Expert Discussion Workshop Report: Transforming the Future of Ageing

Brussels, 7 December 2018

SAPEA

Science Advice for Policy by European Academies

Workshop Report No 4.

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About SAPEA

Spanning the disciplines of engineering, humanities, medicine, natural sciences and social sciences, SAPEA (Science Advice for Policy by European Academies) brings together outstanding knowledge and expertise from over 100 academies, young academies and learned societies in over 40 countries across Europe.

Working closely with the European Commission Group of Chief Scientific Advisors, SAPEA provides timely, independent and evidence-based scientific expertise for the highest policy level in Europe and for the wider public. SAPEA is part of the European Commission Scientific Advice Mechanism (SAM) which provides independent scientific advice to the College of European Commissioners to support their decision making.

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Background

By initiative of the SAPEA consortium, the Scientific Advice Mechanism will be delivering scientific policy advice on **Transforming the Future of Ageing in Europe (the TFA report)**, to address the following question: what policies at the EU level could support the Member States in achieving inclusive, fair and sustainable systems of health and social care and promote the taking up of innovation for ageing societies?

Based on the current international and European policy context, the available scientific evidence, and the expertise of an international and interdisciplinary working group, SAPEA will deliver a state-of-the-art Evidence Review Report (ERR) and provide science-based policy options. The final report is expected by summer 2019 and may inform the Commission's policymaking in the field. A scoping paper was adopted on 27th April 2018 which summarises the areas that should be covered.

A key milestone on the way to preparing the ERR and policy options was a one day expert workshop which took place on 07 December 2018 in Brussels, and brought together the SAPEA Working Group members and other experts with applied knowledge and experience - from industry, civil society, specialised agencies, etc.

The aim of this workshop was to discuss and review the key findings of the TFA report, and to identify points to prioritise in the Scientific Opinion. The workshop participants discussed the draft report in terms of the feasibility and practical applicability of the recommendations made to transform the future of ageing.

In total, there were 37 participants at the workshop with 15 external experts invited and selected based on their applied knowledge and experience in this field.

The experts were provided with some guiding questions and the draft report in advance of the workshop to familiarise themselves with the content. They were asked to address questions that are raised in the draft report and areas of disagreement, relevant points that may have been omitted, and any inaccuracies that require correction and provide evidence which may have been missed in the literature presented.

According to the rules of the meeting, this report is prepared in an anonymous and non-attributed style.

Session Descriptions

Each of the following sessions corresponds to a priority issue or key chapter of the TFA report draft. For each session, one or two SAPEA Working Group members presented an overview of the topic as it is covered in the TFA report draft. In response invited external experts led a questions and discussion session.

At the conclusion of each session, recommendations for the TFA report content were delivered to the SAPEA Working Group for their consideration

The scope of each of the six sessions was as follows:

Session 1 - Health determinants throughout the lifespan

Priority issues for discussion:

- Demographic changes and prospects
- Life course approach
- Non-modifiable and modifiable determinants of the ageing process

Session 2 - Ageing as an opportunity

Priority issues for discussion:

- Combating ageism
- Addressing social & health inequalities
- Integrating more flexibility between social & health care systems

Session 3 - Age-friendly approach in communities and care facilities

Priority issues for discussion:

- Age-friendly communities: urbanism, mobility & security
- Ageing in the home
- Age-friendly hospitals Age-friendly long- term institutions

Session 4 - Early and mid-life interventions to favour healthy ageing

Priority issues for discussion:

- Metabolic disorders Cardio-, neuro- & nephro-vascular risk factors
- Respiratory diseases
- Cognitive decline
- Sensory abilities

Session 5 - The attractiveness, knowledge and skills of clinical gerontology professions and workforce

Priority issues for discussion:

- Health literacy of informal care givers
- Training of the different categories of health care professionals
- Certification of migrant health care workers
- New technology, basic training/retraining/updating knowledge

Session 6 - Technology to favour healthy ageing and wellbeing

Priority issues for discussion:

- Technology availability and feasibility, standardisation of products
- Security, safety, help with reducing dependency, easy communication
- Acceptance by the older adults/costs/ethical aspects
- Global efficiency & proven outcomes
- Mobile health and the children of the baby-boomers

Introduction

The meeting was opened by the Professor George Griffin (SAPEA Chair), and Professor Pearl Dykstra (Chief Scientific Advisor, European Commission's Scientific Advice Mechanism). The scope of the TFA report, and an explanation of its place and value within the EU policy making environment through the Scientific Advice Mechanism were presented.

Professor Jean-Pierre Michel, the lead on the TFA report, outlined the scope and main conclusions of the draft Evidence Review Report. Professor Michel highlighted the large number of already existing science and policy reports on the subject of ageing, and consequently the need for the TFA report to have a unique angle or take on the evidence, approach and conclusions.

Professor John Rowe (Columbia University, Chair of the MacArthur Foundation Research Network on an Aging Society) presented his comments on the TFA draft report and reflected on similarities and differences between the European Union and the United States. The main challenges are the same globally; ageism, the core institutions of our society are neither designed nor equipped to support an aging population and the general denial by society of the potential effects of the demographic transition.

Professor Rowe mentioned that the TFA report informed him that many of the challenges faced are the same but that evidence, such as healthy life expectancy, suggests that in some areas the European Union has had greater success. There are areas that the European Union can learn from the United States' experience, such as the involvement of older persons in volunteering and community-based social initiatives.

Session 1: Health determinants throughout the lifespan

The session presenter reflected on the drastic demographic change in recent years where Europe has experienced an increase of 2.1 years in life per decade since 1850.

Fertility dropped significantly in the twentieth century, with different timing and intensity across Europe. Migration provides the only growth component for Europe, and migrant ageing will become a major issue due to social, cultural and genetic factors. Migration will not be sufficient to avoid population decline after 2045. The child dependency ratio has significantly decreased but has stabilized recently whereas the old age dependency ratio is increasing.

It is important that policy makers and medical professionals aim for additional years to life being healthy life years, rather than simply living longer in poor health. Healthy ageing starts young. Early life experiences and life- style formed in the adolescent and young adult age range determine later life health to a significant extent.

The TFA report focuses on the long-term effects of physical and social exposures during gestation, childhood, adolescence and adult life on capacity and disease. The aim is to maintain functional ability and prevent disease. Access to health education is not equitable and we need to find a way to include those with lower participation in education.

It is important to focus clearly on which factors are non-modifiable (e.g. age, genetics/family health history, sex) and which are the modifiable determinants of the ageing process. Biological age should in general be reduced in importance, especially considering the heterogeneity of today's older persons. Policy decisions based solely upon biological age become less accurate and may promote ageism. They should therefore be phased out wherever possible to be replaced with more accurate and nuanced indicators where case-by-case decision making is not possible.

Recommendations for consideration regarding the TFA report:

- The opening chapter should mention more clearly the two separate approaches of the report, for the currently old, and for the older persons of the future.
- More epidemiological data may be needed to underscore some statements.
- It would be good to have a mechanism to assess policy progress on age-related goals.

• The chapters on ageism and loneliness should be expanded and given more depth.

• Education should be covered in more depth, with a recognition that access to education is unequal, and this is reflected in health inequalities.

• Health is modified by income, place of work and living environment all of which are also subject to significant inequalities.

• Mental health maintenance should be considered to a greater extent as a priority alongside physical health.

• The inequality of health education is a major barrier to improving health throughout the lifespan.

Session 2: Ageing as an opportunity

The TFA report Working Group members were in agreement from the first working meeting that tackling ageism must be a major focus of the report. Ageism concerns stereotypes, prejudice and ultimately discrimination against older persons. Policy makers can have significant positive effects through the adoption of smart policy taking into account best practice in reducing other forms of discrimination such as sex, race or disability. Tackling ageism in all domains (e.g. work, healthcare, social care, transport, societal structures, legal system, the media) will be essential to harness the ability to live longer, healthier and more productive lives. Measures to boost intergenerational interaction, and ultimately solidarity, must be considered. Ageing should be viewed as an opportunity for each individual, enabled by society and the economy at large.

Ageing puts financial pressures on all social security systems: healthcare provision, long-term care, unemployment and disability benefits and public pension systems. Large expenses in one subsystem (say, public pensions) diminish the ability to raise expenses in another subsystem (say, health insurance). When constructing social changes, it is important to acknowledge the fact that multiple systems are involved and there is an interdependence between systems. It is also crucial to recognise that pronounced and often life-long inequalities between citizens exist in all of the domains mentioned in this Session. Those are important societal factors which impact the individual's health.

Integration between formal and informal care, and between social and healthcare is a goal in many EU Member States, but it is a challenging objective to reach. Cross border care is an important European dimension that is currently under-utilised when looking to improve patient access to appropriate care with more choice and flexibility.

Recommendations for consideration regarding the TFA report:

- Ageism should be even more emphasised in the report than it already is, because it is a critical area where policy and law can drive changes in norms and attitudes.
- Associations and correlations cannot inform policies since policies are causal, therefore the focus should be on developing quantitative methods that enable understanding causal effects and mechanisms in observational data. This could be used to evaluate the effects of policies.

• Research should incorporate qualitative and participatory methods to learn what individuals want and value.

• The TFA draft report clearly showed socioeconomic differences but does not sufficiently emphasise that variation in health outcomes within a given socioeconomic group can be as large as the variation between socioeconomic groups. Some people seem to be immune to their socioeconomic circumstances, so what can be learnt from such examples (e.g. unhealthy rich people, very healthy poor people) and how can such learnings be translated into policy options?

• There is currently a lack of consultation with citizens about their individual needs. Goal-oriented care is very important; discussion should seek to determine what is meaningful to the individual.

• Middle and older age groups are highly and increasingly heterogeneous, this needs to be kept in mind when developing policies.

Session 3: Age-friendly approach in communities and care facilities

Expanding age friendly communities is an opportunity to boost social inclusion and integration of older persons through thoughtful and innovative strategies, design and procurement. Big data analytics promise the potential to better understand the way in which vulnerable groups can be integrated into society more readily. Much attention has been paid to disability access by policy makers in recent years, especially with respect of public buildings and transport. The scope of policies should be expanded to consider all persons with physical and mental challenges.

The policy makers and stakeholders needed to drive change are disparate, as are the budgets needed to pull together those efforts into meaningful change. Stakeholders include architects, urban planners, experts in mobility and ergonomics, social care experts, geriatricians. It is cheaper and more effective to plan in advance rather than to retrofit. Smart planning, architecture and building design to increase how age friendly communities are should be incentivised in project funding and public procurement.

Hospitals are a specific example where a change of design, planning and investment approaches could be beneficial to provide a more supportive and therapeutic environment for patients, families and staff of all ages. Reduced staff stress and fatigue, increased effectiveness in delivering care, improved patient safety, and improved overall healthcare quality could be tangible benefits.

Mobility, public transport and driving are important aspects of an age-friendly community that strongly impacts community cohesion and social inclusion. Imposing strict age-related driving license screening likely increases societal and personal costs without clear safety benefits and may result in premature driving cessation particularly in women. Statistics show that elderly people are safe drivers.

Currently there may be discrimination caused by differing legislation between European Union member states. Europe Institutions and governments should work together to develop principles based legislative and guidance frameworks for new technologies that will support age-friendly communities in the future, such as automated vehicles and robotics.

Ageing in place focuses on providing the necessary resources and assistance to enable older people to live with some level of independence at home or in the community for as long as

possible to avoid transferring to more costly long-term care or residential facilities. There are clear opportunities for cost savings; less costly care and support can be provided to older people who remain at home rather than in a residential facility. However, ageing in place policies should not be implemented at the expense of investing in developing a high-quality long-term care system for those that will eventually need residential care.

The TFA report draft identifies as one of its main priorities, the need to tackle the lack of support for and appreciation of the home care workforce. This includes both formal home-care workforce, and its lack of attractiveness for training and as a career, and informal carers. Low levels of pay, difficult working conditions, scant recognition as a valued profession, and a lack of educational opportunities combine to leave care being an unattractive profession. Furthermore, many formal home-care workers are migrants, which creates global care chains where the departure of care workers from other countries creates problems in the workers' countries of origin.

Recommendations for consideration regarding the TFA report:

- There is currently lots of information on the public and private sector role, but a lack of discussion on the voluntary sector.
- Distinction between 'staying put' and 'ageing in place' is good, consider saying more about costs and cultural issues associated with both solutions.
- The section on elder abuse was very welcome and could be emphasised more. Consider discussing it in the section covering ageing in place/staying put.
- The chapters on technology and smart home solutions could be included alongside smart cities (e.g. hive approaches). There should be a focus to implement smart home solutions in general, not just as a solution in ageing peoples' homes.
- The report currently does not address climate change, which has significant impacts on health outcomes particularly concerning older people.
- Consider including more pathways, as the frailty and heart failure ones in the draft are insightful. Implementation of such pathways could probably be encouraged or mandated to a greater extent by policy makers to drive up care standards.
- Outline what are the successes that have come out of age friendly city initiatives and address how best practice can be shared.
- Consider if there are any best practice examples in how to unpick the care conundrum.
- The debate around deinstitutionalisation should be reflected upon.

Session 4: Early and mid-life interventions to favour healthy ageing

The TFA report draft takes the approach of focusing on a number of conditions that are especially important to tackle early in order to favour healthy ageing. There is also a strong connection to the potential to change outcomes on those conditions through prevention measures. The focus areas include:

- Cardiovascular disease (CVD)
- Stroke
- Chronic kidney disease
- Diabetes

The life course approach highlights when health promotion and preventive strategies may be most effective, as different strategies may work best at different life stages. Public health options that focus on improving ageing outcomes all together rather than targeting specific capacities and diseases, may prove to be more efficient, taking into consideration many shared common risk factors. This means that promotion and preventive strategies need to be assessed for their effectiveness on multiple rather than single ageing outcomes. Common risk factors identified for ageing outcomes are poorer socioeconomic conditions, smoking, lower educational levels, obesity and diabetes, physical inactivity, hypertension and depression.

Additionally, tackling diseases of cognitive function and dementias are critical to transforming the future of ageing. It has been identified that around 35% of cases are attributable to a combination of the aforementioned common risk factors. Unlike diseases such as CVD and diabetes, current medical and pharmaceutical approaches to cognitive function and dementias have met with only limited success.

The interplay between genetic susceptibility and environmental factors across the lifespan has been identified, but there is still a lack of robust evidence for effectiveness of interventions.

Health is a continuum and should not be subdivided into different organs. Investments in one disease area can drive improvements in another; for example, the prevention of cardiac disease also benefits mental capacity. Public health options that focus on improving ageing outcomes all together rather than targeting specific capacities and diseases, may prove to be more efficient, taking into consideration many shared common risk factors. This means that

promotion and preventive strategies need to be assessed for their effectiveness on multiple rather than single ageing outcomes.

Recommendations for consideration regarding the TFA report:

- Alcohol consumption should be considered to a greater degree as a risk factor.
- The most recent data on diabetes should be included, which can be found in the IDF Diabetes Atlas 8th edition 2017.
- The section may be too complicated or detailed for policy makers, considering its medical approach to the main disease challenges and causation factors.
- Such new developments as immunity and inflammation are very promising but must be put into context better. Multimorbidity and frailty are very big issues, it is important to move away from a single-disease model to multimorbidity, not just at the individual care level but already in medical-school training.
- Many interventions of age-related declines and diseases come too late. Putting elderly people through extended trials of different drugs is often not helpful.
- A challenge lies in disentangling policy options in the TFA report aimed at EU and those aimed at national levels, considering the EU's limited remit to instigate true public health policy.

Session 5: The attractiveness, knowledge and skills of clinical gerontology professions and workforce

The TFA report identifies a number of trends that risk the delivery of quality gerontological health care:

- Predominance of women
- Advancing age, mandatory retirement age
- No attractiveness (complex bio-psycho-socio and medical problems)
- No appropriate continuing education
- Emergence of technology
- Increased rate of burn out (2/3 of the nurses)
- Increasing staff turnover (10% of staff per year)
- Notable migration flow

As such it is a crucial aspect to transform the future of ageing. Viewed alongside changing population structures and demography, emerging needs and rising NCDs and multimorbidity policy makers will clearly have to take decisive action on the health professions.

New "transversal" education programs are needed for health students and professionals as well as new actors in care (allied professionals: architects, engineers etc.). Education should be life long, with basic education in primary and high schools. There should be undergraduate geriatric teaching in all medical and health schools considering the continual increase in exposure for the vast majority of health professions to older persons.

New transversal and interactive teaching techniques using information and communications technology should be adopted to a greater extent. Blended teaching activities and use of virtual reality, gamification and simulation can focus on teaching both medically effective and empathetic healthcare for patient and family. The next generation of older persons will increasingly demand tailored and patient centric care at a time where greater strain than ever will be placed on the healthcare system due to demographic change.

At present, gerontology is unfortunately not seen as a particularly exciting or innovative area in which to specialise. The field would benefit from enhanced and improved training content and approaches with well-defined professional profiles to aim for. Capacity-building and policy action requires Inter-sectorial collaboration between ministries of Health, Education & Finances. Training the workforce is an important link with job creation and the stimulation of economic development.

The development of "integrated care pathways" training would be beneficial to boost the profession. Comprehensive and multidimensional assessment and intervention performed by an interdisciplinary geriatric team is the most efficient and effective method to deliver care to frail older people with complex medical conditions.

Recommendations for consideration regarding the TFA report:

- Education stops for most people at age 23-ish. Re-training is sporadic. There should be systems in place that enable constant learning and upgrading of skills. In addition, learning should not only take the form of 'front-loading', but also incorporate the lifetime experience of experienced staff.
- Geriatric medicine is highly relevant in hospital settings (particularly frail care), but most elderly people live in the community so various components of this community need to be upgraded to address the needs of elderly patients.
- The report section has an excessive medical orientation, and it could be necessary also to do specific calls addressed to other professionals such as nurses, social workers, therapist, and others.

Session 6: Technology to favour healthy ageing and wellbeing

Technology is an important facilitator of ageing in place. Smart usage of technology can promote healthy & active ageing, assist with activities of daily living, monitor & manage well-being and provide a safe home environment. The Internet of Things with connected devices is becoming a greater part of all of our daily lives and that can support ageing in place. The impending roll out of 5G networks can facilitate greater data collection and crunching and will deliver decision times that match the speed of human thought.

Mobility is an important aspect to consider under the technology umbrella. It is key to retain autonomy, stay integrated within communities and remain socially engaged. Automated vehicles hold high potential for improving the transport possibilities for older people, but the systems must be correctly designed.

Wearable and homebased technologies promote development of integrated closed-loop care and therapeutic systems with high patient adherence. Their use can be more tailored and appropriate considering the following:

- Encourage the adoption of clinico-pathophysiologic phenotyping and early detection of critical health milestones
- Enhance tailoring of symptomatic therapy
- Identify objective biomarkers to improve longitudinal tracking of impairments in clinical care and research
- Improve subgroup targeting of patients for treatments

Education of healthcare professionals to incorporate technologies into daily practice will increase continuous learning and the updating of skills among the health workforce for the benefit of older adults. It will be important to develop a strong evidence base of successful, innovative solutions that lead to scalable and sustainable home healthcare programs. Currently this is not in place.

Technical solutions for home care require input from both older person and their care providers - formal and informal. Acceptance will become more acute as wearables devices become integrated in smart clothing. Informed consent critical and the process of consideration and granting of it must be easy to understand.

Standardisation is needed to cope with rapidly growing industry of wearables and in-home healthcare technologies and services. A lack of agreed standards makes data integration difficult into EHR in primary care centres.

New approaches are needed for the value assessment and reimbursement of new technologies that do not fit within the usual paradigm of consumer products, medical devices, medicines or surgical intervention.

A unique electronic medical chart containing an agreed minimum content of the electronic record by all EU Member States will improve patient care providing continuity of care with the support of public health programmes and accessibility across EU countries. A major hurdle is finding agreement across medical disciplines on minimum content of electronic record.

Obstacles to Electronic Health Record implementation and use include:

- Patients' privacy and confidentiality
- Data storage and centralisation
- Legislation related to health in each country must be unified or made coherent
- Differences in clinical practices and the variety of ways of recording data or treating a patient.

Artificial Intelligence (AI) is far from being useable in a safe and practical manner in health care right now. AI can provide decision support but not decision making. Technology can never replace human contact, overreliance on technology could lead to poorer mental health.

Recommendations for consideration regarding the TFA report:

- There is a lack of focus on reimbursement and health economics in the report. The private sector needs clearer guidance on what exactly is expected by healthcare systems (in terms of data collected, quality of data, reimbursement schemes), otherwise they halt development of new technologies.
- Report currently focusses on robotics and robotics research, but there should be more on integrated diagnostics and data science. Data science can help manage patients better.
- Privacy and data security should be mentioned more strongly. The technological perspective should cover trustworthiness (privacy, security, safety, acceptability) and cost-effectiveness.

• Inequality is a major concern around greater use of the technology. The level of technical penetration varies widely amongst EU countries, people without the necessary access/ gadgets/skills are excluded.

• Current elderly people that use smart devices have only learnt to use them in old age. Future old people will have used smart devices their whole life.

Conclusion

The SAPEA Working Group will consider all of the feedback noted from the workshop when finalising the Transforming the Future of Ageing report. It is not mandatory to include all or any of the comments put forward during the workshop, but the Working Group agreed that the vast majority of feedback given can be taken into account in the preparation of the final report given the available time and resources. Indeed, the structure and flow of the report will be reshaped in light of the workshop along with the inclusion of content suggestions.

Meeting participants

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