



Cardiovascular Disease in People with a Severe Mental Illness Fact Sheet

What is Severe Mental Illness?

The term “severe mental illness” is a frequently used phrase, but is imprecise in its nature. In the generally accepted form, the term has three elements: Diagnosis, Disability and Duration.

- **Diagnosis:** a diagnosis of schizophrenia, bipolar disorder, or other psychotic disorder is usually implied
- **Disability:** The disorder causes significant disability
- **Duration:** The disorder has lasted for a significant duration, usually at least two years.

What happens in the general population?

- Primary Prevention programmes recommended by the WHO include:
 - comprehensive tobacco control policies and alcohol reduction policies
 - restrictions on advertising of food and non-alcoholic beverages to children
 - taxation on sugar sweetened beverages
 - reformulation of products to reduce salt content in foods
 - nutrition labelling and educating the public about healthy eating, reducing the intake of foods that are high in fat, sugar and salt, and maintaining a healthy weight
 - creating healthy public spaces such as building walking and cycle paths to increase physical activity
 - providing healthy school meals to children and promoting physical activity in schools
- Secondary Prevention recommendations include the use of medication:
 - aspirin
 - beta-blockers
 - angiotensin-converting enzyme inhibitors
 - statins.

What is the prevalence of the disorder in people with severe mental illness?

- Causes of death amongst people with schizophrenia from cardiovascular disease increased from 1.84 times greater than the general population in the 1970s, to over 3.20 times greater in the 1990s. This increase has continued into the 21st century.



What are the risk factors for people with severe mental illness?

- They are more likely to be overweight.
- They are more likely to smoke.
- They are more likely to have diabetes.
- They are more likely to have dyslipidaemia.
- They are more likely to have erectile dysfunction and hyper-prolactinaemia secondary to antipsychotic medication. Hyper-prolactinaemia in women can cause gynaecological symptoms and signs.
- They are more likely to have chronic kidney disease secondary to lithium prophylaxis.

What are the effects of anti-psychotic medication?

- Second generation anti-psychotic medication is recognised to induce factors that significantly increase the risk of cardiovascular disease.
- Studies show that it is the medication that plays a significant role in the development of these risk factors, rather than the illness for which the medication is prescribed.
- Anti-psychotic medication is responsible for potentially fatal arrhythmias, including Torsades de Pointe.
- Anti-psychotic medication causes venous thromboembolism, increasing the risk of both deep vein thrombosis and pulmonary embolism.

What is the effect of life style choices and social determinants of health?

- People with severe mental illness access health care services less than others, and therefore do not take up offers of cardiovascular prevention as frequently as others.
- People with severe mental illness are more likely to be unemployed, and homeless, and therefore less able to afford medication that might be prescribed for the secondary prevention of cardiovascular disease.
- People with severe mental illness are more likely to smoke than the general population. Smoking increases the risk and severity of cardiovascular disease.

What is the effect of multi-morbidity?

- People with severe mental illness are more likely to suffer from insulin resistance, which includes diabetes. Diabetes is itself a risk factor for cardiovascular disease, and the complications of diabetes, such as renal failure and erectile dysfunction are independent risk factors for cardiovascular disease.
- Smoking will exacerbate the effects of cardiovascular disease, and the effects of thrombosis that is a side effect of anti-psychotic medication



What are the Recommendations for Clinical Care?

- In all countries, every person with severe mental illness should have their cardiovascular risk assessed annually using an appropriate cardiovascular risk score algorithm. The FD should use which ever risk score algorithm is nationally or regionally recommended e.g. WHO CVD risk assessment, SCORE, QRISK2.
- Where individuals with severe mental illness have a high assessed cardiovascular risk, they should be offered appropriate medication and interventions to reduce that risk e.g. by adding aspirin, beta-blockers, angiotensin-converting enzyme inhibitors and/or statins, whilst acknowledging the risks associated with polypharmacy.
- In all countries, every person with severe mental illness, should be asked annually if they smoke tobacco, and where appropriate offered smoking cessation advice.
- In all countries people with severe mental illness should be assessed for evidence of glucose dysregulation – by measuring the fasting blood glucose on an annual basis. For those who have developed diabetes, they should be offered the same treatment plans and follow-up as those people with diabetes, but without severe mental illness.
- Assess each patient’s beliefs and preferences, and assess levels of health literacy and barriers to care.
- Use interpreters as appropriate for patients with language barriers.
- Patients should have available self-management support from people who are themselves recovering from severe mental illness.

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