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EDITORIAL

Ageing and polymorbidity: is there a mismatch between the training of internists and the need?

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The Dutch population is ageing, like the populations of the majority of countries throughout the world. At present about 15% of the Dutch population is older than 65 years. This will be 21% in 2025. As chronic diseases often develop in elderly people, the Dutch National Institute for Public Health and the Environment (RIVM) recently calculated the consequences of ageing for the Dutch population.[1] Calculations were carried out with a 'Chronic Disease Model', simulating the course of diseases in the general population, including trends in the past, unhealthy lifestyles and demographic changes due to ageing. The outcome of these calculations is dramatic. About 6% of the Dutch population and about 25% of the people older than 65 years will suffer from diabetes in 2025, if the present trend in the increase of obesity continues. Relative to 2005, this means an increase of 70% in 20 years. Expected prevalences for other chronic diseases are summarised in *table 1*. In addition, the prevalence of a variety of other chronic diseases related to ageing, such as dementia, depression, anxiety, Parkinson's disease and hearing and vision impairment, are expected to increase as well. This is not a national trend. At present, chronic diseases contribute 60% to the global burden of disease and this will increase to 80% by the year 2020.[2]

Table 1. *Increase of prevalence (%) of chronic diseases in period 2005-2025*[1]

	Prevalence (%)
Cancer:	
• Lung cancer	47
• Breast cancer	30
• Colon cancer	45
Cardiovascular disease:	
• Acute myocardial infarction	38
• Heart failure	34
• Stroke	57
Chronic obstructive lung disease	19
Diabetes mellitus:	
• Basic trend	58
• Including increase of obesity	71
Osteoporosis	41

So, chronic diseases are becoming a major problem in the provision of medical care. As single occurrence of chronic diseases in elderly people is rare, an increasing number of individuals with a chronic disease will suffer from more than one chronic condition.[3-5] This requires an integrated patient-centred rather than disease-centred approach, preferably by a generalist. The majority of chronic diseases of these polymorbid elderly patients fall within one or more of the subspecialities of internal medicine and hence internists will become more and more involved in the care of patients with complex multiple conditions. For this reason, the Dutch Society for Internal Medicine recognised internal medicine for elderly patients as a subspeciality in 2004. One may wonder, however, whether or not this is a pleonasm in view of the ageing of the population and passes over what the core competence of a future internist should be: a generalist with knowledge of ageing and the pathophysiology of age-related diseases, an open mind for psychosocial aspects in the care of the elderly and its consequences for a functional and multidisciplinary approach in the provision of care. In view of this, one may also wonder whether there is a need for a specialisation in geriatric medicine separate from internal medicine rather than integration of this speciality within the core competence of general internists to limit fragmentation of care for the elderly patient.

The consequence of this line of reasoning is that the need for internists trained in general rather than subspeciality internal medicine should increase during the next 20 years in parallel with the increase in elderly patients with multiple chronic conditions. The trend in the training of Dutch internists is, however, exactly the opposite. A recent survey revealed that over 90% of the trainees in internal medicine prefer training in one of the subspecialities of internal medicine.[6] Of these, trainees' interest in a training in the subspeciality elderly or geriatric medicine is about 3%, which in combination with the slight interest to become a generalist is not nearly enough to cover the future needs in the medical care of complex polymorbid patients. This

situation is not unique either. A survey among internal medicine residents-in-training in the USA revealed a steady decline in the percentage of residents planning to pursue generalist careers. In 2003, 20% of the third-year residents planned to practise general internal medicine compared with 54% in 1998.[7] The same trend is noticed in many European countries and has raised growing concerns about the position and future of internal medicine.[8]

Is internal medicine indeed facing a serious problem if this mismatch between medical care needs and career planning continues? We feel it is, and this will have significant consequences for the medical care of the increasing number of elderly patients with complex and multiple chronic diseases. These consequences are diverse. Medical care for polymorbid patients provided by subspecialists rather than generalists will be in danger of becoming more and more fragmented rather than integrated due involvement of multiple specialities – even multiple internists – who act independently, working from the perspective of their own subspeciality and performing either more or less diagnostics and therapeutic procedures than necessary. This may contribute to more visits to the hospital or more hospital-days and accordingly more burden of disease and medical expenses than necessary. In a recent study on elderly patients with diabetes mellitus managed by a specialist clinic for diabetes care we found a variety of complicating and concurrent morbidities in all subjects necessitating involvement of on average five (sub)specialists and 12 hospital visits per year.[9] Another study on subjects with diabetes showed that both diabetes-related and nondiabetes-related comorbidities increase the use of medical care facilities substantially, in particular for patients with both types of comorbidities.[10] A study on patients admitted because of community-acquired pneumonia, acute myocardial infarction, congestive heart failure or upper gastrointestinal haemorrhage showed longer lengths of hospital stays and slightly higher mortality rates for patients cared for by subspecialists practising outside their speciality, compared with general internists and subspecialists practising within their speciality.[11] These observations are particularly relevant for elderly patients with polymorbid conditions and emphasise that a patient-centred rather than disease-centred approach of integrated care is necessary to meet the complex medical care demands of such patients.

The question that then remains is: 'Why do trainees in internal medicine prefer a career in a subspeciality instead of general internal medicine?' With respect to content, it appears that trainees feel that the knowledge and skills they are expected to master for the broad field of general internal medicine exceeds the limits of their capacities. In addition, expertise in one of the subspecialities of internal medicine is considered more prestigious than general expertise and is thought to improve the chances of getting a position in one of the nonuniversity hospitals after the vocational training. This can, however, be questioned as in the majority of advertisements for internist positions, expertise in general internal medicine in combination with preferably more than one subspeciality is emphasised. On the other hand, studies in the USA indicate that the choice for a career as generalist is influenced by opportunities for long-term relationships with patients, a broad content area of practice, caring for ambulatory patients, and time with family.[12] Whether or not this also applies to the Dutch situation is unknown.

What needs to be done to increase the number of trainees pursuing a career in general internal medicine in line with the future needs? To this end, the European Federation for Internal Medicine (EFIM) proposed a number of recommendations in its recent position paper.[8] Among other things, these include the advice to check and adapt the specialist training programmes to the challenges of the profession, to promote a situation in which departments of internal medicine cooperate rather than compete with their subspeciality disciplines, to promote recognition of internal medicine as a discipline in itself rather than a little of this or that, and to improve the marketing of internal medicine to make known to decision-makers, the general population and the patient what internal medicine can offer the health care system and in particular the individual patient with complex polymorbid conditions. We feel, however, that these recommendations will get stuck in the mire of good intentions if they are not translated into practical policies. First, on the basis of the medical care needs, an inventory should be made of how many general and subspecialist internists are needed. The training capacity should be adapted to these needs. In other words, more training positions for generalists and less training positions for subspecialists. An alternative to this can be the introduction of a variety of profiles within the training programmes of internists at the cost of subspeciality training programmes. Or, as in the United Kingdom, to stimulate subspecialists to register also in geriatric medicine to enable them to provide both general and organ specific services. Second, stakeholders in internal medicine should play a key role in the promotion of general internal medicine, not only as a necessity but also as an attractive career choice. Third, administrators and internal medicine partnerships in nonuniversity hospitals should be stimulated to give priority to the recruitment of specialists who consider an integrated approach in internal medicine to be a core competency. Finally, the reasons why trainees turn away from general internal medicine should be analysed to develop specific measures for achieving enough trainees who consider the care of complex and multiple chronic diseases in elderly patients a challenge and not a second choice if they cannot obtain a training position in a subspeciality.

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