

You only notice them if you understand them: Geriatric syndromes

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Ageing is acknowledged to result from a lifelong accumulation of molecular and cellular damage, caused by many mechanisms that are regulated by a complex maintenance and repair network.¹

Multimorbidity and polypharmacy are the results of our good standard of care for ageing persons as present in many Western societies. Many healthcare expenses and efforts are currently devoted to providing healthcare to older persons. As the diversity among ageing persons is enormous and as the exact age of a person is easy to retrieve, higher age often lets clinicians make (wrong) judgments solely based on chronological age. Clinicians and researchers as well, therefore, need simple, easy to administer, valid, accurate, and reliable methods to detect the biological age of an older person, often referred to as his state of vulnerability or more preferred, frailty. As a problematic expression of ageing, age-related decline occurs in many physiological systems, which collectively results in vulnerability to sudden health status changes triggered by minor stressor events. This situation is often referred to as frailty.

FRAILITY

Frailty is a long-established clinical expression that implies concern about an elderly person's vulnerability and outlook. Frailty is often considered a state of increased vulnerability to poor resolution of homeostasis after a stressor event, which increases the risk of adverse outcomes, including falls, functional decline, and delirium.²

For many years now, a debate is ongoing about whether frailty is best defined as a syndrome or a state. This has resulted in many frailty indices, models and definitions and in comparisons between them.^{3,4} The bottom line is that the use of these indices and models could help to provide a more accurate and earlier identification of frail elderly persons eligible for interventions to improve outcomes in both primary care and in hospitals.

Ageing increases the presence of frailty, multimorbidity and disability, and large cohort studies show an overlap between the presence of these concepts. The CHS study population was used to investigate the overlap between frailty, disability, and multimorbidity.⁵

Frailty and multimorbidity as combination (defined as two or more chronic diseases) was present in almost 45% of the population. Disability, frailty and multimorbidity showed an overlap in almost 25% of the older participants.

COMPREHENSIVE GERIATRIC ASSESSMENT

Currently, most healthcare systems such as, for instance, outpatient clinics, emergency departments and hospital wards, are organised around single-system illnesses. However, many elderly people have multiorgan problems and more than one geriatric condition.⁶

As many older persons in need of acute care have multimorbid and geriatric conditions, interfering with clinical decision-making concerning diagnosis and treatment, all health domains of an ageing frail person should be taken into account. This should take place not only at the outpatient clinic, but at presentation to the emergency department or hospital ward as well.

The most evidence-based manner to detect geriatric syndromes is comprehensive geriatric assessment (CGA).⁷ Although this systematic assessment is a resource-intensive process and therefore reliable, more efficient and responsive screening methods for routine care are available that can be applied together with CGA in a two-step manner to improve ED outcomes. A number of these clinically sensible and easy to apply instruments have been developed to select older patients for CGA and different care pathways after presentation to an emergency department.^{8,9}

The study by Schrijver *et al.*, presented in this issue of the Netherlands Journal of Medicine, shows that there

is still room for improvement in providing care after ED presentation, as many older patients present not only with an illness but also with one or more geriatric conditions.¹⁰ The implementation of screening instruments may create more awareness of providing sufficient care after presentation of frail persons with geriatric syndromes to the ED to improve desirable outcomes, such as physical functioning.

OUTCOMES

A more patient-based approach instead of a disease-based approach would also have considerable clinical merit, as has recently been advocated by Reuben and Tinetti.¹¹ This approach would be the basis for a shift in the care of frail elderly patients towards a more appropriate goal-directed care, in which individually framed clinical outcomes that span organ systems are negotiated with patients and their relatives.

MEDICAL EDUCATION

The fuel for a system change or the key towards more insight is education. This is, however, an even more difficult goal to achieve.

A study by Brooks in 1993 showed that in order to put more effort into introducing training in geriatrics and gerontology into the medical curriculum, a number of barriers have to be overcome first: 1) some teachers, role models, paramedical personnel, etc. have positive attitudes but others may have negative attitudes regarding the elderly because of previous exposure or training (or lack of training); 2) students and residents may be unhappy that more materials will be added to their already crowded curriculum; 3) students and residents may be influenced by the experiences they have with relatives; 4) students and residents may strongly believe in existing myths about the aged, and some suffer from 'ageism'; 5) medical curriculum planners and department heads will probably not want changes in existing time schedules allocated to them; 6) all medical educators will agree, however, that gerontology and geriatric medicine needs to be studied and included in medical education, but few will want to sacrifice time or energy in that direction.¹²

The study by Tersmette *et al.*, also in this issue of the Netherlands Journal of Medicine, came even 20 years later to the same conclusions.¹³ They assessed on the student level the topics addressed in the questions of the cross-institutional progress test (CIPT). In the CIPT, on average 1.5% of questions cover G&G. They also demonstrated that the Dutch National Guidelines Blueprint contains few specific Geriatrics and Gerontology

(G&G) objectives. Currently, obligatory G&G courses in medical schools on average amount to 2.2% of the total curriculum measured as European Credit Transfer System units (ECTS). Only two out of eight medical schools have practical training during the Master phase in the form of an obligatory clerkship in G&G. So geriatric education in the Netherlands does not seem to be in line with current demographic trends. The National Guidelines Blueprint falls short of providing sufficiently detailed objectives for education on the care of older people. The geriatric content offered by medical schools is varied and incomplete, and students are only marginally tested for their knowledge of G&G in the CIPT. For nurses and other health professionals the same conclusions can be made. So haven't we learnt from the past?

NEAR FUTURE

Back to the past and redesigning the future fails because of the lack of a time machine. But knowledge gained in the past may help us to redesign the future and improve healthcare thinking and healthcare systems.^{14,15} Fear of change should not keep us from doing the right thing and we all know what we have to do as age expectancy is still increasing and the number of very old citizens will be threefold higher in the next three decades.

Change is happening in the Western communities, in particular in the thinking about G&G education and caring for the aged. It will not take us another 20 years to change.

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