

E D I T O R I A L

The Science of Choosing Wisely: should it be applicable to any intervention for healthy and active longevity?

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We do experience a longevity revolution

The number of persons aged 80 or over is projected to more than triple by 2050 and to increase more than seven-fold by 2100. In most developed countries, a universal health coverage provides financial protection against the cost of illness and promotes the care for the whole population, but at a cost/health spending that now accounts about 9% of GDP on average in OECD, and exceeds 10% in many other countries (1). This could be reasonable if the benefits exceed the costs, but there is an ample evidence of inequities and inefficiencies and inappropriate usage of tests and of harmful treatments which need to be addressed. Because the consequence could be the lack of financing of care of longeve persons, particularly when dependent.

Today scenario for healthy longevity is scientifically based on prevention, timely diagnosis and treatment of intercurrent illnesses, good diet, regular physical activities, brain training, drugs that should delay many diseases of old age and food supplements.

Are these interventions evidence based? Sometimes we have controversies concerning the efficacy of some treatment (2). And "*Primum non nocere*" (first, do not harm) remains a basic tenet of medical practice for older persons too. It suggests the necessity to convince population to adopting a good lifestyle as soon as possible, and to avoiding any intervention of any type, which could damage the person and particularly intrinsic capacities lifelong.

The WHO program (3-5) identified five intrinsic capacities for healthy aging: mobility, cognition,

vitality, psycho-social-neurosensorials: vision, hearing. Since healthy ageing depends on an individual's intrinsic capacity (IC), the environment and interactions between them, a focus on IC has the potential to design interventions for improving the health of individuals.

According to WHO, vital functions maintain with aging by 3 different steps:

- a. Increase intrinsic capacity reserves in early aging (45-70 yrs.);
- b. Preserve cognitive functions in late aging (70 yrs. +);
- c. Restore cognitive functions when needed (*and possible!*).

Using this program the WHO aims to decrease the number of dependent older adults by 15 million by 2025.

The need for action with a focus on evidence-based policies and novel strategies ensuring healthy and successful longevity maintaining IC at maximum level is a priority, avoiding to support expensive interventions, either diagnostic or therapeutics, of no demonstrated benefit, or potentially harmful (6).

In recent years, the United States, and later many other countries, increased efforts to reduce inappropriate use of treatments and tests, either because of costs or of negative clinical results. Perhaps the most visible has been the Choosing Wisely Campaign (CWC) (7), a remarkable physician-led campaign to reduce the provision of unnecessary or harmful services in health-care. CWC helps physicians and patients discuss the necessity of tests and treatments. CWC addressed this problem by asking specialist societies to generate a list

of the most prevalent low-value services in their field and more recently has spread worldwide, also into surgical contest and in prevention. CWC started in 2009, expanded in 2012 and most scientific societies of many countries in all part of the world produced their own list of interventions not to be done.

The mission of CWC is to promote conversations between clinicians and patients/subjects by helping these to choose care that is supported by evidence, not duplicative of other tests or procedures already received, free from harm, truly necessary, questioned and discussed. The recommendations should not be used to establish coverage decisions or exclusions. They are meant specifically to look for appropriate and necessary treatment.

Is it time to apply CWC methodology also to anti-aging-healthy aging medicine? And to any approach to longeve persons? And to limit the tendency of human beings to overestimate the effects of any action?

These questions have been addressed, using a questionnaire, to scientists attending at a meeting of the Academy of Healthy Aging (Stockolm 2019). They were asked to list the five things, according to personal expertise, that should be avoided during life to promote and/or maintain healthy longevity.

The results demonstrated that the knowledge of the problem that inappropriate care could harm instead of protect is not today part of the basic culture of many researchers/clinicians and of common medical practice regarding healthy longevity. The message “do not harm” was not understood and most part of scientists provided suggestions to increase level of exams and care, independently by efficacy or danger of negative outcomes.

Some questions could be of help to curb any therapeutic illusion, the first might be formulated as “Before you conclude that a treatment was effective, look for other explanations.” The second heuristic might be

“If you see evidence of success, look for evidence of failure” (8).

Physicians and medical professionals of any discipline and all scientists interested into active and healthy longevity should apply CWC methodology, providing statements concerning also what should not to be done during life for maintenance of intrinsic capacity lifelong. A tailored approach for old people with multiple long term morbidities and how put them at the hearth of the decision about their care is a necessity, to reduce treatment burden, minimize unwanted side effects from taking multiple medicines, cutting treatments of limited benefits, avoiding fatal medical errors and inappropriate prescription.

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