

Presidency compromise proposal on the Framework Programme HEALTH, DEMOGRAPHIC CHANGE AND WELLBEING

1.1. Specific objective

Lifelong health and wellbeing for all, **children, adults and older people**, high-quality, economically sustainable **and innovative** health and care systems, **as part of welfare systems in Member States**, and opportunities for new jobs and growth are the aims of support to research and innovation in response to this challenge and will make a major contribution to Europe 2020.

The cost of Union health and social care systems is rising with care and prevention measures in all ages increasingly expensive, the number of Europeans aged over 65 expected to nearly double from 85 million in 2008 to 151 million by 2060, and those over 80 to rise from 22 to 61 million in the same period. Reducing or containing these costs such that they do not become unsustainable depends in part on **ensuring improving** the lifelong health and wellbeing of all and therefore on the effective prevention, treatment and management of disease and disability.

Chronic conditions ~~such as cardiovascular disease (CVD), cancer, diabetes, neurological and mental health disorders, overweight and obesity and various functional limitations and diseases~~ are major causes of disability, ill-health and **health related retirement**, premature death, and present considerable social and economic costs.

In the Union, **cardiovascular disease (CVD)** annually accounts for more than 2 million deaths and costs the economy more than EUR 192 billion while cancer accounts for a quarter of all deaths and is the number one cause of death in people aged 45-64. Over 27 million people in the Union suffer from diabetes and **over 120 million from rheumatic and musculoskeletal conditions**. **Rare diseases remain a major challenge, affecting approximately 30 million people across Europe.** ~~†The total cost of brain disorders (including, but not limited to those affecting mental health, including depression) has been estimated at EUR 800 billion. It is estimated that mental disorders alone affect 165 million people in the Union, at a cost of EUR 118 billion. These sums are expected to rise significantly, largely as a result of Europe's ageing population and the associated increases in neurodegenerative diseases.~~ Environmental, **occupational**, life-style and socio-economic factors are relevant in several of these conditions with up to one third of the global disease burden estimated to be related to these.

It is estimated that depression alone affects 165 million people in the Union, at a cost of EUR 118 000 million. For neurodegenerative diseases, amongst other conditions, effective prevention strategies will first require a considerable boost in research into their causes and the development of better early diagnosis and treatment options, including, where appropriate, personalised advanced therapies.

Rare diseases remain a major challenge, affecting approx. 30 million people across Europe. Effective treatments can only be developed if member states cooperate, as the cases in any given member state are not enough for effective research to be done.

Diseases in children, including premature born children.

Children's health is a top priority for the European Union. As in the case of rare diseases, effective research and treatment can only be developed within the framework of a common European strategy.

~~Poverty related and Infectious~~ diseases (e.g. HIV/AIDS, tuberculosis and malaria), are a global concern, accounting for 41 % of the 1.5 billion disability adjusted life years worldwide, with 8 % of

these in Europe. **Poverty related and neglected diseases are also a global concern.** Emerging epidemics, **re-emerging infectious diseases (including water-related diseases)** and the threat of increasing anti-microbial resistance must also be prepared for. **Increased risks for animal-borne diseases should be considered.**

Meanwhile, drug and vaccine development processes are becoming more expensive and less effective. **Efforts to increase the success of drug and vaccine development include alternative methods to replace classical safety and effectiveness testing.** Persistent health inequalities **and the needs of specific population groups (e.g. those suffering from rare diseases)** must be addressed, and access to effective and competent health **and care** systems must be ensured for all Europeans **irrespective of their age or background.**

Research should allow advanced therapies and cellular therapies that would be focused on the treatment of chronic and degenerative diseases to be improved.

Other factors such as nutrition, physical activity, wealth, inclusion, engagement, social capital, and work also affect health and well-being and a holistic approach must be taken.

Due to higher life expectancy the age and population structure in Europe will change. Therefore, research furthering lifelong health, active ageing and wellbeing for all will be a cornerstone of the successful adaptation of societies to demographic change.

1.2. Rationale and Union added value

Disease and disability are not stopped by national borders. An appropriate European level research, **development and innovation response effort and in cooperation with third countries and with the involvement of all stakeholders, including patients and end-users,** can and should make a crucial contribution to addressing these **global challenges, thereby working to achieve the Millennium Development Goals,** deliver better health and wellbeing for all, and position Europe as a leader in the rapidly expanding global markets for health and wellbeing innovations.

The response depends on excellence in research to improve our fundamental understanding of **the determinants of health, disease, disability, healthy employment conditions, development and ageing (including of life expectancy),** and on the seamless and widespread translation of the resulting and existing knowledge into innovative, scalable, **and effective, accessible and safe** products, strategies, interventions and services. Furthermore, the pertinence of these challenges across Europe and in many cases, globally, demands a response characterized by long term and coordinated support for co-operation between excellent, multidisciplinary and multi-sector teams. **It is also necessary to address the challenge from the perspective of the social and economic sciences and humanities.**

Similarly, the complexity of the challenge and the interdependency of its components demand a European level response. Many approaches, tools and technologies have applicability across many of the research and innovation areas of this challenge and are best supported at Union level. These include **understanding the molecular basis of disease, the identification of innovative therapeutic strategies and novel model systems, the multidisciplinary application of knowledge in physics, chemistry and systems biology, the development of long term cohorts and the conduct of clinical trials (including focus on the developments and effects of medicines in all age groups), the clinical use of "-omics", systems bio-medicine or the development of ICT and their applications in healthcare practice, notably e-health.**

The requirements of specific populations are also best addressed in an integrated manner, for example in the development of stratified and/or personalized medicine, in the treatment of rare diseases, and in providing assisted and independent living solutions.

To maximise the impact of Union level actions, support will be provided to the full spectrum of research, **development** and innovation activities. From basic research through translation of knowledge **on disease to new therapeutics**, to large trials, **piloting** and demonstration actions, mobilising private investment; to public and pre-commercial procurement for new products, services, scalable solutions, which are when necessary, interoperable and supported by defined standards and/or common guidelines. This co-ordinated, European effort will **increase the scientific capabilities in health research and** contribute to the ongoing development of the ERA. It will also interface, as and when appropriate, with activities developed in the context of the Health for Growth Programme, the **Joint Programming Initiatives, including “Neurodegenerative Disease Research”, “A Healthy Diet for a Healthy Life”, “Antimicrobial resistance” and “More Years, Better Lives”** and the European Innovation Partnership on Active and Healthy Ageing.

1.3. Broad lines of the activities

Effective health promotion, supported by a robust evidence base, prevents disease, **improves contributes to** wellbeing and **is cost effective**. ~~Health promotion to cost containment~~. **Promotion of health, active ageing, wellbeing** and disease prevention also depend on an understanding of the determinants of health, on effective preventive tools (such as vaccines) on effective health and disease surveillance and preparedness, and on effective screening programmes. **Effective health promotion is also facilitated by the provision of information to citizens which encourages responsible health choices.**

Successful efforts to prevent, **detect early**, manage, treat and cure disease, disability, **frailty** and reduced functionality are underpinned by the fundamental understanding of their determinants and causes, processes and impacts, as well as factors underlying good health and wellbeing. **Improved understanding of health and disease will demand close linkage between fundamental, clinical, epidemiological and socio-economic research**. Effective sharing of data, **standardised data processing** and the linkage of these data with large scale cohort studies is also essential, as is the translation of research findings into the clinic, in particular through the conduct of clinical trials, **which should address all age groups to ensure that medicines are adapted to their use**.

The resurgence of old infectious diseases including tuberculosis, the increased prevalence of vaccine-preventable diseases and the growing problem of anti-microbial resistance further underlines the need for a comprehensive approach towards poverty related and neglected diseases.

Personalised medicine should be developed in order to suit preventive and therapeutic approaches to patient requirements, and must be underpinned by the early detection of disease.

An increasing disease and disability burden in ~~It is a societal challenge to adjust to the context of an aging population~~ **places further demands on health and care sectors: due to the ageing population.** If effective health and care is to be maintained for all ages, efforts are required to improve decision making in prevention and treatment provision, to identify and support the dissemination of best practice in the health and care sectors, and to support integrated care ~~and~~. **A better understanding of ageing processes and the prevention of age-related illnesses are the basis for keeping European citizens healthy and active throughout the course of their lives.** **Similarly important** is the wide uptake of technological, organisational and social innovations

empowering in particular older persons, **persons with chronic diseases** as well as disabled persons to remain active, **productive** and independent.

Doing so will contribute to increasing, and lengthening the duration of their physical, social, and mental well-being.

All of these activities shall be undertaken in such a way as to provide support throughout the research and innovation cycle, strengthening the competitiveness of the European based industries and development of new market opportunities. **Emphasis will also be placed on engaging all health stakeholders – including patients and patient organisations, health and care providers – in order to develop a research and innovation agenda that actively involves citizens and reflects their needs and expectations.**

Specific activities shall include: understanding the determinants of health (including **nutrition, physical activity, environmental, socio-economic and occupational, gender**, and climate related factors), improving health promotion and disease prevention; understanding disease and improving diagnosis **and prognosis**; developing effective **prevention and** screening programmes and improving the assessment of disease susceptibility; improving **the surveillance of infectious diseases** and preparedness **for combating epidemics and emerging diseases**; developing **new and better preventive and therapeutic vaccines and drugs**; using in-silico medicine for improving disease management and prediction; **developing regenerative medicine, adapted treatments and** treating disease, **including palliative medicine**; transferring knowledge to clinical practice and scalable innovation actions; **improving health information and better collection and** use of health **cohort and administrative** data; **standardised data analysis and techniques**; active ageing, independent and assisted living; individual **awareness and** empowerment for self-management of health; promotion of integrated care, **including psychosocial aspects**; improving scientific tools and methods to support policy making and regulatory needs; and optimising the efficiency and effectiveness of healthcare **systems provision** and reducing **health disparities and** inequalities by evidence based decision making and dissemination of best practice, and innovative technologies and approaches. **Active involvement of health care providers must be encouraged in order to secure rapid take-up and implementation of results.**