

behaviour across all three stakeholders. Evaluation of the face-to-face GP training, has demonstrated a significant shift in GP attitudes. The next steps include speciality specific face-to-face training for hospital doctors. The developing work will be discussed with examples of interventions provided.

### Expertise and post-normal science in the development of the Swedish sickness certification decision-support tool

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#### Background

In Sweden, large variations were identified in sick-leave duration also in episodes with the same diagnoses. A decision support was developed to ensure more uniform assessment of sick leave. The present qualitative study aimed at examining the process of construction and development of the new decision support.

#### Methods

Qualitative analyses of data from interviews and documents were performed. Participants (n=15) in in-depth interviews were medical and insurance experts from the Social Insurance Agency involved in the development of the decision-support. Interviews with the medical experts focused on how well their specific medical field of expertise fitted the format suggested for the decision support and how a "standard patient" looked

like in their clinical everyday work. For both groups of interviewees, issues regarding assessment of work capacity were discussed. The documentary analysis was done reading investigations, memos, reports and minutes. Themes identified in the interviews were compared with the overall documentary analysis and constituted the basis for an epistemic analysis.

#### Results

The analyses showed that the decision-support was developed under a tight schedule and with strict templates for its format. The decision support was built around diagnostic categories and a majority of the experts that were used were specialized in medicine. A difficulty in the process was according to participants to produce standardised medical assessments of how a particular illness was expected to affect patients' work capacity rather than how the illness affected the patient. The evidential basis for such assessments was scant. Findings show that conditions that were not somatic or could not be 'measured objectively' proved extra problematic, since much of the assessment in these situations hinges on physicians' experience-based expertise combined with their understanding of the circumstances of individual patients.

#### Conclusion

The analysis indicates that 'work capacity' does not fall squarely within the remit of medical expertise, but is an example of 'post-normal science' that requires a broad range of experts from different fields both inside and outside of science coming together to pool their knowledge and build new expertise.

## M.5. Workshop: Multimorbidity: a hidden epidemic that challenges European health services

Chairs: Marjan van den Akker, The Netherlands and Alexandra Prados, Spain

Organiser: Aragón Health Science Institute (Spain) and EUPHA Section on Chronic Diseases

#### Background and aims

The presence of multiple chronic diseases within one patient, defined as multimorbidity, is today the rule rather than the exception. Although it mainly affects the older people, with a prevalence reaching as high as 98%, its frequency is higher than expected in individuals of younger age as well. Recent investigations have stated that multimorbidity manifests differently in men and women and that it is negatively associated to individuals' socio-economic level.

Multimorbidity has negative consequences not only for patients' health (i.e. increased mortality, lower patient quality of life and unsafe health care) but also for the sustainability of health services due to a potentially inefficient use of healthcare resources.

The magnitude of this phenomenon and its increasing evolution force us to consider multimorbidity as a relevant public health problem. Yet health care is organized and designed primarily to assist patients with a single health problem. If the goal of health services is to reduce excess morbidity and mortality, there is an urgent need to move towards healthcare delivery models that prioritize patients' global health, rather than caring for individual chronic diseases.

It is therefore necessary to identify, evaluate and disseminate those best practices with a proven positive impact on the health of patients with multiple chronic diseases, to adapt clinical guidelines, and to involve physicians, managers and patients themselves in the pursuit of a solution.

#### Workshop layout

The workshop is composed of three presentations by European researchers with international representativeness and sound expertise in the study of multimorbidity. The first one will delve into the etiology, the course and the impact of chronic disease associations, including those complex disease aggregations which are less intuitive or explicable. The second one will offer future prospects to adequately respond to the needs of patients with multimorbidity from the perspective of both health services and patients themselves. The third one will focus on a key and peremptory aspect as is the need to develop clinical practice guidelines that systematically address multimorbidity, taking the case of chronic heart failure as an example.

#### Added value

Attendees will acquire state-of-art knowledge on multimorbidity as well as a deeper understanding of the rationale for public health research and action agendas to incorporate multimorbidity as a high-priority area.

#### What is there behind multimorbidity? Following the track of diseases

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It is a well-known fact that one in four adults have two or more chronic conditions and that half of older adults have three or more chronic conditions. What is less obvious is how those diseases are aggregated and evolve within individuals and populations, as well as the underlying mechanisms that may explain these associations.

A few studies have shown that certain diseases co-occur at a significantly higher rate than is expected by chance alone,

leading to disease “constellations” formally named as multimorbidity patterns. Although it could be expected that diseases are concentrated in an individual if one disease is directly responsible for the others or if they all share common risk factors, additional mechanisms beyond those of a pathophysiological nature which are rather related to socio-economic, cultural, environmental and behavioral factors have also been described.

Studies focusing on the investigation of the etiology, as well as the course and the impact of specific combinations of chronic conditions are crucial for several reasons. First, even if the effect of multimorbidity on mortality, functional status, quality of life and health care has been soundly demonstrated, it remains largely unclear which specific disease combinations are responsible for specific effects. Second, knowledge about how diseases cluster and how such clusters evolve along an individual’s life can lead to better treatment and prevention strategies in patients with multiple health problems. Third, research on the causal mechanisms of multimorbidity could shed light on the role of less intuitive factors such as iatrogenia in this phenomenon. And fourth, observations about possible synergistic effects among particular disease combinations on outcomes can derive in a large health gain by early recognition of consecutive diseases.

In this part of the workshop we aim to overview the available evidence in relation to the type, nature and clinical relevance of multimorbidity patterns with the purpose of promoting reflection on the impact of available knowledge on health policy, care provision, clinical decision making and health research.

### **Opportunities and core components in the care for people with multimorbidity**

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Multimorbidity is recognized as a relevant and increasingly frequent health problem. It is an important societal problem with many consequences for the patients, but also for the costs of health care and the use of health services. In order to adequately treat patients with multimorbidity, a complex evaluation is required of the diseases and prescription decisions against complaints, diagnostics, laboratory findings, previous adverse effects, and patient preferences.

In medical practice, the evidence-base for adequate medical management of multimorbidity and polypharmacy (the simultaneous use of five or more medications) is underdeveloped. This is reflected in most of the current guidelines for medical practice, which are mainly disease-specific and pay little attention to disease-disease, drug-disease and drug-drug combinations with their potential harmful adverse effects. Obviously, multimorbidity is strongly related to polypharmacy. Polypharmacy increases the risk of side-effects and patient non-compliance.

For patients with multimorbidity and polypharmacy, usually several health care professionals are involved in delivering care. Two thirds of people with a chronic condition use at least two different health services (e.g. GP care, physical therapy, ambulatory care, hospital admission).

It takes complex approaches to handle these complex health situations. The GP setting would seem to be the right place to launch efforts seeking to strengthen coherence and

coordination of primary and secondary sector care to optimize the care for people with multimorbidity. This becomes even more important in the future when the GP is confronted with a considerably growing number of frail community dwelling elderly. A proactive policy to detect frailty in time and to provide tailor-made medical and nursing care in the community is necessary then.

In this part of the workshop we will pay attention to core components in the care for people with multimorbidity. Interventions should be made at different levels: at the patient level in specific treatment decisions (polypharmacy), involving the patient (shared decision making / patient centred care), but also at the level of the organization of care (e.g. pointing out case managers, and reorganizing chains of care).

### **Addressing multimorbidity in clinical practice guidelines: the case of chronic heart failure**

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Clinical practice guidelines (CPGs) play a pivotal role in supporting clinical decision making with the best available evidence and have shown to improve health care in chronic conditions, such as chronic heart failure (CHF). Nevertheless, previous research has shown that an uncritical application of the recommendations of different CPGs in caring for patients with multimorbidity is not feasible and may even have undesirable effects, such as drug-drug and drug-disease interactions. This is in particular problematic in CHF, since almost all (96%) of the patients suffer from at least one, and more than a third from five or more non-cardiac comorbidities.

To identify the relevant interactions (e.g. between CHF and its common comorbidities) it is of crucial importance to further develop current disease-specific CPGs: disease-disease interactions indicate populations under risk, such as a co-existing depression that worsens the prognosis of CHF. The diagnostic workup of a symptom such as dyspnea (either indicating the worsening of CHF or of a co-existing chronic obstructive pulmonary disease) results in conflictive therapeutic strategies. Decisions about a pharmaceutical treatment have to consider potential drug-disease and drug-drug interactions between CHF and comorbidities to avoid harm arising from, for example, a prescription of an anti-depressant in CHF patients and to make use of synergistic effects, such as ACE inhibitors in CHF patients with hypertension.

Although, CPGs aim to support clinical decision making in an individual patient, they are developed for patient groups representing public health relevant topics. To optimize health care in patients with multiple conditions, CPGs have to address multimorbidity adequately. The identification of the above mentioned interactions is a necessary precondition and a first step in this direction. In addition, patients’ preferences and therapeutic goals have to be taken into account in clinical management. They are the key to prioritize the diagnostic and treatment measures in multimorbidity.

In this part of the workshop we aim to identify key issues of a methodological framework to systematically address multimorbidity in CPGs. We will present the results of a scoping exercise consisting of a CPG review on interactions and an interdisciplinary expert workshop, and further discuss them from the public health perspective.