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The aging of Europe. The unexplored potential

Mihajlo Jakovljevic¹

¹Health Economics and Pharmacoeconomics, Faculty of Medical Sciences University of Kragujevac, Serbia

ORIGINS OF POPULATION AGING

Most of the written demographic history of diverse European nations that once inhabited the continent or those that still strive, was the story of young societies whose major, long term survival challenges were poverty, hunger and infectious diseases. Since the early roots of industrial revolution, in some European nations almost two centuries ago, unique new demographic transition began to reveal its face [1]. This long term evolution was encircled with decreasing female fertility, improved early childhood survival, falling mortality rates and extended longevity [2]. The term population aging became broadly recognized description of this phenomenon [3]. Converging causes of such outcome were build-up of welfare states, sexual revolution with inclusion of females into the labor markets and promising deliverables of medical technologies, mostly during the XX century.

THE CASE OF EUROPE

A myriad of modern day European nations are coping with the growing proportion of elderly citizens with Russia [4], Italy [5], Nordic [6], Balkan [7] nations among some notable examples. These changes have brought several important burden in different areas of social life [8]. The first and most concerning one is the fact that most domestic-driven European labor forces are gradually shrinking [9]. This is partially being compensated by replacement with foreign born skilled migrants [10] but only to some extent [11]. Long term and continuing shortages of labor are particularly visible in some areas such as professional medical and nursing staff in some large countries like Germany [12]. Furthermore, in Europe [13] are consecutively adopted extended work life policies which so far do not tackle gender vulnerabilities in an appropriate scale [14].

CONSEQUENCES FOR MEDICAL CARE ESTABLISHMENTS

In the medical services arena, growing proportion of elderly citizens is opening few other issues. Most obvious one are higher medical needs of the people in their 70s and 80s [15]. This frequently accumulates to the fact that last years of life ending in an incurable illness demanding expensive intensive care unit admission, palliative or home care, costs more than the entire medical consumption of an individual over his/her life span [16]. Other less striking challenges refer to the difficulties in access to the medical care imposed to the elderly and concerning life quality in this age group. And last but not the least, poor health outcomes among the old patients, frequently interpreted as failures of evidencebased treatments actually present compliance difficulties [17]. Some of these inefficiencies were successfully improved by patient-centered therapy approach which is becoming increasingly adopted throughout the world in recent years [18].

Contemporary health systems have deployed a variety of mechanisms to protect senior citizens from such vulnerabilities. Many legislations tackled equity issues in terms of both access [19] and affordability of medical services [20]. These goals even in wealthiest among European societies were partially accomplished by means of extended insurance coverage [21], provision of community support [22], spreading the network of nursing staff offering home care services [23] and higher reimbursement of medicines [24] in this age group. Generic replacement of brand name drugs proved to be effective tool substantially decreasing the outpatient costs and affordability of pharmaceuticals to the elderly [25]. Among the most promising investments are current European Commission-Japan Horizon 2020 calls for funding of robotic technology research tailored for the home assistance to the elderly and disabled persons [26]. Other less demanding areas

Corresponding author

Mihajlo Jakovljevic sidartagothama@gmail.com

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offering room for significant advances are healthy aging policies [27] involving dietary habits, exercise [28] and coping with mental illnesses most prominent in last decades of life [29].

Certainly one of the cardinal difficulties arising from such a demanding and broad policies refer to the skyrocketing costs of care for senior citizens [30]. These expenditures virtually cross the red lines of both affordability and willingness to pay in many European nations [31]. Diverse strategies were adopted to lessen this burden. Some of the simplest ones were splitting the costs incurred among federal, regional and municipal level budgeting. In harsher social environments, particularly throughout the broad Eastern Europe and Balkans region, large part of these costs were simply moved away from governmental and public responsibility towards the ordinary citizens and their families [32]. This led to the well-known rise in out-of-pocket expenses in these regions [33]. There were two serious adverse effects of the inability of state-owned public insurance funds to provide extensive health coverage for the elderly. First was occurrence of catastrophic household expenditure leading entire families beneath the poverty line due to serious illness of an individual [34]. Another even more important at the national level, was boomerang effect of declining comprehensive preventive, screening and primary outpatient care to the old patients. They were returning back in more severe stages of their illness requiring hospital admission and an expensive and demanding inpatient care. This was probably the most obvious case with core prosperity diseases such as diabetes [35], COPD [36], addiction disorders [37], risky pregnancies [38], community-acquired pneumonia [39], depression [40] and of course, cancer [41]. Back among the mature free market EU-15 economies, all these challenges were present in similar pattern. Traditional high-income economies had stronger historical legacy of preventive medicine, better coverage of rural regions by the network of primary medical care facilities and higher living standards [42]. These advantages are still placing Western European retired citizens in a significantly better position compared to their Central and Eastern European counterparts.

HARVESTING THE UNEXPLORED POTENTIAL OF MATURITY

Regardless of all aforementioned setback of such a huge demographic change, we should be aware that "grey transition" does not inevitably imposes only weakness to the contemporary communities in Europe and beyond. Many countries successfully implemented extensions of mandatory and voluntary retirement age limits upwards in both males and females [43]. Some professions actually benefited from these gradual legislative changes because of lower costs of new staff recruitment and training [44]. In a post-industrial society, benefiting from expanding ICT technologies, distant work from home proved to be surprisingly convenient. It actually allowed older workers with transport limitations and chronic illnesses to contribute with their huge experience and knowledge further on, instead of being forcibly retired by law [45]. This case is typical in a large scale of scientific, artistic, advertising or public administration related duties [46]. Furthermore, many senior positions in a variety of businesses, governmental and municipal affairs, industrial and service provision sectors of the economy demand effective leadership capacity [47]. This ability for evidence-based decision making was proven in managerial sciences to be more dependent on overall life experience and wisdom than to the precise technical skills mostly mastered by younger people [48]. These and many other possible benefits of the growing proportion of senior citizens should not be omitted in foreseeable future. European Union's and Commonwealth of Independent States' authorities will probably remain the most capable institutional framework delivering long term strategies to cope with population aging in both the West and East of the European region.

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