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## Excess mortality in subjects with severe mental illness

*A matter of serious concern*

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If anyone dies – the question is when and what the cause is, and how the quality of life has been. Patients with bipolar disorder and patients with schizophrenia, most often comprising the group of patients defined as severe mental illness (SMI), have an increased mortality rate in comparison to the general population (1,2). Despite differences between disorders there are similar patterns of increasing relative mortality rates over time for bipolar disorder and schizophrenia (2). Current data supports the largest gap in mortality rate in younger persons with SMI as compared to the background population, as in this age group death is a relatively uncommon event in the general population (1). Over the last half a century, a significant increase in life expectancy has been observed, most likely as a result of earlier diagnosis and improved treatment for diseases eventually leading to death from natural causes. The benefits have been most pronounced in patients without SMI, as compared to patients with SMI, but improvements in terms of mortality have likely also occurred in patients with SMI, although some data support a general lowering in age at death for patients with schizophrenia (3). Regarding deaths from unnatural causes, especially suicide, a decrease has occurred over the last decades in patients with SMI (3), which has naturally resulted in a relatively larger proportion of deaths occurring because of natural causes.

In a randomized trial, combined treatment consisting of optimized pharmacological interventions, individual and group psychoeducation, the possibility of psychotherapeutic interventions and a high knowledge base for the treatment of bipolar disorders was shown to be superior to treatment as usual (4). Here, the same clinicians and nurses often treat patients throughout the duration of the outpatient program, thereby establishing a therapeutic relationship, which increases the likelihood of early intervention when the patient observes a negative change in mental state. Even though improvement of the mental disorder per se leads to better quality of life and indirectly may reduce the occurrence of somatic disease through changes in lifestyle and improved patient awareness of somatic symptoms, more needs to be done. The team of people supporting patients with SMI are most often composed of multidisciplinary psychiatric specialists, e.g. psychiatrists, psychologists and nurses, but they often lack sufficient knowledge of somatic diseases, which obviously leads to less focus and poorer management of these diseases. Thus their focus on the mental problems carries an inherent risk of these overshadowing the possible symptoms of somatic diseases.

Psychiatric patients can be referred to somatic hospital-based care or to their general practitioner (GP) for further diagnostic procedures, for treatment of somatic diseases or for treatment of somatic risk factors. Lack of attendance for outpatient appointments is a problem in most settings, but is likely to be more problematic in patients with SMI across settings, including the somatic outpatient settings. If a possible risk factor for somatic disease, e.g. increased cholesterol or hypertension, is identified during routine screening in patients with SMI, and the patient is asked to contact their GP regarding treatment, there is a

high risk of non-attendance. In this model, the responsibility for establishing contact and getting treatment is laid upon the patient. Several interventions have been proposed to minimize these problems, e.g. combining somatic and psychiatric healthcare with both psychiatric and somatic treatment conducted by one treatment team nested in psychiatry (4). Such teams would be beneficial for most patients with SMI, but would probably mainly treat minor physical issues as seen from the perspective of internal medicine consultants, which could make it difficult to attract professionals to these positions.

In cardiology and neurology, myocardial infarction and stroke are associated with an increased risk of affective disorders, especially depression, and treatment outcomes for the somatic disorders correlate negatively with the presence of a psychiatric disorder. As seen in psychiatry, albeit the other way around, the immediate somatic disorder may obscure possible mental symptoms or disorders, which for that reason may be unidentified and therefore left untreated.

In other fields of medicine, a multi-specialty team of experts is typically involved in the treatment of patients with severe life threatening illnesses. In patients diagnosed with cancer, oncologists, surgeons, radiologist and internalists all join forces to treat the patient most efficiently. The member's knowledge base and the patient population define the teams who meet regularly, with no other set agenda than discussing new patients and problems encountered. The latter might be of extraordinary importance as this could perhaps result in a lower threshold for discussing specific patients as compared to an approach where patients are only discussed when a meeting is called. Neurologists, cardiologists, endocrinologists and psychiatrists, constituting a natural group or team of specialists based on relevant and common psychiatric and somatic co-morbidities could adopt a similar model. Psychiatrists could be advised concerning a multitude of somatic conditions, e.g. treatment of hypertension, dyslipidemia, thyroid dysfunction or tremors whereas the cardiologist or neurologist might need advice on diagnosing or treating affective or psychiatric disorders in general. In this model, all attending clinicians would have a possible gain and the group would have a common aim. This could ensure attendance from all involved, and would result in a smaller impact on the clinical life of consultants attending these meetings, as their main function would still be within their own area of expertise. The team members would be able to advice in regard to specific treatment choices, diagnostic procedures and follow-up with their own knowledge base, and would naturally see patients as needed. Furthermore, the model would most likely result in more attention being paid towards co-morbidities.

Patients with SMI have an increased mortality rate as compared to the general population, mainly as a result of excess deaths due to somatic diseases, and in a theoretical model adjusting for all diagnosed somatic diseases, patients with schizophrenia have been known to have a mortality rate twice the mortality rate of otherwise healthy individuals (5). These findings could suggest that the increased

mortality rate associated with SMI, assuming similar findings for patients with bipolar disorder, is not only associated with the specific, diagnosed, somatic co-morbidities, but is also associated to the overall burden of having a severe mental illness. SMI is associated with a poorer social network, lower socioeconomic class, lower educational level, cognitive deficits, a higher rate of substance abuse and psychiatric symptoms overshadowing somatic symptoms and disorders in both somatic and psychiatric care. Several of these factors could lead to a longer latency to request somatic treatment when experiencing somatic symptoms or simply to non-detection of somatic diseases.

To deal with the burgeoning excess mortality in patients with SMI, it is clear that a multifaceted approach is needed. Within such an approach, psychiatric care still is essential to reduce psychiatric symptoms and to prevent their reemergence, by optimizing psychoeducation, psychological treatment and pharmacotherapy. Such efforts have already resulted in reduced rates of suicide over the latest decades, and will be even more essential in the future (3). However, even though focus on physical health has been growing over the recent years, new strategies in managing patients with SMI are obviously needed. The model proposed here; developing multi-specialty teams comprising psychiatry and other fields of medicine, based on mutually relevant co-morbidities, will provide patients with both SMI and patients with primarily somatic disorders the advantage of specialized treatment of their main conditions as well as resulting in specialized treatment of their somatic and/or psychiatric co-morbidity. Patients will not need to leave the established main therapeutic relationship ensuring ongoing attendance.

The proposed model is not necessarily a one size fits all, as the functional capacity of patients varies. Some might be better served by contacting the GP themselves, but in the proposed model patients will benefit from knowledge regarding somatic illnesses being integrated into psychiatry care.

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