Comorbidity and guidelines: conflicting interests

The fourth epidemiological transition is characterised by an unprecedented increase in chronic degenerative disorders.[1] Thus chronic disease is a particularly important area in which to ensure high-quality care. Clinical practice guidelines are increasingly being used for performance indicators. Stephen Campbell and colleagues recently showed substantial improvement in the quality of clinical care in UK general practice when judged on this basis.[2] Reassuring as this result is, this method ignores the reality that 25–50% of people with a chronic disease have comorbidity or multimorbidity (table).[3–7]

Comorbidity is a regular feature of general practice. However, evidence-based diagnostic and treatment strategies generally overlook comorbidity.[8] Despite the support that disease-specific guidelines give, these guidelines are likely to introduce more problems than they solve when used in patients with comorbidity. Treatment or even diagnosis of a disease[9] might interact negatively with the treatment or natural course of a co-existing disease. For example, in chronic obstructive pulmonary disease, state-of-the-art treatment might include oral corticosteroids, but if the patient also has diabetes mellitus, oral corticosteroids might not be in the patient's best interests. Promotion of physical activity—which would be beneficial for chronic obstructive pulmonary disease—might not be possible if there is severe osteoarthritis of the hip. Conversely, hip replacement, indicated by the severity of the osteoarthritis, will be contraindicated if a patient's pulmonary capacity precludes major anaesthesia. These examples show why performance indicators based on single-disease guidelines cannot accurately reflect the quality of care with multiple chronic diseases. Dealing with comorbidity needs a patient-centred rather than a disease-oriented approach. Addressing individual needs while integrating various disease perspectives is at the root of general practice and determines its effectiveness.[10]

Often implicit in the approach to comorbidity is the assumption that the co-existing diseases are pathophysiologically related to the index disease or represent a disease-specific complication. To some extent this is the case: because chronic obstructive pulmonary disease is caused by smoking, the patient may also have bronchial cancer, ischaemic heart disease, heart failure, or pulmonary hypertension. In these cases it is possible that a disease-specific management plan could address all diseases involved. But this only accounts for part of the comorbidity. Using our findings[5] we divided comorbidity into four categories: causal, diseases with a common pathophysiology; complicating, disease-specific complicating morbidity; concurrent, co-existing chronic morbidity without any known causal relation to the index disease; and intercurrent, referring to interacting acute illness, usually limited in time.[11]

This categorisation has implications for patients' care. When the comorbidity is causally related to or is a complication of the index disease, disease-specific guidelines can be used to direct management. However, these guidelines must include information on the full spectrum of health risks associated with the index condition. Such guidelines would enhance proactive management of illness, but their development will require patients with a mix of comorbid conditions to be included in randomised trials.[12]

The problems with disease-specific guidelines come to the fore when there is concurrent morbidity, particularly in ageing-related diseases when comorbidity is linked to frailty.[13] The interacting effects of diseases and their management require more complex and individualised care than simply the sum of separate guideline components. And it is only to a limited extent possible to account for this in the framework of guidelines, where statements on management are by definition directed at subgroups. Instead of advocating the development of new guidelines taking all possible combinations of diseases into account, we would emphasise a holistic patient-centred approach, ensuring continuity of care and integrating the patients' biopsychosocial domains. There is an urgent need—particularly in primary care—to test the

Number of chronic diseases*	Self-reported Dutch survey†	General practice‡	
		>65 years	>75
0	43	34	31
1	26	27	29
2	14	22	25
≥3	16	17	15

*From list of 19 for Dutch survey, and of 10 for general practice study. †All ages, n=12699. ‡n=12000.

Table: Percentage of patients with chronic diseases in Netherlands from Dutch population-based health-interview survey[6] and general-practice-based continuous morbidity registration[7]

impact of guidelines. Given the problems of randomisation, blinding, and other methodology, we also welcome studies that combine therapeutic approaches[14] or report the natural course of patients with comorbid illness.

Chris van Weel, François G Schellevis
Department of General Practice, Radboud University Medical Centre, Nijmegen 6500 HB, Netherlands (CvW); and Netherlands Institute for Health Services Research, Utrecht, Netherlands (FGS)
c.vanweel@hag.umcn.nl

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WHO Child Atlas Project

Mental and behavioural problems during childhood and adolescence are a serious public-health concern. About half of all lifetime mental disorders begin before the age of 14 years.[1] Worldwide prevalence rates for child and adolescent mental disorders are around 20%, with similar types of disorders across cultures.[2,3] Information about the lifetime financial costs and long-term morbidity associated with mental disorders that begin in childhood is beginning to be reported.[4–9] Despite these findings, which were anecdotal for decades, the gap in mental-health services for children and adolescents with mental disorders is evident in virtually all countries at a time when the need has never been greater.

The WHO Atlas on Child and Adolescent Mental Health Resources[10] attempts, in a systematic manner, to identify the gap in resources for child and adolescent mental health. The Child Atlas project was undertaken by WHO, in collaboration with the World Psychiatric Association Presidential Global Programme on Child Mental Health, and the International Association for Child and Adolescent Psychiatry and Allied Professions. The project gathered information about child and adolescent mental-health resources from 66 countries by use of a key informant method. The questionnaire survey was sent to potential respondents and contacts in all 192 countries. The response rate itself reflects the difficulty in identifying individuals at the country level who have responsibility for and knowledge of the resources and services for problems associated with child and adolescent mental health.

There are several domains in which there are gaps for child and mental-health resources. Policy, training, and direct services all have major gaps. Across all domains, the regions in the world with the highest percentage of the population under the age of 19 years had the poorest level of resources, but sometimes had the most creative programming to meet needs. An essential gap is child and adolescent mental health. The Child Atlas documented the absence of capacity for gathering data on child and adolescent mental-health resources across various dimensions (table). In high-income countries, only eight of 20 reported some form of epidemiological survey data. Only one of 16 low-income countries reported the availability of such data and that country was in Europe. Data for child and adolescent mental-health disorders are published in the annual health survey of 12 of 20 high-income countries and three of 16 low-income countries. No systematic data-gathering of child and adolescent outcomes in mental-health services exists anywhere nationally.

The gap in policy, although less evident high-income