Ageing in the Middle-East and North Africa: Demographic and health trends

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Abstact. The world is ageing rapidly (United Nations Development Programme [UNDP], 2016). The population of the Middle East and North Africa (MENA) is no exception, with older adults in the Arab world are expected to increase in number and as a percentage of the general population. All MENA countries are likely to undergo marked changes from 2025, with those aged above sixty-four years representing the largest age group by 2050. The percentage of older persons in the MENA is expected to increase, and will create enormous demands on the health care system. As yet, there are no national plan for universal and equal access in Arab countries that explicitly includes older people. The high prevalence of non-communicable diseases and disability among older adults suggests that this segment of the population needs specialized health care. Preventive geriatric medicine and the establishment of national geriatric curricula are greatly needed to promote 'healthy ageing' in all Arab countries. Having more accurate estimates of trends in the burden of disease and in health-care provision and use among older Arabs would inform evidence-based policies for older persons, their families and caregivers.

Keywords: *Middle East and North Africa (MENA), ageing population, policy, health care.*

Introduction

The population of the world is ageing rapidly, both in its absolute numbers and in its percentage relative to the younger population (United Nations Department of Economic and Social Affairs [UNDESA], 2019). In 2018, for the first time in history, persons aged 65 years or over, worldwide outnumbered children under age five. Projections indicate that by 2050 there will be more than twice as many persons above 65 as children under five. By 2050, the number of persons aged 65 years or over globally will also surpass the number of adolescents and youth aged 15 to 24 years. This is shaped mostly by levels of fertility and mortality, which have declined almost universally around the globe. Moreover, it is expected that in 2050 the 1.5 billion people aged 65 years or over worldwide will outnumber adolescents and youth aged 15 to 24 years (1.3 billion).

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Globally, approximately 9% of people were aged 65 or over at the end of 2019 (UNDESA, 2019). The proportion of older persons in the world is projected to reach nearly 12% in 2030, 16% in 2050 and it could reach nearly 23% by 2100. Europe and Northern America have the most aged population in 2019, with 18% aged 65 or over, followed by Australia / New Zealand (16%). Both regions are continuing to age further. Projections indicate that by 2050 one in every four persons in Europe and Northern America could be aged 65 years or over. A previous estimate revealed that more than half (58%) of all people who are 65 years and older live in developing nations. The world's older population experiences a net increase of 1.2 million each month, 80% of which occurs in low-income world nations (United Nations Development Programme [UNDP], 2016). Moreover, as in the west, the growth rate is fastest for the oldest old; those most likely to have chronic diseases and be in need of health services (UNDESA, 2019).

The number of people above age 80 years is growing even faster than the number above age 65. In 1990 there were just 54 million people aged 80 or over in the world, a number that nearly tripled to 143 million in 2019. Globally, the number of persons aged 80 or over is projected to nearly triple again to 426 million in 2050 and to increase further to 881 million in 2100. By 2050, it is anticipated that six countries will also have more than 10 million people aged 80 years or over, namely China (99 million), India (48 million), the United States of America (30 million), Japan (17 million), Brazil (10 million) and Indonesia (10 million). Together, these 6 countries will account for 57% of all persons aged 80 or more in the world (UNDP, 2015). Moreover, whereas the overall numbers of males and females globally are about equal, women outnumber men at older ages owing to their longer average life expectancy. In 2019, women comprise 55% of those aged 65 years or over and 61% of those aged 80 years or over globally.

Population trends and challenges in the Middle East and North Africa (MENA)

The Middle East and North Africa (MENA) is one of the cradles of civilization and of urban culture. Judaism, Christianity, and Islam originated in the region. The influence of MENA spreads beyond its rich oil fields. It seizes a tactically significant geographic position between Asia, Africa, and Europe. There are major demographic changes affecting the MENA Region. These changes will offer social and economic opportunities or some powers and harshly challenge others. The populations of more than 50% of the countries will increase by more than a third (some by more than two-thirds) by 2025, placing additional stresses on vital natural resources, services, and infrastructure. Two-thirds of these countries are in Sub-Saharan Africa; most of the outstanding fast-growing countries are in the Middle East and South Asia (Abyad & Hammami, 2019). Since 2011, the region has experienced an eruption of conflict in several Arab countries. What was termed the 'Arab Spring' led to a series of wars and conflict in countries such as Syria, Iraq, Libya and Yemen. Domestic strife and foreign intervention have led to "failed states" across the region (Müller et al., 2016; Kinsman, 2016).

As the Region enters the third millennium the rapid population growth intensifies the challenges that it will face. The population of the MENA has increased fivefold since the 1950s, from just under 110 million in 1950 to 569 million in 2017 (UNDESA, 2017). Notwithstanding mostly declining rates of fertility, absolute population numbers are expected to further double

to over 1 billion inhabitants by 2100, according to medium variant projections (ibid.). By the end of the century, therefore, there will be more people in the MENA region than in China, whose population is expected to continue to shrink to just over one billion; and more than in Europe, the population of which is expected to recede by approximately 10% by 2100. Right now, the population growth rate is most minimal in Lebanon (0.73%) and most noteworthy in Iraq (3.1%). The diminishing pattern of population development is required to proceed for the following couple of decades where the development rate is assessed to achieve a negative value in Algeria, Bahrain, Lebanon, Morocco, Oman and Tunisia in the year 2050. Of all nations, Saudi Arabia has demonstrated the most honed diminish in Population development rate from 6.0% in 1980 to 2.1% in 2010 and is relied upon to diminish much further to 0.4% by 2050.

Contrasted with developed nations, the majority of inhabitants in the Middle East is youthful. The level of the Population beyond 65 years old in MENA is evaluated at 4.7% (of an aggregate Population of 336 million) as indicated by the World Bank (2012) report. The range shifts from under 2% in the United Arab Emirates (UAE) to about 10% in Lebanon. As a result of declining fertility, the youth bulge peaked in North Africa in the 1970s and in the Middle East in the 1990s (Cammett et al., 2015). In the foreseeable future this youth bulge will remain high. The Arab Human Development Report of 2016 concluded that the current Arab youth population is "the largest, the most well educated and the most highly urbanized in the history of the Arab region" (UNDP, 2016). In 2015, around half of the total population were under the age of twenty-four, and more than 60% under thirty years old (UNDP, 2016). This presents a number of challenges to authorities including unemployment rates, conflict and civil unrest, especially in developing countries where the capacity to create educational and employment opportunities and possibilities for political participation are restricted. Education rates increase the likelihood of inclusion in 'legitimate' labour market activity, whilst preventing youth from engaging in unlawful activity (Grogger, 1998).

The MENA region is a diverse and heterogeneous region where politics and religion pervade most aspects of life including health care. The region has witnessed a major amelioration in health over the past few decades. This has resulted in rapid increases in life expectancy, most outstandingly Lebanon improved the life expectancy from sixty-seven to around eighty years in the period from 1990 to 2015 (United Nations Economic and Social Commission for Western Asia, 2017). This success is secondary to marked improved in healthcare services with access to modern medical technology in both Lebanon and the entire region (ibid.). The improved health situation, the declining fertility and mortality rates will result in an increase in demographic ageing. The ageing of the population, coupled with the return migration to other regions, and the emigration of working age populations, have further augmented the old age dependency ratio (Saxena, 2013). This ratio represents the dependency burden relative to economically active age groups, understood as the proportion of the population aged sixty-five years or older in relation to those of working age (15 to 64 years old). There is a clear increase in dependency levels of MENA countries from 1950 to 2015, and as projected through to 2100. In 2015, Israel, Tunisia, Turkey and Lebanon had the highest proportions of residents over sixty-five years, relative to the populations of working age. From 2050, Iran, Turkey, Lebanon and Oman are anticipated to see the highest increases in the old age dependency

burden from among MENA countries. Tunisia for example, is projected to see its old age dependency ratio increase from 6.9% in 1980 to 15% by 2025, and further to 54 % of the population by 2100.

Notwithstanding further amelioration in fertility and mortality rates, the six Gulf Cooperation Council (GCC) countries are projected to witness levels of ageing reduced mostly by the high levels of working-age immigration - despite expected decreases in migration rates. Qatar– with its high levels of migrant workers - is anticipated to see its dependency ratio increase only marginally, from 2.1% in 1980 to around 2.9% by 2025. As in the GCCs, the increase of old-age dependency ratios in Yemen and Somalia are slow, though for different reasons. Rates here are projected to decrease instead, due to the higher fertility and mortality rates still compelling population growth rates. Regardless of the above, all MENA countries are likely to undergo marked changes from 2025, with those aged above sixty-four years representing the largest age group by 2050. The percentage of older persons in the MENA is expected to increase with improvement of health care delivery in the area. The projection is that in 35-40 years, the youthful masses will work their way up the population pyramid, and the geriatric population in the Middle East will surge. This will lead to the rectangularization of the pyramid. Population projections reveal a threefold increase of older persons from 4.1% in 2010 to close to 12% in 2050. Yet, paralleled to the West (13.2 % in North America and 18.5 % in Europe in 2010) the region rests fairly young. Presently, Lebanon and Tunisia have the highest percentage of older people (65+) (7.3% and 7.0%, respectively). By the year 2050, the percentage of older persons will exceed 20 % in 6 out of the 22 MENA countries, and will range between 12% and 19% in 9 others.

Not surprisingly, as in ageing populations elsewhere, the fastest rate of growth will be in the very old. The World Health Organization (WHO) (2011) estimates that from 2000 to 2050, the rate of growth of the population above age 65 is projected to be 4-5%, and the average annual growth rate of the oldest (85 years and older) will exceed five% in eleven Arab countries. In countries like Lebanon, the proportion of older persons is already relatively high and will double by the year 2050. Other countries such as Qatar, Kuwait, and the United Arab Emirates (UAE) should anticipate a fivefold or greater increase in the proportion of their geriatric population and should allocate resources accordingly. In the whole MENA Region, it is expected that the older population will triple (Table 2.1) (WHO, 2011; UNDP, 2015).

Therefore, the region will develop rapidly ageing populations within the next few decades. The countries which have much lower levels of economic development and access to adequate health care than more developed countries, will be hard-pressed to meet the challenges of more older people, especially as traditional family support systems for older persons are breaking down. Policymakers in the Middle East need to invest soon in formal systems of old-age support to be able to meet these challenges in the coming decades (Abyad, 2015). Older persons are at high risk for disease and disability; this population ageing will place urgent demands on developing-country health care systems, most of which are ill-prepared for such demands. It is apparent that the problems of the frail older persons and development of geriatric programmes and understanding of geriatric principles are international problems (WHO, 2000; Abyad, 2017).

Table 1: Current and projected percentages in the MENA of old and oldest-old populations

Countries	Percentage of Population 65+			Percentage of Population 80+		
	2010	2030	2050	2010	2030	2050
World	7.7	11.6	15.6	1.6	2.3	4.1
Algeria	4.6	9.0	19.1	0.7	1.2	3.7
Bahrain	2.1	9.0	25.4	0.3	0.6	4.3
Comoros	2.7	3.7	5.9	0.4	0.3	0.7
Djibouti	3.3	4.8	8.0	0.3	0.6	1.0
Egypt	5.0	8.7	14.2	0.7	1.4	2.8
Iraq	3.3	3.7	6.8	0.4	0.5	1.0
Jordan	3.9	5.6	12.8	0.5	0.9	2.2
Kuwait	2.5	5.2	16.1	0.3	0.5	2.2
Lebanon	7.3	12.0	21.0	1.1	1.8	4.6
Libya	4.3	7.9	17.4	0.6	1.4	3.3
Mauritania	2.7	3.9	6.6	0.2	0.3	0.7
Morocco	5.5	10.5	17.7	0.8	1.4	3.7
Oman	2.5	8.3	22.5	0.5	0.8	3.6
Palestine	2.7	4.0	7.1	0.3	0.6	1.2
Qatar	1.0	4.3	21.2	0.1	0.3	3.5
Saudi Arabia	3.0	6.4	15.1	0.6	0.9	2.2
Somalia	2.7	3.2	3.8	0.3	0.3	0.5
Syria	3.9	7.3	12.8	0.6	1.1	2.9
The Sudan	3.6	4.7	7.5	0.4	0.6	1.1
Tunisia	7.0	12.1	21.4	1.2	1.8	4.6
UAE	0.4	6.3	28.0	0.1	0.2	4.2
Yemen	2.6	3.2	5.6	0.3	0.4	0.7

Source: United Nations Department of Social and Economic Affairs, (2017).

Health transitions

The MENA Region is passing through the 'Health Transition Phase', which is characterised by an unprecedented increase in both number and proportion of adults and older persons. Improvement of health care has been achieved by a combination of technical advances, social organization, health expenditure, and health education (Abyad, 1994, 1995a, 1995b, 1996, 2001, 2019). Rapid urbanization and industrialization are occurring across the MENA countries. The epidemiological consequences of these changes will lead to an increased rate of death from cancer and circulatory disorders. In addition, an increase in chronic disorders of old age and ageing itself, will create enormous demands on the health care system. As yet, there are no satisfactory geriatric care services available for older persons. Different countries in the region have started different programmes which tend to be rudimentary and fragmented with no programmes available on a national level (ibid.).

Once among the highest on the planet, MENA's fertility rate has been declining for quite a long time, to a great extent as a result of deferred marriages and the utilization of contraception. Nonetheless, a background marked by high fertility has brought about a

growing number of women of reproductive age (15 - 49 years). This number (for the area in general) expanded from 84 million in of 2000 to 119 million in 2015, and is anticipated to increment further, arriving at 147 million in 2030 and 169 million in 2050 (UNDESA, 2017). This demographic process, known as momentum, will prompt an enormous number of births in 2050 contrasted with 2000, despite the fact that the normal number of births per woman is declining (ibid.). Both the beginning and pace of fertility decrease is anticipated to shift generally over the region. In 2000, fertility in the MENA found the middle value of around 3.3 children per woman and none of the nations had fertility rates underneath the substitution level of 2.1 children per woman (however Tunisia, Iran and Lebanon were close). By 2015 in any case, fertility had tumbled to simply underneath three children for every woman in the district in general and to or beneath substitution level in six nations: Bahrain (2.1 children per woman), Kuwait (2.0), Qatar (1.9), UAE (1.8), Lebanon (1.7) and Iran (1.7). By 2030, half of the MENA countries will have total fertility rates at or below replacement level.

National under-five mortality rates between 1990 and 2015 in the area diminished by between just shy of 50% in Algeria, Djibouti, and Iraq to roughly 75% in Tunisia, Lebanon, Egypt, Iran, and Oman, and are presently (starting at 2016) extending from around 65 deaths for each 1,000 live births in Sudan and Djibouti to under 10 deaths in Qatar, Kuwait, Lebanon, UAE and Bahrain (United Nations Inter-Agency Group for Child Mortality Estimation, 2017). The number of under-five deaths in the region will continue to decline over the coming decades. Life expectancy at birth for the world reached 72.6 years in 2019, an improvement of more than eight years since 1990. Life expectancy in the least developed countries lags 7.4 years behind the global average, due largely to persistently high levels of child and maternal mortality and, in some countries, to violence and conflicts or the continuing impact of the HIV epidemic (table 2).

The Region shows wide variations in their life expectancy ranging from as high as 79 years in Lebanon to 75 years in Kuwait, 73 years in Egypt, to 64 years in Yemen and Sudan and as low as 54 years in Somalia. In contrast, people in some developing countries like Swaziland are not expected to live on average for more than 50 years. The future pace of increment in life expectancy is probably going to change between nations, with solid inconsistencies being relied upon to continue until mid-century. The best situation is anticipated for Lebanon, where life expectancy is anticipated to reach 85 years by 2050, trailed by Oman, Qatar, Morocco, UAE, Algeria, Iran, Tunisia, and Bahrain, all of which have anticipated life expectancies of over 80 years. Indeed, Syria would join this group, if it were to pursue pre struggle patterns (UNDESA, 2017). On the other hand, the anticipated life expectancy at birth in 2050 will be only around 70 years in Djibouti, Yemen and Sudan.

The MENA region has just entered a period of exceptionally low dependency ratios. This economically beneficial situation will last until around mid-century, after which the dependency ratio will rise again as a consequence of the ageing of the population. In the coming decades, a remarkably huge extent of MENA countries will move into their most profitable years, opening up the potential for a demographic dividend. The most positive time frame for the area in general will be between now and 2040, when the dependency ratio will drop as low as 50 dependents (youngsters under 15 years and older individuals 65 and over)

for each 100 people of working age (15-64 years). The dependency ratios will rise again in the second half of the century, because of a quickly developing portion of older people in the population, and the window of opportunity for benefitting from the demographic dividend will start to close. Another significant demographic transition experienced in the area identifies with relocation. Migration contributes either emphatically or adversely to the old age dependency ratio of nations. In the previous ten years, the area's migrants have dramatically increased, and it has progressed toward becoming host to the world's quickest developing coercively dislodged and worldwide transients (Connor, 2016). Relocation for financial objectives and place of refuge from local clashes or occupation have moved the area's migrant communities 120% to a sum of 54 million, or 13% of the whole (ibid.). The demographic dynamics of these risings vary inconceivably from nation to nation, as do the associated repercussions. Where migration has been vigorously age and sex particular, gender and dependency ratio have been affected likewise. In Gulf States, most of the local populations (exactly 88 % in the UAE, 75% in Qatar and 74% in Kuwait) contain for the most part worldwide migrant workers. Saudi Arabia pulls in the most noteworthy number of universal migrant specialists in the region, approximately 33%. The to a great extent male transient workforce, likewise twists local gender ratio, work advertised cooperation figures and national birth rate measurements (UNDESA, 2015).

The MENA Region includes some of the oldest urban civilizations; it stands out amongst the most urbanised worldwide (56%) (United Nations Habitat, 2012). The urban areas developed by more than four times from 1970 to 2010 and will dramatically increase again in the following forty years. Driven by an assortment of factors including financial improvement, movement to oil-rich nations and struggle, wide varieties exist crosswise over Arab nations with some encountering an abnormal state of urbanisation, for example, the GCC nations (urbanisation in Bahrain, Kuwait, Qatar, Saudi Arabia and the UAE ranges from 82.1 % to 98.7%). The procedure of urbanisation, be that as it may, will contrast altogether crosswise over sub-areas.

The Gulf sub-area as of now has significant levels of urbanization – in excess of 80% in Kuwait and near 10% in Qatar. Mashreq nations and the least developed nations (LDCs) of the MENA region, for example, Mauritania, Sudan and Yemen have lower paces of urbanisation, albeit urban occupants are as yet expected to increment quicker than their provincial population, and to epitomize the bulk by 2050. Urbanization can likewise have consequences for an ageing population, where joint family bolster structures are regularly less firm when contrasted with those in rural districts, in this manner expanding the weight upon national social security frameworks. Essentially, declining rural populations may impact horticultural import reliance proportions and related worries about nourishment power and nourishment security. The projection is that in 35-40 years, the youthful masses will work their way up the pyramid, and the geriatric in the MENA will surge. Not surprisingly, as in ageing populations elsewhere, the fastest rate of growth will be in the very old. Ageing contributes to a contracting workforce accessible to support the dependent older persons. Nonetheless, with reasonable foreknowledge, sound monetary approaches, and political solidarity, the present structure of the Middle East can be transformed into a demographic reward.

Table 2: Life expectancy at birth (years) (2015)

Rank	State/Territory	Total	Male	Female
	Global average	70	67	73
Developed Countries				
1	Japan	83.74	80.91	86.58
2	Italy	83.31	80.00	86.49
3	Switzerland	82.84	80.27	85.23
43	United States	78.88	76.47	81.25
Regional Countries				
5	Israel	82.64	79.59	85.61
44	Lebanon	78.86	77.14	80.87
48	Qatar	77.89	77.10	79.68
55	United Arab Emirates	76.67	76.02	78.23
58	Bahrain	76.38	75.58	77.42
60	Oman	76.33	74.66	78.85
76	Iran	75.06	73.98	76.22
78	Turkey	74.84	71.53	78.12
83	Tunisia	74.60	72.30	77.04
89	Kuwait	74.28	73.34	75.56
93	Saudi Arabia	74.08	72.82	75.47
98	Jordan	73.79	72.21	75.52
100	Morocco	73.61	72.60	74.62
110	Palestine	72.65	70.74	74.66
114=	Libya	71.47	68.79	74.41
120	Egypt	70.84	68.71	73.05
129	Syria	69.51	63.98	76.26
130	Iraq	69.19	66.99	71.44
159	Yemen	63.51	62.18	64.88
162	Sudan	63.08	61.60	64.60
165	Mauritania	62.77	61.29	64.25
189	Somalia	54.88	53.28	56.51
Developing Countries				
194	Nigeria	52.29	51.97	52.61
197	Côte d'Ivoire	50.97	50.21	51.85
199	Central African Republic	49.53	47.83	51.25
201	Eswatini (Swaziland)	49.18	49.69	48.54

***Source*:** United Nations Department of Economic and Social Affairs, (2015).

This demographic dividend alludes to a transition from a high birth rate to a low birth rate together with increased life expectancy (low death rate) as the developing nation progresses into an industrialized economic system. For a brief timeframe in a country's history (typically lasting 20-40 years), the young dependent (age 1 to 14 years) enter the workforce at a

comparable or faster rate than the old dependent (over 65 years) exit it into retirement. A sizeable part of younger people who are healthy, educated, and employed are capable of contributing to the national economy, thus the term 'dividend'. Amid this 'window of opportunity', the geriatric cohort tend to increase without a corresponding increase in the support ratio or the cost of dependent care; in fact, the dependency ratio may shrink. The window of opportunity, however, does not last forever. In time, the age distribution changes once more. As the growing middle-aged and older moves into the dependent age bracket, they are no longer replaced by younger productive cohorts due to descending fertility rates. As in other regions in the world, the Middle East is also experiencing marked changes in its health-related issues. Once dominant infectious diseases are now being replaced by chronic non-communicable diseases, which comprise 47% of the region's burden of disease, and is anticipated to rise to 60% by 2020 (Khatib, 2004). Hence, with the ageing of the Region's Arab population, maintaining health and independence in old age will become increasingly challenging.

Human development in the MENA region

The UNDP's Human Development Index (HDI) has captured human progress, combining information on people's health, education and income in just one number. Despite overall progress, large pockets of poverty and exclusion persist in the Region. Inequality and conflict are on the rise in many places. Between 2012 and 2017, the conflicts in Syria, Libya and Yemen contributed to these countries' slipping down the HDI, due to significant declines in their life expectancy or economic setbacks. It will take years, if not decades for them to return to pre-violence levels of development. The 2018 Update presents HDI values for 189 countries and territories with the most recent data for 2017. Of these countries, 59 are in the very high human development group, 53 in the high, 39 in the medium and only 38 in the low. The global HDI value in 2017 was 0.728, up about 21.7% from 0.598 in 1990. Across the world, people are living longer, are more educated and have greater livelihood opportunities. The average lifespan is seven years longer than it was in 1990, and more than 130 countries have universal enrolment in primary education. During the period between 2005 and 2017 Lebanon, Jordan and Libya experienced different degrees of progress toward increasing their HDIs. Lebanon's 2017 HDI of 0.757 is the same as the average of 0.757 for countries in the high human development group and above the average of 0.699 for countries in Arab States. From Arab States, countries which are close to Lebanon in 2017 HDI rank and to some extent in population size are Jordan and Kuwait, which have HDIs ranked 95 and 56 respectively.

In the Region countries with very high human development included Israel with the highest HDI with a position at 22, UAE ranked 34 followed by Qatar, Saudi Arabia, Bahrain, Oman and Kuwait at 56. Whereas countries with high human development, were topped by Turkey, followed by Mauritius, Lebanon, Algeria, Jordan, Tunisia, Libya, Egypt and Palestine. In the medium human development parts, one finds Iraq and Morocco. In the low human development, one finds Syria, Sudan, Yemen and South Sudan. In recent years, other countries had setbacks as new challenges emerged and conflicts erupted. Between 2012 and 2017 Libya, the Syrian Arab Republic and Yemen had falling HDI values and ranks—the direct effect of violent conflict. Although Lebanon is not directly involved in violent conflict, it has

suffered spill overs from the conflict in the Syrian Arab Republic, hosting more than a million Syrian refugees. In 2012 the Syrian Arab Republic ranked 128 on the HDI, in the medium human development group. But after years of conflict it dropped to 155 in 2017, in the low human development group, due mainly to lower life expectancy.

Health care services

The Madrid Plan calls on governments to take steps to achieve universal and equitable access to health care and to tackle social and economic inequality based on age, sex or other grounds (United Nations, 2002). The main challenge for health services policies and programmes in most Arab countries is their affordability and accessibility, which is of particular relevance to the older population. Older people may face age discrimination in the provision of services because their treatment may be perceived to be less worthy than the treatment of younger persons.

Wars and conflicts that are endemic in a number of countries of the region and the more recent 'Arab Spring' struggles lead to fragile health care systems and curtail access to services and basic amenities, further compounding the challenges faced by vulnerable populations. Overall, there is no national plan for universal and equal access in Arab countries that explicitly includes older people. Even in countries where healthcare services are nominally universal and free (e.g., GCC states, Jordan, Iraq, Libya, Tunisia, Algeria, and Syria), it is unknown whether they are made specifically available to older persons. For example, even if accessible, older rural residents with limited mobility are particularly likely to have difficulty reaching service providers.

The high prevalence of non-communicable diseases and disability among older adults suggests that this segment of the population needs specialized health care. Similar to most cultures around the world Arab culture places tremendous respect on elders and family support obligations in old age (Sinunu et al., 2009), most older Arab adults live at home and receive care from their children, spouses, or other close relatives. To date, in most Arab countries, the number of institutionalized older adults remains low (Al-Shammari et al., 2000; Boggatz & Dassen, 2005; Margolis & Reed, 2001), but specific figures of the institutionalized proportion are not available. For example, in the UAE, the approximate incidence of institutionalization among older people is 7-14 per 1000 people aged 65 and older, which is nearly six times lower than U.S. levels (Margolis & Reed, 2001). Recent reports indicate that members of the family are increasingly unable to care for their vulnerable elder family members, particularly those with the most severe disabilities (Sinunu et al., 2009).

Overall, although ageing has been a problem in wealthier countries for a long time, in some Arab countries it has only recently become an issue. For instance, in all Arab countries there is a lack of specialization and teaching in geriatric medicine (Al-Shammari et al., 2000; Chemali et al., 2008; Keller et al., 2002; Margolis et al., 2003; Youssef, 2005). Furthermore, nursing homes, if available, are ill-prepared for older residents (Hafez et al., 2000), and only those individuals belonging to the middle or high social class can afford to put their elders in long-

Table 3: Countries by Human Development Index

	Country	HDI	LE	SDG	GNI
Developed World -Very High Development					
1	Norway	0.953	82.3	12.6	68,012
2	Switzerland	0.944	83.5	13.4	57,625
13	United States	0.924	79.5	13.4	54,941
Middle East & North Africa					
22	Israel	0.903	82.7	13.0	32,711
32	Cyprus	0.869	80.7	12.1	31,568
34	United Arab Emirates	0.863	77.4	10.8	67,805
37	Qatar	0.856	78.3	9.8	116,818
39	Saudi Arabia	0.853	74.7	9.5	49,680
43	Bahrain	0.846	77.0	9.4	41,580
48	Oman	0.821	77.3	9.5	36,290
56	Kuwait	0.803	74.8	7.3	70,524
64	Turkey	0.791	76.0	8.0	24,804
65	Mauritius	0.790	74.9	9.3	20,189
80	Lebanon	0.757	79.8	8.7	13,378
85	Algeria	0.754	76.3	8.0	13,802
95	Jordan	0.735	74.5	10.4	8,288
95	Tunisia	0.735	75.9	7.2	10,275
108	Libya	0.706	72.1	7.3	11,100
115	Egypt	0.686	71.7	7.2	10,355
119	Palestine	0.706	73.6	9.1	5,055
120	Iraq	0.685	70.0	6.8	17,789
123	Morocco	0.667	76.1	5.5	7,340
155	Syrian Arab Republic	0.536	71.0	5.1	2,337
167	Sudan	0.502	64.7	3.7	4,119
178	Yemen	0.458	65.2	3.0	1,239
187	South Sudan	0.388	57.3	4.8	963
Developing countries					
76	Sri Lanka	0.770	75.5	10.9	11,326
188	Central African Republic	0.367	52.9	4.3	663
186	Niger	0.354	60.4.5	2.0	906

SDG =Mean Year of Schooling
LE= Life Expectancy at birth
SDG= Mean Years of schooling
GNI Gross national income per capita in $

HDI score between 8 and 0.953 Very High Human Development
HDI score between 0.7 and 0.798 High Human Development
HDI score between 0.556 and 0.699 Medium Human Development
HDI score less than 0.546 Low Human Development

***Source*:** United Nations Department of Social and Economic Affairs, (2015).

term formal treatment (Sinunu et al., 2009). Due to the lack of sufficient geriatric services, older people are generally treated by general internists or physicians and are admitted to acute care hospitals in the GCC countries (Al-Shammari et al., 2000; Margolis & Reed, 2001). Most older adults argue that advanced home services are inadequate or unavailable (Youssef, 2005) and that there is a lack of social and economic support for caregivers (Atallah et al., 2005). The health care system must align to improve the situation in guaranteeing that multifaceted older patients are furnished with care that is streamlined and intelligible. There is a need for enhancement of education and training, increments in enlistment and retention, and the advancement of new models of care (Abyad, 1996, 2001, 2008a, 2008b). The WHO has distinguished a 'Sustainable Development Goals index threshold' of 4.45 doctors, nurses and midwives per 1000 individuals, to guarantee a health workforce of adequate density to achieve the objectives of the SDGs (WHO, 2016). There is significant difference between MENA nations regarding the quality of their health services providers. Eleven out of 19 nations had satisfied the base WHO guideline for health service provision outlined above by 2015, with the most elevated density of health service providers being in Qatar (9.4 per 1,000 occupants) and Libya (8.0).

The contribution of social visitation and integration to the well-being of Arab elders is an interesting observation from research in the region. Studies suggest that continuing social interaction and belonging to a strong social network is a major factor contributing to effective ageing among the region's elders and may be viewed as even more important than optimal. The family traditions that exist in Arab culture make nursing homes and institutions of old age the last choice for most families and only when all care options fail. Consequently, in countries of the region, the proportion of institutionalized older people remains very small (< 5 per thousand older people), except for Lebanon (13 per thousand older people). This is in clear contrast to the percentage of older persons receiving formal care in institutions in Europe, ranging between 9 % in Italy and 32% and 35% in Sweden and Belgium, respectively (Aziza & Brodsky, 2003).

While nursing homes remain very scarce in Djibouti, Iraq, Libya, Morocco, Oman, Saudi Arabia, the Sudan, Syria, Tunisia and Yemen (less than 0.4 per 10,000 persons older than 65), the number of nursing homes in proportion to the size of the older population is highest in Palestine, Lebanon and Bahrain (close to 1.9, 1.6 and 1.1 per 10,000 persons older than 65, respectively). Qatar, Jordan and Egypt (ranging from 0.4 to 0.6 per 10,000) follow this. Countries with high numbers of nursing homes have reported high numbers of day-care centres, with Bahrain at the top of the list (3.4 per 10,000 people over 65), followed by Lebanon (1.9), Palestine, Qatar and Egypt (range 0.5-0.6). The quality and affordability of nursing homes in Arab countries is one of the main concerns. Older people's programmes also represent class distinctions, and the well-to-do clearly benefit from the superior homes. Clubs are a luxury that can only be afforded by the wealthy. In fact, programmes are not well known to the community's older people and their caregivers (Regional Mapping, 2012). One of the few and earliest such programmes for older people in the region is the 'Mobile Units' system in Bahrain. It was launched under the authority of the Ministry of Social Affairs by the National Committee on Ageing in October 1994 and eventually passed on to the Ministry of Health in August 2007. Currently, there are ten mobile units, each consisting of a team of

Table 4: Estimated number of health service providers (doctors, nurses and midwives) for each scenario by country

Country or Area	Health service providers in 2015 (estimated using 2000-2015 trend)	WHO threshold met, 2015	Health service providers 2030 if trend maintained	Health service providers in 2030 if all countries meet WHO Standard
Algeria	179,600	Yes	277,643	277,643
Bahrain	7,405	Yes	14,430	14,430
Djibouti	1,722	No	3,971	5,041
Egypt	222,877	No	507,323	532,868
Iran	256,562	No	360,656	395,442
Iraq	106,135	No	294,346	294,346
Jordan	65,596	Yes	87,096	87,096
Kuwait	30,192	Yes	40,465	40,465
Lebanon	37,375	Yes	32,085	32,085
Libya	49,893	Yes	62,023	62,023
Morocco	76,005	No	142,498	181,888
Oman	31,137	Yes	49,733	49,733
Qatar	23,313	No	31,532	31,532
Saudi Arabia	224,889	No	311,679	311,679
Sudan	129,660	Yes	307,055	307,055
Syria	63,368	Yes	149,614	149,614
Tunisia	53,114	No	70,289	70,289
UAE	55,789	No	76,605	76,605
Yemen	65,686	Yes	174,120	174,120
MENA	1,680,318	No	2,993,163	3,093,952

* The State of Palestine is excluded from the analysis due to the lack of available data.

***Source*:** World Health Organization Global Health Workforce Statistics [online database] & United Nations Department of Economic and Social Affairs (2017).
Note: Data from 2000 to 2015 was used for estimation. If density is higher than the WHO minimum standard in 2030, the forecasted number of health service providers is reported.

health and social workers, including family physicians, physiotherapists and dieticians, providing nursing, medical and social care and advice to older persons and their caregivers at home. The units are financed by the National Committee on Ageing, the Red Crescent Society and by the State-owned Social Insurance Organization.

In the Region there is a need for a central shift in the focus of clinical care for older people. Rather than managing numerous diseases and symptoms in a disjointed fashion, the emphasis should be on interventions that optimize older people's physical and mental capacities over their life course and that enable them to do the things they value. WHO believe strongly that in order to reach healthy ageing there is a need to focus on the goal of maintaining intrinsic

capacity and functional ability across the life course. Recently they proposed the *Integrated Care for Older People* model (ICOPE). The model stresses the need to integrate gerontological and geriatric care within the community. At the Regional level there was a consultation meeting in Beirut that explained the model for the academicians and key persons from the EMRO Region.

Delivering age-friendly, integrated health-care services in the region will necessitate a change in the way health systems are planned. Services will have to be oriented around the needs of older people rather than around the needs of the services themselves. Furthermore, the new system will have to serve older people with a high and stable level of intrinsic capacity, those with a declining capacity and those whose capacity has deteriorated to the point where they require the care and support of others (WHO, 2016). It is important to move from a disease focused approach towards care that aims to enhance older people's intrinsic capacity over their life course (Ham, 2010). The purpose is not to degrade good disease management but is rather to stress that an older person's physical and mental capacity should be the emphasis of, and the starting point for, coordinated health interventions (Low et al., 2011).

These ICOPE guidelines and associated products are the main tools in support of the implementation of the WHO Global strategy and action plan on ageing and health approved by the World Health Assembly in 2016. WHO will partner with ministries of health, nongovernmental organizations, professional associations and academic institutions to disseminate these guidelines, and support their adaptation and implementation by Member States. The foreseeable obstacles for the adoption of ICOPE in the region include lack of political will, gaps in general knowledge about integrated care, difficulties with implementation and insufficient sharing of experiences with integrated care internationally.

Conclusion

In conclusion, older adults in the Arab world are expected to increase in number and as a percentage of the general population. With an increasing prevalence of non-communicable diseases and their associated risk factors and consequences, the emerging health profile of older Arabs in many ways is reflecting that of older adults in the West. However, the high prevalence of non-communicable diseases in several countries in the region does not replace completely the burden of communicable diseases such as HIV, tuberculosis, schistosomiasis and malaria, especially in African countries, where the double burden of infectious and chronic diseases prevails. Preventive geriatric medicine and the establishment of national geriatric curricula are greatly needed to promote 'healthy ageing' in all Arab countries. There is also a need to promote, support and fund research on older adults among scholars within the region. Having more accurate estimates of trends in the burden of disease and in health-care provision and use among older Arabs would inform evidence-based policies for older persons, their families and caregivers. Future care for older persons will also require, according to the WHO, models of both formal and informal care and support systems. While formal long-term care programmes in poor countries are largely underdeveloped, they will be essential to complement the informal support system and maintain the major role that family caregivers are currently playing. Definitions of structured long-term care services that

support informal caregivers include education, respite care, medical appointments, and financial assistance to cover expenses related to care. For example, several countries in East Asia and Southeast Asia offer adult day care and counselling services to support caregivers in their families. Singapore provides home care, and accommodation preferences to family members who are willing to live next door to their older parents, and Malaysia offers tax benefits for adult children who live with their parents.

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