## Cardiovascular risk factors among patients with severe mental disorders: an overview and the role of cardio-psychiatry in prevention strategies

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Individuals with severe mental disorders (SMDs) consisting of schizophrenia, major depressive disorder and bipolar affective disorder have a life expectancy 15-25 years shorter compared to individuals from the general population. Despite the high rate of unnatural deaths (e.g., suicides, injuries), physical conditions represent the main cause of reduced life expectancy among individuals with SMD. Evidence suggests that physical conditions account for ~70% of deaths among individuals with SMD, with cardiovascular diseases contributing 17.4% and 22.0% to the reduction in overall life expectancy in men and women, respectively<sup>2</sup>. Lifestyle risk factors for cardiovascular diseases among individuals with SMD (e.g., unhealthy dietary pattern, cigarette smoking, reduced physical activity) are traditional risk factors that are also present, thought usually to a lesser extent, among individuals from the general population. Additional risk factors among individuals with SMD include the use of psychotropic medications (antipsychotic medications, specifically second-generation antipsychotics, antidepressants, and mood stabilizers) and biological risk factors (shared genetic loci for both SMDs and cardiovascular diseases)<sup>3</sup>. Importantly, different cardiovascular risk factors among individuals with SMD interact by yet-undefined mechanisms which additionally complicate the relationship between SMDs and cardiovascular diseases4. In the research literature, there is still a lack of studies on systematic assessment of cardiovascular risk factors among individuals with SMD. Furthermore, in clinical practice, comorbidity of cardiovascular diseases and psychiatric disorders is likely to be underrecognized and undertreated. In this work we discuss the risk factors for cardiovascular diseases among individuals with SMD, highlighting the role of multidisciplinary approach comprising psychiatry and cardiology teams in prevention strategies. We also discuss clinically significant interactions between common cardiovascular and psychotropic medications as well as (neuro)psychiatric effects of common cardiovascular medications. Finally, we provide novel insights related to the genetic relationship between SMDs and cardiovascular diseases, based on genome-wide association studies.

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