban environment for healthy aging we need: emotional health and physical health; access to public services; healthy behavior; and education, work and play environments. Aging is life tomorrow. Before we reinvent urban lives, we should consider the social norm. We need to change the definition of getting older, to stay in the work place and to learn. Before we reinvent institutions, policy makers must come together to see age as an opportunity and individuals must recognize that living longer also means living healthier and staying active and embracing technology. Wellbeing is an investment in ourselves so that society does not have to take care of us later.

Joseph Curtatone: It is important to promote an ageless community. In Somerville, 43% of the population are between 22-65 and 10% is 65 years old and above. In Somerville we understand what is needed for the young as well as for older populations. We correlate wellbeing to happiness. We understand that if you are healthier, you are also happier, and if they are healthier and happier they are also productive in later life; making significant contributions to their communities. Understanding population is important to creating a seamless society, which is a challenge...but doable.

Anne Hartstein: People continue to say they are excited to retire at 65 because they gain freedom to work or not work as they choose. This does not necessarily mean should not be working past that age. In Massachusetts, we have identified nine principles for aging well which provide for the best possible quality of life: transportation, meaningful support, access to healthcare, physical health and mental cognition, affordable housing, civic engagement, family life and flexible support services. To eliminate negative stereotyping we need to give people choices that they can make themselves (more transportation options to give people freedom to choose their activities). We need the resources available to so that they are not at the mercy of service providers.

Michael McBurney: The WHO World Health Day motto, 'good health adds live to years' is a good approach to aging. Healthy living is not just living longer it is living life to the fullest. When people continue to have cognitive and physical health, they can work as long as possible and people accept them but only when their health is compromised that their age becomes obvious. We have a disconnect between public and private entities when it comes to nutrition. Nutrition is personal and it also involves the community and society but are they the same thing? The challenge is what is the 'right' food and what is the recommended amount to eat. This is very difficult to answer for the average person so industry and science must come together to clarify the needs of different groups.

Nutritionists specify upper and lower nutrient requirements by gender and age. Globalization is here and the internet and social media have brought a flattening of the information structure. We communicate extensively. We are now developing food for all sets of groups and the opportunity is there to provide common guidance and strategy to empower individuals at the society level.

Simin Meydani: If we prevent some of the present life style choices, we will promote healthy aging. People want to have a dignified life and to feel valuable as they age. They want to continue to contribute to society later in life. For

example, the US Peace Corps now hires retired experts because they understand the value that the older adult can bring to this program. This can, and should be, replicated by others. It is important to recognize the differences between older and younger generations but it is good to embrace this by improving the environment that older adults live and work in to make it possible for them to contribute to society and the workforce. There is no need to segregate generations, for example, in a work environment.

Mohsen Mostafavi: We are moving towards expertise. People now build different buildings but we need to spend time addressing the many levels of people's choices. People have different interests at all levels and ages which requires the reconfiguration of different built environments. At age 75 one's needs are different from those who are age 25 but this is manageable by rethinking and reconfiguring different urban settings. Leisure is an important thing to incorporate into an environment so that work does not become a substitute for leisure. Historically, libraries have provided this but a combination of libraries with other media and learning tools will be important and enabling for learning and for connecting all. Educational establishments should provide access to higher education for the elderly and will be important to discuss this further.

Karen Sealy: Not too long ago, mental health nomenclature was reconfigured to eliminate the word and associated negative. This happened because we took proactive steps to make it happen. We should also call out people when they demonstrate negative attitudes towards the elderly. When we look at ageing we have to look at ourselves and understand how our families age. Downsizing living quarters is one aspect of aging but that is also dismantling familiar communities and moving to different locations. We need to reconfigure those environments. We need to create ageless communities so that people are not forced to move. Accommodating their needs will be better, necessary and cost effective. Intergenerational programs are important. For example, daycare could easily be a place where the 'older' people we are discussing today look after the younger. Further, going beyond custodial care centers: they could become multipurpose learning centers.

Medical centers could be healthcare centers where the older community works and not just be volunteers. Communities need champions of their own to understand healthy aging. Events at the international level, such as the UN days for older persons and wellness week are ideal times to bring out issues of the elderly and help countries.

Question III: *How can we best utilize the momentum of this conference to facilitate the edification of age-friendly environments that foster both good health and active participation from older adults? How would you foresee your organization's role in this process? What are the key substantive elements? The instantaneous interconnectivity of social media and other modern technologies have proven to be impressive mechanisms for propagating rapid change. In this context, how can we harness the power of this phenomenon?*

Iris Adler: This is the age of content, and there are media outlets hungry for this content. My charge is to get the word out in any way you can. We must all be in this together due to the enormity of this issue. How we age must be discussed openly and robustly in the media so that we embrace healthy aging. Stories that counter the stereotypes associated with aging must be told.

Joseph Coughlin: Engineers design to requirements. We must work together with them to communicate what it is we need in the future...to design what we want and what we need. Identifying a problem and getting passionately involved to solve the problem is important and the HNRCA should be commended for this conference. What do we envision for urban healthy aging? Access to viable transportation to promote mobility within urban areas must be given a top priority. Nutrition and personalized diets are now already available in *retail* areas, technology should be at the point to help you to make better decision while you are shopping, not after the fact. How do we frame healthy living when designing urban living environments and what type of institutions should be given priority in the future? Innovation must contribute to the new vision. Technology will follow but we need imagination first. We have

to decide how we want to live in the future. New institutions and services need to be imagined so that the technology will be created to follow suit. Building and creating public/private partnerships is essential for this.

Joseph Curtatone: Regional, world and state leaders have visited Somerville to learn what we are doing, for example in childhood obesity. Ask the important questions on how systems work or do not work, not just the consequences. We have the passion in America's great cities. For example, childhood obesity is a failure in our system. We engage the media to tell our stories on how we live, work and raise a family in our community, which we consider crucial. Because of our location, we consider transportation is not just the subway but important means to create an ageless society and a great place to live. We need to continue what we started at this conference.

Ann Harstein: Massachusetts has the institutions it needs to move the agenda of this conference forward. For example, The Council on Aging operates out of 349 communities that are now considered wellness centers. These institutions provide various activities for older people including: computer courses, wellness programs, civic engagement, social media, employment assistance, and training. However, we could improve these services based on new innovations and data sharing. Aging baby boomers now live in every community. We also pay attention to caregivers and give them support. We live in an aging society and, therefore, we know we are facing an impending magnitude of Alzheimer's cases and other age related problems. We need to continue the momentum generated here.

Michael McBurney: The question is how do we build the momentum that we started here? DSM appreciates the partnership with HNRCA and to have the opportunity to participate in this conference with our partners. We need to remember urban residents do not have the land to produce their food but those residents must engage in dialogue with and establish mutually beneficial partnerships with the food industry. DSM is celebrating its 25th anniversary promoting Vitamin A to prevent blindness globally. The private sector wants to improve nutrition and standards of living while making profit. Dietary supplements raise access to nutrition especially for urban residents. Information dissemination is important because industry and individuals are all in this together. We learn new ways to develop nutrients that are safe for all ages and promote healthy aging.

Simin Meydani: This conference brought people together from many sectors that are engaged in important work that might not normally work together. The idea is to start the dialogue to innovate, to face the challenge and promote healthy aging. We hope to keep the issue of healthy and active aging in the forefront, disseminate the information about the important work we and other scientists do and keep it at the top of everyone's agenda to make sure we promote healthy aging. We are putting together a working group with WHO/PAHO to identify gaps and move forward embracing a holistic approach to promote healthy aging.

Mohsen Mostafavi: We will need to continue the momentum of this conference and remain engaged with the other panelists and others in the future. Public, private and academia should find some concrete pilot projects to be realized in the near future to help us build on the momentum started here. We need to be concrete, specific and modest in what we need to do in promoting healthy aging and urbanization. For example, it was a small political discussion that resulted in 'pocket parks' in NYC that encouraged private owners to provide public spaces. That is now a reality. We need to address what is really a public space? It is not a mall and it is not shopping but it is more than that and does not have to always be linked to consumerism. So, it would be important for this group that is diverse in interest and knowledge to come up with alternative projects that could promote healthy aging.

Karen Sealey: WHO and PAHO commend the HNRCA for their leadership and for organizing this conference. This is an outstanding example of partnership that benefits the region and the global community. We need the content and output of this conference be shared and we look forward to publicizing the information in many venues. PAHO and the WHO will make sure the information from this conference is distributed widely in the regions and globally. We would also like to continue the discussion because Dr. Kumaresan and I believe that often policy makers do not hear such important discussions like those that took place today. We would like to facilitate the discussions further to bring it to a ministerial level. We look forward to collaborating with the HNRCA to enhance research collaboration in

order to get better information, especially for the region, because we know and we have very little in this field. We encourage you to collaborate with us and we also need the private sector to work with us to take this discussion to the global community. Life cost, health span life span, healthy living are all new to us.

For the video presentation of the three questions click:

<https://tuftsemc.box.com/shared/static/475a60afc659f8e7306d.mp4>

Biographies



Angelo Azzi, Moderator

Senior Scientist, Jean Mayer USDA Human Nutrition Research Center on Aging at Tufts University

Angelo Azzi obtained an M.D. at the University of Padua, Italy (1963), where he continued as Assistant Professor (1963-1966). After postdoctoral training in the Department of Biophysics University of Pennsylvania (1967-1969), he returned to Padua where he obtained a PhD in Pathophysiology (1969) and in Biochemistry (1970). In this same structure he then received an appointment as Associate Professor (1970-1975) and Full Professor (1976-1977). He then relocated to Bern (Switzerland) where he served as Professor & Head of Department, Medical Chemistry Institute, University of Bern (1977-1984) and later Professor and Director of the Institute for Biochemistry and Molecular Biology (1984-2005). In 2005, he moved to Boston (USA) where he was first a Visiting Scientist (2005) and later a Senior Scientist (2006-) of the HNCRA at Tufts University. He has published more than 400 articles and has been an invited speaker at more than 200 international meetings. He has carried out research on mitochondria; cytochromes; membranes; transporters; protein kinase C and signal transduction; the molecular function of tocopherols and carotenoids.



Iris Adler

Program Manager, WBUR National Public Radio

Iris Adler is the current Program Manager at WBUR Radio in Boston. In that capacity she helps to oversee the station's programming, including long form series and documentaries. At a previous point, Adler was the News Director at WBUR, where she oversaw the strong local news department.

Adler also spent nearly two decades working as the Executive Editor of New England Cable News, an all-news television network where she produced documentaries and edited long form news series. She has won every major regional and national work for her work in radio and television.



Bob Blancato

Executive Director, National Association of Nutrition and Aging Services

Bob Blancato is President of Matz, Blancato, & Associates, a firm integrating strategic consulting, government affairs, advocacy services and association and coalition management. He is also National Coordinator of the non-partisan 3000 member Elder Justice Coalition, and the Executive Director of the National Association of Nutrition and Aging Services Programs. In 2011 Bob was elected to the Boards of the American Society on Aging and the National Council on Aging. Also in 2011 he was named a Strategic Advisor to Generations United after serving on its Board. Further, in December 2011 Bob was awarded the decoration of Knight of the Order of Merit of the Italian Republic by the President of Italy.

Bob's government service includes 17 years on the staff of the House Select Committee on Aging. In addition he was Executive Director of the 1995 White House Conference on Aging appointed by President Clinton and on the Policy and Executive Committee for the 2005 Conference appointed by Rep. Nancy Pelosi. Bob is the recipient of a number of national, state and local awards for advocacy and service including those from NASUAD, N4A, the National Academy of Elder Law Attorneys, the Older Women's League and several national elder abuse associations. He was also appointed to the Commonwealth Council on Aging in Virginia by Governor Tim Kaine and served as Chairman from 2009-2011. Bob holds a Bachelor of Arts from Georgetown University and a Masters of Public Administration from American University. He has been a visiting lecturer at the University of Maryland Graduate School of Social Work, the Erickson School at UMBC, and George Washington University.



Joseph Coughlin

Director, Massachusetts Institute of Technology AgeLab

Joseph F. Coughlin, Ph.D. is Director of the Massachusetts Institute of Technology AgeLab – a multidisciplinary research program that develops new ideas to improve the lives of older adults and those who care for them. Based in MIT's Engineering Systems Division, he teaches policy and systems innovation and is author of the online publication *Disruptive Demographics*. He is one of *Fast Company Magazine's* '100 Most Creative People in Business' and was named by the *Wall Street Journal* as one of "12 pioneers inventing the future of retirement and how we will all live, work and play tomorrow." The Visiting Nurse Association named Dr. Coughlin a 'Home Health Hero' for his research in technology-enabled innovation in home healthcare services. He is a Behavioral Sciences Fellow of the Gerontological Society of America and is recipient of the Maxwell A. Pollack Award for Productive Aging for demonstrated excellence in translating research into practical application improving the lives of older people. A Fellow of Switzerland's World Demographics & Ageing Forum Dr. Coughlin advises and speaks to businesses, governments and non-profits worldwide. He has served on numerous corporate advisory boards operating in the telecommunications, health, auto and financial services industries. Dr. Coughlin was appointed by President Bush to the White House Conference on Aging Advisory Committee and has worked with governments in Asia and the European Union, the World Economic Forum, OECD, and the Council on Foreign Relations on aging and strategic innovation.



Joseph Curtatone

Mayor, City of Somerville, Massachusetts

Joseph A. Curtatone, First elected in November of 2003, began his fifth term as Mayor of Somerville on January 2, 2012. He had previously served for eight years as an Alderman at Large. 37-years old at the time his first election, Curtatone is the second youngest Mayor in Somerville's history. As Mayor, he has successfully implemented a wide range of reforms and new programs that have earned Somerville many distinctions by regional and national organizations, including the designation by *Boston Globe Magazine* as "the best-run city in Massachusetts," by America's Promise Alliance as one of the "100 Best Communities for Youth," and a winner of the 2009 "All America City" competition.

Delegations from other Massachusetts communities – and from cities as far away as Ireland and Korea – regularly visit Somerville for briefings on the city's SomerStat program, a data-driven performance management system modeled on Baltimore's CitiSTAT initiative. In 2006, Somerville became the first city in America to offer both a 311 constituent service center and Connect CTY mass notification technology. By calling 311 from any phone in the city, Somerville residents and businesses can now access information and services from any city department and can track progress on service requests through a publicly accessible work-order system. Under his leadership, Somerville has also earned national recognition for its successful joint effort with Tufts University

to implement "Shape Up Somerville," an effective program to reduce the incidence of childhood obesity among the city's elementary school children, which was lauded by First Lady Michelle Obama during the launch of her "Let's Move" initiative. His success in Somerville has earned him the presidency of the Massachusetts Mayor's Association, a position on the Board of Directors for the National League of Cities, and as a member of the Metropolitan Mayors Association.



Kevin M. Fickenscher

President / Founder, CREO Strategic Solutions, LLC

Dr. Kevin M. Fickenscher is the Founder of CREO Strategic Solutions, LLC – an organization focused on senior executive strategic support, leadership development and assistance with evolving care delivery models. Previously, he served in a variety of leadership roles within the healthcare industry on both a domestic and international basis. He is a recognized physician executive with extensive experience in strategic and operational development in complex healthcare organizations. He is a thought leader related to technology and information management and holds extensive experience in organizational transformation and development, physician management, health policy analysis, leadership development, clinical quality and resource/care management, among other areas. Dr. Fickenscher is considered to be a dynamic, visionary leader in healthcare throughout the world, and has consistently been ranked among the Most Powerful Physician Executives in Healthcare by Modern Healthcare.



Roger Fielding

Director, Nutrition Exercise, Physiology and Sarcopenia Lab, Jean Mayer USDA Human Nutrition Research Center on Aging at Tufts University

Roger A. Fielding is Director and Senior Scientist of the Nutrition, Exercise Physiology, and Sarcopenia (NEPS) Laboratory at the Jean Mayer USDA Human Nutrition Research Center on Aging at Tufts University. He is also Professor of Nutrition at the Friedman School of Nutrition Science and Policy, Professor of Medicine at Tufts University School of Medicine, and Lecturer of Physical Medicine and Rehabilitation at Harvard Medical School. Currently, he also serves as the Associate Director of the Boston Claude D. Pepper Older Americans Independence Center.

After graduating from Boston University with a B.S. in Health Sciences, Dr. Fielding received a Master of Arts in Physical Education from Ball State University in 1985. In 1993, he graduated with his Ph.D. from Tufts University after researching the modulation of skeletal muscle protein metabolism and the effect of exercise-induced muscle injury. Thereafter, he began his research career in the Department of Health Sciences at Boston University, initiating studies that examined the role of skeletal muscle power output on physical function and disability in older adults, as well as parallel studies examining the influence of aging on intracellular signaling events in contracting skeletal muscle. In 2004, Dr. Fielding was recruited to the Jean Mayer USDA Human Nutrition Research Center on Aging at Tufts University and has since conducted numerous clinical studies of exercise and muscle function in older adults. As a Senior Scientist, he has explored the effects of nutritional, pharmacological, and exercise therapies on changes in skeletal muscle structure and function with advancing age, and has examined the role of nutrition and exercise on muscle performance in older animals and humans.

Dr. Fielding is an internationally known researcher who studies the underlying mechanisms contributing to the age-associated decline in skeletal muscle mass, the resultant impact on function, and the potential role of exercise, nutrition, and physical activity on attenuating this process.

Dr. Fielding has a strong record of extramural funding including support from the NIH, USDA, foundations and industry. He serves on the editorial boards of the Journal of Nutrition, Health and Aging, and the Journal of Nutrition and Metabolism and the Journal of Gerontology for Medical Sciences. He has also served as a reviewer on numerous NIH study sections and was recently elected to the NIH/CSR College of Reviewers.



Nadia Greenhalgh-Stanley

Assistant Professor of Economics and Healthcare Economist at Kent State University
Katie Fitzpatrick, Economist at Seattle University
Shelly Ver Ploeg, Economist at Economic Research Service of USDA

Nadia Greenhalgh-Stanley is an Assistant Professor of Economics at Kent State University. She currently teaches Economics of Healthcare, Urban Economics, and Principles of Microeconomics. Her research focuses on the interaction of urban economics and public finance. More specifically, she examines how changes in social insurance programs (Medicaid, Medicare, and Food Stamps) impact elderly housing decisions and portfolio choices. She also has many other research projects on the elderly including looking at bankruptcy law, food stamp participation, living in food deserts, diet-related disease, and options in the private long-term care insurance market. Her research is currently funded by the Social Security Administration, the Institute for Poverty Research at the University of Wisconsin, and the U.S. Department of Agriculture. She was a Dissertation Fellow of the Social Security Administration while a graduate student at Syracuse University. She has had her research published in the Journal of Urban Economics and is currently a member of the National Tax Association, American Real Estate and Urban Economics, American Economic Association, Committee on the Status of Women in the Economics Profession, and the Southern Economic Association.



Ann L. Hartstein

Secretary of the Massachusetts Executive Office of Elder Affairs

Ann L. Hartstein was appointed Secretary of the Massachusetts Executive Office of Elder Affairs by Governor Deval Patrick in July, 2009; however she is no stranger to the Executive Office of Elder Affairs or the greater elder community. Prior to being appointed, Ann served for five years as Executive Director of the Massachusetts Association of Older Americans, a state-wide grass-roots advocacy organization for senior citizens. Before that she served as Assistant Secretary for Policy and Program Development at the Massachusetts Executive Office of Elder Affairs. She acquired a solid understanding of the elder community within Massachusetts as a result of her eleven year tenure as director for a Council on Aging in a suburb west of Boston, as well as through her experience as Director of Barnard Services for the Hale-Barnard Corporation, a case manager for elder services, a social worker in a home health agency and hospice, and in a long term care facility. Ann has a Master of Science in Gerontology from the University of Massachusetts, a Master in Management of Human Services from Brandeis University and a Bachelors in Social Work from the University of Kansas.

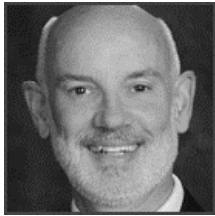


Jacob Kumaresan

Executive Director, World Health Organization, New York

Jacob Kumaresan, MD, DrPH is currently Executive Director of the WHO Office at the United Nations in New York. Previously he was Director at the WHO Centre for Health Development in Kobe, Japan from 2008-11 and president of the International Trachoma

Initiative, a non-profit organization dedicated to eliminating the leading cause of preventable blindness from 2003-07. He joined World Health Organization headquarters in Geneva 1992, where he eventually headed the Stop TB Partnership expanding efforts to meet the global targets to stop TB. He has wide spread public health experience and worked with the governments of Zimbabwe and Botswana during 1980s.



Michael McBurney

Head of Scientific Affairs, DSM Nutritional Products

Dr. Michael McBurney is Head of Scientific Affairs at DSM Nutritional Products LLC, the world's leading supplier of vitamins, carotenoids, and new nutritional ingredients where he provides global leadership in developing, implementing, and executing nutrition science and communications strategies. He is an experienced leader and manager of nutrition and food science teams in academic and industry (consumer packaged goods and ingredient manufacturing) environments. Dr. McBurney is an Adjunct Professor in the Friedman School of Nutrition Science & Policy at Tufts University and has held academic appointments at the University of Toronto, University of Alberta, Michigan State University and Texas A&M University. He was honored with a McCalla Research Professorship at the University of Alberta (1997) and was a Rank Prize Invitational Speaker (Nutrition and Gut Cell Function, 1999). While at the Kellogg Company, his responsibilities included the development of nutrition research and communications activities, nutrition labeling oversight in the USA, and evaluation of bioactive food ingredients. Dr. McBurney was founding Department Head of the Department of Nutrition and Food Science at Texas A&M University where he directed the administration of teaching, research and extension activities. During his tenure at Texas A&M, he established departmental operating processes, hired seven faculty members, increased student enrolment 34%, and completed \$1.8 MM in renovations.

Dr. Michael McBurney received his B.S. in Biology (Ecology) from Carleton University, M.S. and Ph.D. degrees in Nutrition from Cornell University. His post-doctoral training included an Organization for Economic Cooperation and Development (OECD) postdoctoral award to study at the Swedish University of Agricultural Sciences, Rowett Research Institute, and Animal & Grassland Research Institute. He continued his postdoctoral training at the University of Toronto and enjoyed a 1y sabbatical at the University of North Carolina-Chapel Hill. He has published almost 200 manuscripts, book chapters and abstracts on a wide range of subjects related to nutrition and health. Dr McBurney has given almost 70 invited speeches in 12 countries.



Simin Nikbin Meydani

Director, Jean Mayer USDA Human Nutrition Research Center on Aging at Tufts University

Dr. Simin Nikbin Meydani, DVM, Ph D, serves as the Director of the Jean Mayer USDA Human Nutrition Research Center on Aging at Tufts University. She is Professor of Nutrition and Immunology at the Friedman School of Nutrition Science and Policy and Tufts Sackler Graduate Program in Immunology. Dr. Meydani's scientific interests include the impact of nutrition on immune and inflammatory responses and resistance to infectious diseases on which she has published extensively. In addition, she studies the basic biology of aging as it relates to immune and inflammatory responses, role of nutrition in the aging process and age-associated diseases. Her studies are translational and utilize cell and molecular techniques as well as different animal models, randomized clinical trials and observational field studies in the US and less developed countries. Her honors include the American Society for Nutrition Herman Award in clinical nutrition, Fellow of Hedwig van Amerigen Executive Leadership in Academic Medicine Program, American Aging Association Denham Harman Lifetime Research Achievement Award, American Society for Nutritional Sciences Lederle Award in Human Nutrition Research, American College of Nutrition Grace Goldsmith Award, the Wellcome Visiting Professorship at Iowa State University, and the HERMES Vitamin Research Award. She serves/has served on several NIH, USDA, FAO/WHO, and industry grant review and advisory committees as well as editorial boards of scientific journals.



Mohsen Mostafavi

Dean, Harvard Graduate School of Design

Mohsen Mostafavi, architect and educator, is the Dean of the Harvard University Graduate School of Design and the Alexander and Victoria Wiley Professor of Design. He was formerly Dean of the College of Architecture, Art, and Planning at Cornell University and Chairman of the Architectural Association School of Architecture in London. He has taught at numerous institutions including the University of Pennsylvania, Cambridge University, and the Frankfurt Academy of Fine Arts (Städelschule). Dean Mostafavi serves on the steering committee of the Aga Khan Award for Architecture and the board of the Van Alen Institute, and has served on the design committees of the London Development Agency (LDA) and the RIBA Gold Medal. He is a consultant on a number of international architectural and urban projects. His publications include *On Weathering* (MIT, 1993); *Delayed Space* (Princeton, 1994); *Approximations* (AA/MIT, 2002); *Surface Architecture* (MIT, 2002); *Logique Visuelle* (Idea Books, 2003); *Landscape Urbanism: A Manual for the Machinic Landscape* (AA Publications, 2004); *Structure as Space* (AA Publications, 2006); *Ecological Urbanism* (Lars Müller Publishers/Harvard GSD, 2010); *Implicate & Explicate* (Lars Müller Publishers, 2011); and *Louis Vuitton: Architecture and Interiors* (Rizzoli, October 2011).



Rhonda Neuhaus

Policy Analyst, Government Affairs Disability Rights Education and Defense Fund Rhonda Neuhaus joined DREDF as Policy Analyst for Government Affairs in January 2011. Ms. Neuhaus holds a JD from the University of Maryland School of Law, a MA in Sustainable development from Brandeis University and a BA from Rollins College. Before joining DREDF, Ms. Neuhaus focused on human rights, advocacy capacity-building and civil society strengthening in international development programming. She provided subject

matter expertise to governments and NGOs on human rights law and policy, international disability standards, and strategies for ensuring the rights of disadvantaged groups in development programming.

From 2008 to 2011, she built and managed the Making it Work initiative, working towards implementation of the UN Convention on the Rights of Persons with Disabilities (CRPD) at Handicap International. She has been a consultant on disability and development issues for BlueLaw International, providing human rights education and advocacy services relating to the CRPD for the Shafallah Center for Children with Special Needs in Doha, Qatar. Prior to her legal education, she worked as an inclusive development specialist at Mobility International USA (MIUSA) from 1998–2000, where she designed and implemented international exchange and economic development programming worldwide. Her work included the design and implementation of training to promote disability inclusion in education and employment, as well as micro-credit schemes.

An experienced trainer and facilitator, she has delivered human rights and disability rights educational trainings in Peru, Nicaragua, El Salvador, Jordan, Tunisia, Spain, Brazil and throughout the United States. She co-produced two path-breaking training videos, and has published in local, national and international media on the subject of human rights and disability inclusion. She is fluent in Spanish and lives in Silver Spring, Maryland.



Peggy Newell

Provost and Senior Vice President ad interim, Tufts University

Peggy Newell was named Provost and Senior Vice President ad interim for Tufts University in July 2011 and continues to serve as Vice Provost. As Interim Provost, Peggy is committed to the advancement and support of teaching, research, and scholarship, while she leads the schools in academic planning and priority setting across the University. She has been at Tufts since 1982, serving as Associate Dean of the Sackler School of Graduate Biomedical Sciences and Associate Dean for Special Programs at the School of Medicine prior to joining the Provost's Office as Associate Provost for Research in 1998. As Vice Provost since 2004, she oversees the Office of the Vice Provost which is responsible for the implementation of the University's policies on

conflict of interest and misconduct in research, and compliance with regulations on the use of laboratory animals, human subjects, recombinant DNA, and infectious agents. Other responsibilities of the Vice Provost's Office include the protection and licensing of the University's intellectual property, the Office of Proposal Development, and the Office of Research Administration. A graduate of Boston College with a BA in Psychology, Peggy earned an MBA degree from Boston College Carroll School of Management and a JD degree from Suffolk University Law School.



Raúl Cárdenas Osuna

Founder, Torolab

Raúl Cárdenas Osuna is the founder and director of Torolab, a collective workshop and laboratory of contextual studies that identifies situations or phenomena of interest for research, basing the studies in the realm of life styles to better grasp the idea of quality of life. He holds a degree in architecture from the Universidad Iberoamericana in Tijuana as well as a Masters in Fine Arts from the University of California in San Diego.

His work has been shown nationally and internationally at various venues including: MoMA, New York City; the Museum of Modern Art of Louisiana in Denmark; Museum of Contemporary Art of San Diego; LA(X)ART, Los Angeles; Moderna Museet, Stockholm; San Francisco Museum of Modern Art; the Museum of Contemporary Art of Sydney; the Storefront for Art and Architecture, NYC; Havana Biennial; Liverpool Biennial; Beijing 2004 Biennial of Architecture; Mercosur Biennale, Brazil; and Lyon Biennale, France. His work is in private and public collections such as the Musuem of Contemporary Art of San Diego and the Jumex collection in Mexico. He has received twice The American Center foundation award and a Rockefeller Foundation grant. He has taught at the Universidad Iberoamericana's School of Architecture in Mexico; at the San Francisco Art Institute and the California College of Arts in the US; and Rennes2 University in France.

In October 2011, Raúl Cárdenas was awarded for best arts-intervention project with social impact by Harvard's Cultural Agents Initiative and has been named Person of the Year by Tijuana's newspaper 'Frontera'. Currently, he is also the director of the non-profit organization 'Sociedad de Agentes de Cambio' and director of the Digital table for the Metropolitan Strategic Plan of Tecate-Rosarito-Tijuana, where he currently lives and works.



Kathleen Otte

Region Administrator, United States Administration on Aging

Ms. Kathleen Otte is the Regional Administrator for Regions I, II and III for the U.S. Administration on Aging (AoA) . In this capacity, she represents the AoA and the Assistant Secretary on Aging on all matters related to the implementation of the Older Americans Act (OAA) and other aging related issues within the 14 states and 2 territories she oversees. Prior to joining AoA, Kathleen served as the Director of the Bureau of

Elderly and Adult Services for the State of New Hampshire. Under her leadership, Kathleen and the New Hampshire team, designed and implemented a caregiver support program that received national distinction by winning the prestigious Innovation Award from the Council of State Governments.

Kathleen has over thirty years' experience in the field of aging, having served or volunteered in various human service delivery programs including senior centers, nutritional services, home and community based long term care, health care, elder abuse and caregiver supports. Prior to her work as the State Director, Kathleen worked as an administrator in nursing facilities and assisted living facilities where she earned the Malcolm Baldrige Award for Excellence from The American Healthcare Association. Kathleen is a graduate of the University of Oklahoma having achieved her Master's degree in Human Relations and a Bachelors' degree in Social Work with an emphasis in gerontology



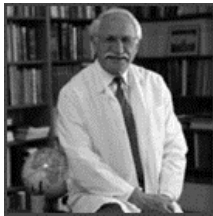
Maureen E. Power

Executive Director of the Intergenerational Urban Institute - Worcester State University

Maureen Power Ph.D. is a Professor of Urban Studies at Worcester State University where she founded and directs the Intergenerational Urban Institute . Dr. Power was the catalyst for WSU inviting elders 60 and over to free college education and involving them on campus. The mission of the IUI is to channel the energies of college students of all ages in service to the community. Its motto is "Educated Engaged Energized".

The IUI, in addition to tutoring elder immigrants on campus and in the community, mentoring teen parents, and providing hunger awareness, programs has been offering SNAP outreach to elders. SNAP (Supplemental Nutritional Assistance Program), formerly called food stamps is a "fork" stimulus which puts food on people's tables and federal money in the local economy. After the Governor's Commonwealth Corps Program ended which had funded the SNAP outreach, the HOT team (Hunger Outreach Team) was created to continue outreach both to elders and college students. The HOT team students range in age from 20 to 89!

Maureen has a background in Social Policy from the Heller School at Brandeis University where she earned both her Masters and Ph.D. She has been fortunate in being able to travel to China, Burma, Nicaragua, Netherlands, Germany and the UK examining intergenerational connections in these countries. She is a strong believer that together we can make a difference



Irwin H. Rosenberg

University Professor, Tufts University

Irwin H. Rosenberg, M.D. is a University Professor at Tufts University and a senior scientist at the Jean Mayer USDA Human Nutrition Research Center on Aging. Dr. Rosenberg served as Dean of the Friedman School of Nutrition Science and Policy at Tufts University from 1995-2004. He served for 15 years as the Director of the Jean Mayer USDA Human Nutrition Research Center, which studies the interaction of aging and

nutritional/dietary factors as well as the way in which diet, nutrition, and physical activity can modulate or prevent degenerative diseases of aging. The focus of his research has been on vitamin metabolism, especially folate and cardiovascular disease, as well as stroke and cognitive decline.

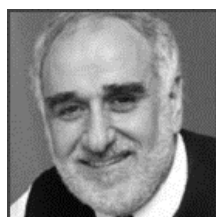


Karen Sealey

Special Adviser UN and Partnerships, Pan American Health Organization/World Health Organization

Karen Sealey is a physician-planner, public specialist with a wide breadth of experience in public health administration and planning at the national and international levels. She has worked in New York City, prior to becoming the Director of Health Planning in the Ministry of Health in Trinidad and Tobago. In her 22 years with PAHO, Dr. Sealey has held several senior positions, working at the national, sub-regional and regional levels. She includes among her achievements spearheading the development and adoption of the Caribbean Health Promotion Charter, establishing the Awards for Excellence in Health Journalism in that sub-region, and publishing the inaugural edition of Health Conditions in the Caribbean. During her secondment to UNAIDS as the Director of the Caribbean Regional Support Team, Dr. Sealey was a strong advocate for meaningful inclusion of the Persons living with HIV, civil society and the private sector in the response to HIV and established the Caribbean Women, Girls and HIV program.

Since her return to PAHO in August 2009, Dr. Sealey has been serving as its Special Adviser for UN Matters and Partnerships in the WHO Office at the UN. Among her functions is to support the Permanent Missions from the Group of Latin American and Caribbean countries to the UN, on health development matters; thus she supported the CARICOM Missions in the process for the adoption of the resolution which called for convening of the high level meeting on the prevention and control of non-communicable diseases.



Ricardo Uauy

Professor, London School of Hygiene and Tropical Medicine

Ricardo Uauy M.D. Ph.D., received his Medical Doctorate from the University of Chile in 1972, and Ph.D. in Nutritional Biochemistry from MIT in 1977. He trained in Pediatrics during 72-74 and Clinical Nutrition during 76-77 at Harvard Children's Hospital in Boston and Neonatology at Yale New-Haven Hospital during 74-75. He is board certified in Pediatrics and Neonatal-Perinatal Medicine (USA). He has served as: president of the IUNS 2005-09, Professor of Public Health Nutrition at Institute of Nutrition (INTA) University of Chile and London School of Hygiene and Tropical Medicine, INTA Associate Professor in 1977, Professor in 1981, and Director of INTA University of Chile 1994-2002. Has participated as expert in multiple WHO/FAO expert committees (Protein Energy 81, Fats and Oils 93, FBDGs 95, Obesity a Global Epidemic 97, Vitamins and Minerals 98, Nutrition in the Elderly 98 and Human Energy needs 01, chair WHO/FAO Nutrition Diet and Chronic Disease 02, and Global Strategy WHO/03; WHO/FAO Scientific Update on CHO 06 and on Trans Fats 07, chair FAO/WHO Expert Consultation on Fats and Fatty Acids in Human Nutrition in 08. McCollum Lecture award ASN (USA) 2000, member Chilean Academy of Medicine 2002. Lawton Chiles International Lecturer Award NIH 2003, Spanish Nutrition Society Award and PAHO/WHO Abraham Horwitz award for Leadership in Inter-American Health 2005; in 2006 received the Kellogg's International Nutrition Award from the ASN; in 2008 the Rank Lecture Award/UK Nutrition Society and the British Nutrition Foundation Prize; in 2010 the George Graham Lecture Award John Hopkins School of Public Health. Has published over 300 peer reviewed indexed papers and edited 10 books.

Conference Agenda

Day 1 – Wednesday, 11 April 2012

11:00 – 1:00: Session I: Introduction

Objective: to illustrate the consequences of urban expansion and an aging global population; age associated physiological changes and associated diseases; and the economy of aging.

- Chairperson *Simin Nikbin Meydani, Director, JM-USDA HNRCA*
- 1:00 – 1:10 Welcome; *Simin Nikbin Meydani, Director, JM-USDA HNRCA at Tufts University*
- 1:10 – 1:20 Opening Remarks; *Peggy Newell, Provost and Senior Vice President, Tufts University*
- 1:20 – 1:30 Reading of Proclamation by Massachusetts Governor Deval Patrick, *Ann L. Hartstein, Secretary, Massachusetts Executive Office of Elder Affairs*
- 1:30 – 2:00 Keynote Address on Population Aging, Urbanization and Health; *Jacob Kumaresan, Executive Director, World Health Organization*
- 2:00 – 2:30 Physiopathology of Aging-Related Chronic Disease: *Irwin Rosenberg, Laboratory Director, JM-USDA HNRCA at Tufts University*

Session II: Common Drivers of Healthy Aging

Objective: to highlight research findings on attributes of successful aging including: physical activity, diet and nutrition; access to health care, psychosocial support systems and security.

- Chairperson *Sarah Booth, Associate Director, JM-USDA HNRCA at Tufts University*
- 3:30 – 3:35 Greetings from the United States Administration on Aging; *Kathleen F. Otte, Region Administrator, United States Administration on Aging*
- 3:35 – 4:00 Nutrition and Sarcopenia: The Role of Physical Activity and Diet on Age-Related Changes in Skeletal Muscle Mass and Function:
Roger Fielding, Laboratory Director, JMUSDA HNRCA at Tufts University
- 4:00 – 4:30 Diet/Nutrition/Nutrients—Developed Countries
Simin Nikbin Meydani, Director, JMUSDA-HNRCA at Tufts University
- 4:30 – 5:00 Diet and Nutrition Issues in Older People From Low and Middle Income Countries
Ricardo Uauy, Professor, London School of Hygiene and Tropical Medicine
- 5:00 – 5:30 Healthcare 2020 - The Required Paradigm Shift in Care Delivery
Kevin Fickenscher, President/Founder CREO Strategic Solutions, LLC
- 5:30 – 6:00 Educated Engaged Energized: Elders Creating Secure Communities
Maureen E Power, Executive Director, Intergenerational Urban Institute - Worcester State University

Session III: Urban Planning and Design

Objective: to present research findings and best practices for designing age-friendly cities including architectural design, physical environment, food and health care accessibility, and security issues.

Chairperson	<i>Mohsen Mostafavi, Dean, Harvard Graduate School of Design</i>
9:00 – 9:30	Ecological Urbanism, Public Space and Aging <i>Mohsen Mostafavi, Dean, Harvard Graduate School of Design</i>
9:30 – 10:00	Molecular Urbanism: Design and Quality of Life <i>Raul Cardenas Osuna, Founder and Director, Torolab</i>
10:00 – 10:30	Making Nutritious Food Accessible in Urban Areas <i>Nadia Greenhalgh-Stanley, Assistant Professor of Economics, Kent State University</i>
Chairperson	<i>Ruth Palombo, Assistant Secretary, Massachusetts Executive Office of Elder Affairs</i>
11:00 – 11:30	The Value of Nutrition to Healthy Aging – A Policy Perspective <i>Robert Blancato, Executive Director, National Association of Nutrition and Aging Services</i>
11:30 – 12:00	Health Disparities Among People with Disabilities and Public Policy Implications <i>Rhonda Neuhaus, Policy Analyst, Government Affairs, Disability Rights Education and Defense Fund</i>

Session IV: Panel Discussion on Governance and the Business of Aging

Objective: to discuss the role of governments, business sector, international organizations, the public, media and scientific community in promoting successful aging.

Moderator: *Dr. Angelo Azzi, Senior Scientist, JM-USDA HNRCA at Tufts University*

Panel Participants:

- *Ms. Iris Adler, WBUR Program Manager, National Public Radio*
- *Dr. Joseph Coughlin, Director, Massachusetts Institute of Technology AgeLab*
- *The Honorable Joseph Curtatone, Mayor, City of Somerville*
- *The Honorable Ann L. Hartstein, Secretary, Massachusetts Executive Office of Elder Affairs*
- *Dr. Michael McBurney, Head of Scientific Affairs, DSM Nutritional Products*
- *Dr. Simin Nikbin Meydani, Director, JM-USDA HNRCA at Tufts University*
- *Dr. Mohsen Mostafavi, Dean, Harvard Graduate School of Design*
- *Dr. Karen Sealey, Special Advisor UN and Partnerships, Pan American Health Organization/World Health Organization*

S p o n s o r s