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Review

Integrating physical healthcare into psychiatry for severe mental illness: A narrative review and position statement from the ECNP PAN-Health group

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A B S T R A C T

Individuals with severe mental illness (SMI) face significantly reduced life expectancy, mainly driven by natural causes such as cardiovascular disease, pulmonary disease, cancer, and stroke. Although medical care has advanced, the mortality gap between individuals with SMI and the general population has continued to expand in many countries over recent decades. This disparity is exacerbated by systemic healthcare inequities, fragmented healthcare, insufficient use of preventive measures, and the burden of multimorbidity.

This paper proposes six actionable strategies to reduce the excess mortality associated with SMI by integrating physical healthcare into psychiatric services. Across all recommendations, we explicitly embed lifestyle interventions, especially structured physical activity given its comparatively stronger evidence base in SMI, alongside sleep and nutrition support delivered through pragmatic, accessible programs. First, psychoeducation should be expanded to include physical health literacy. Second, structured smoking cessation programs must be implemented. Third, early identification and management of obesity, including pharmacological interventions, should be prioritized. Fourth, hypertension should be routinely screened and treated within psychiatric settings. Fifth, dyslipidaemia and diabetes require systematic monitoring and timely initiation of statins, metformin and GLP-1 receptor agonists. Sixth, these interventions must be delivered through integrated care models that ensure continuity, optimal self-management, and long-term outcome monitoring. Together, these six approaches offer a framework to narrow the mortality gap between people with SMI and the general population, as well as support a shift toward holistic, person-centered care. We synthesise the evidence on physical health disparities in SMI and provide practical, evidence-based recommendations for psychiatric settings. Together, these strategies offer a feasible, person-centered framework to improve health outcomes and reduce premature mortality in individuals with SMI.

1. Introduction

People with severe mental illness (SMI) face a significantly reduced life expectancy compared to the general population. This is compounded by poor outcomes and reduced quality of care primarily for diseases such as cardiovascular disease, respiratory disease, multimorbidity, and cancer. Despite advances in healthcare, several challenges exist including fragmented care, underutilization of preventive services, and systemic inequities in healthcare delivery for people with SMI. In this paper, we first provide an in-depth overview of the wide-ranging health disparities that exist in SMI compared to the general population. We then discuss the limitations of current standard care and provide recommendations on how to provide evidence-based care in the psychiatric setting can improve health outcomes and reduce premature mortality in people with SMI as compared to the general population.

2. Clinical outcomes of SMI

2.1. Life expectancy

People with SMI experience a markedly reduced life expectancy, typically 10 to 20 years shorter than the general population. While unnatural deaths, including suicides, contribute to this disparity, approximately 70% of deaths in this population result from natural causes, with cardiovascular and respiratory diseases being main contributors (Correll et al., 2022; Jayatilleke et al., 2017; Nordentoft et al., 2013; Chan et al., 2023). Cancer also accounts for a significant proportion of the premature mortality of people with SMI (Jayatilleke et al., 2017). These statistics underscore an urgent need to address the physical health inequities affecting people with SMI and to integrate physical healthcare more effectively into mental health services.

While life expectancy has steadily improved in most European and North American countries, individuals with SMI have not experienced similar gains (Olshansky et al., 2024; Fiorillo and Sartorius, 2021; Hayes et al., 2017; Staudt Hansen et al., 2019). This divergence has led to a widening mortality gap between individuals with SMI and the general population in many countries (Hayes et al., 2017; Staudt Hansen et al., 2019), despite significant variance between regions. A meta-analysis of 135 studies (Solmi et al., 2024a) revealed substantial geographical differences in all-cause mortality risk among people with schizophrenia, with the highest relative risk in Africa and the lowest in North America. Suicide-related mortality followed a similar pattern (highest in Oceania, lowest in North America), while natural-cause mortality appeared consistent across regions studied. The protective effect of antipsychotic medication on mortality also varied by region, with the strongest associations observed in Europe. Numerous factors influence life expectancy, including sex, genetics, education, socio-economic status, social networks, lifestyle and access to medical technology (Brouwers, 2020; Lawrence and Kisely, 2010; Nielsen et al., 2021; Kavanagh et al., 2025; Brandt et al., 2022; Polcwiartek et al., 2024). Individuals with SMI are often disadvantaged across many of these determinants. For example, a meta-analysis of 43 studies involving over 2.7 million people with schizophrenia found elevated all-cause mortality in both men and women compared to the general population (Solmi et al., 2025). While the analysis found that both men and women experienced similarly elevated all-cause mortality compared to control groups, age-dependent

patterns emerged. Specifically, women under 40 years of age exhibited a significantly higher mortality risk than those aged 40 and older. Additionally, sex differences were observed in specific causes of death, with men showing a significantly higher risk of death from neurological disorders, particularly dementia. In Table 1, we present illustrative ranges of occurrence for selected risk factors and diseases, intended as common examples rather than an exhaustive catalogue. Estimates vary by age, sex, diagnostic criteria, geography, and study design and should be interpreted as indicative, not definitive, for any single setting. "Individuals with SMI" primarily refers to schizophrenia-spectrum and bipolar disorders (with some overlap across broader diagnoses) (see Table 2).

2.2. Cardiovascular disease

The main cause of death in the general population as in people with SMI is thought to be cardiovascular disease (Nielsen et al., 2021; Polcwiartek et al., 2024). However people with SMI face significant disparities in cardiovascular care; they are less likely to undergo diagnostic procedures for suspected acute coronary syndrome, receive invasive cardiovascular interventions, or prevention therapies (Correll et al., 2022; Kugathasan et al., 2018; Chan et al., 2022). When tertiary prophylactic treatments, such as antiplatelet agents, statins, or antihypertensives, are prescribed, medication-taking rates remain strikingly low (Kariis et al., 2023; Woodhead et al., 2016; Attar et al., 2020; Campain et al., 2022; Moreno et al., 2024), with a similar pattern observed following cerebrovascular events (Woodhead et al., 2016; Chu et al., 2024). Consequently, despite significant advances in diagnostic and therapeutic approaches that have reduced standardized mortality rates associated with acute myocardial infarction and stroke in the general population, people with SMI have not benefited equally (Charlson et al., 2015; Plana-Ripoll et al., 2020). Standardized mortality rates after acute myocardial infarction and stroke have increased among people with SMI, leading to higher absolute mortality rates (Plana-Ripoll et al., 2020). This trend is particularly concerning given their elevated baseline cardiovascular risk and heightened prevalence of modifiable risk factors such as smoking, hypertension, diabetes, dyslipidaemia, obesity, metabolic syndrome, poorer diet quality, high levels of sedentary behaviour and physical inactivity (Teasdale et al., 2019; Vancampfort et al., 2015, 2017; Visseren et al., 2021). Antipsychotic treatment choice significantly affects cardio-cerebrovascular mortality in SMI. In over 2.5 million people with schizophrenia, first-generation antipsychotics was associated with increased cardiovascular mortality in incident cases, while second-generation antipsychotics and clozapine reduced mortality in prevalent cases (Solmi et al., 2024b).

Table 1
Illustrative, non-exhaustive occurrence ranges; values vary by population, definitions, and study design. "SMI" refers primarily to schizophrenia-spectrum and bipolar disorders. For precise estimates, see the cited sources.

Comorbidity	Occurrence in Healthy Group	Occurrence in Individuals with SMI	Reference
Cardiovascular disease	Lower burden; later onset vs SMI	Consistently higher burden and earlier onset; clustered risk factors	Polcwiartek et al. (2024)
Type 2 diabetes mellitus	~6–8% prevalence	~12–20% prevalence (≈2–3 × higher)	Firth et al. (2019)
Chronic obstructive pulmonary disease (COPD)	~4–6% prevalence	~10–12% prevalence (≈2–3 × higher); reduced lung function	Jaén-Moreno et al. (2023)
Obesity	~20–30% prevalence	~40–60% prevalence (≈2 × or more)	Vancampfort et al. (2015)
Cancer	Incidence varies by site; earlier detection more common	Similar/modestly higher incidence for some sites; later stage at diagnosis; lower screening; higher mortality	Murphy et al. (2024)
Metabolic syndrome	~25–30% prevalence	~32.6% pooled prevalence; ≈1.5–2 × higher vs controls	Vancampfort et al. (2015)

Primary prevention strategies targeting cardiovascular risk factors remain significantly underutilized in people with SMI (Nielsen et al., 2021; Polcwiartek et al., 2024). Despite the high burden of modifiable risk factors in this population, real-world data show missed opportunities for preventive interventions (Kugathasan et al., 2018; Chan et al., 2022). For example, randomized controlled trials (RCTs) comparing lifestyle interventions with treatment-as-usual (TAU) in people with SMI have shown only limited success in reducing cardiovascular risk, highlighting the limitations of conventional approaches when applied to this population (Speyer et al., 2019; Jakobsen et al., 2017). These findings suggest that traditional approaches to lifestyle modification may need to be adapted to the unique needs and challenges faced by this population. Furthermore, pharmacological interventions as part of primary prevention, such as initiating statins for dyslipidaemia or glucagon-like-peptide-1 (GLP-1) receptor agonists for obesity, remains underexplored in this group, despite their proven efficacy in reducing cardiovascular risk in other high-risk populations (An et al., 2025). Secondary prophylaxis, aimed at managing existing conditions such as hypertension, diabetes, or dyslipidaemia to prevent further complications, is similarly underutilized in people with SMI (Nielsen et al., 2021; Polcwiartek et al., 2024; Kugathasan et al., 2018). Despite evidence that timely interventions can significantly reduce morbidity and mortality, people with SMI are less likely to receive guideline-recommended treatments (Visseren et al., 2021). For example, antihypertensive medications or insulin therapy are often prescribed at lower rates than in the general population, and follow-up care is often inconsistent or delayed (Ayerbe et al., 2018). Tertiary prophylaxis, aimed at preventing disease progression and complications after major events like myocardial infarction, also reveals stark disparities (Nielsen et al., 2021; Polcwiartek et al., 2024; Kugathasan et al., 2018). People with SMI are less likely to be prescribed beta-blockers, statins, or angiotensin-converting enzyme (ACE) inhibitors after an acute coronary event (Nielsen et al., 2021; Polcwiartek et al., 2024; Kugathasan et al., 2018; Chan et al., 2022). This underutilization of tertiary prophylaxis leads to higher rates of recurrent cardiovascular events and contributes significantly to the mortality gap (Chan et al., 2022).

2.3. Arrhythmias

Adding further complexity to the cardiac health of people with SMI is the increased risk of arrhythmias, which range from benign to life-threating (Du et al., 2023). While the occurrence of arrhythmias in people with SMI is under-researched, several concerns warrant attention. Psychotropic medications, particularly antipsychotics and antidepressants, have been associated with QT interval prolongation and other pro-arrhythmic effects (Du et al., 2023; Blok-Husum et al., 2023).

One particularly dangerous arrhythmia is Torsades de Pointes, a specific type of polymorphic ventricular tachycardia characterized by rapid, irregular heartbeats that can lead to fainting, seizures, or sudden cardiac death. This condition is linked to prolonged QT intervals on ECG, often caused by psychotropic drugs that disrupt cardiac ion channels, impair electrical conduction, and increase arrhythmia risk in susceptible individuals. (Tisdale et al., 2020; Melo et al., 2024). While Torsades de Pointes is rare, its potential severity makes QT prolongation a critical focus in the cardiac management of people with SMI (Tisdale et al., 2020; Melo et al., 2024). However, meta-analytic evidence indicates that certain antipsychotics such as aripiprazole, asenapine, brexpiprazole, cariprazine, haloperidol, lurasidone, and paliperidone produce QTc prolongation at rates similar to placebo (Huhn et al., 2019). In contrast, other antipsychotics were associated with

Table 2
Six interventions to improve physical health outcomes in people with SMI.

Intervention	Description	Key Strategies	Expected Benefits
1. Physical Health Literacy via Psychoeducation	Expand existing psychoeducation programs to include modules on cardiovascular risk and physical health	• Educate on smoking, obesity, hypertension, dyslipidemia • Promote preventive behaviors and timely help-seeking • Encourage adherence to medications and lifestyle changes	Improved self-management, reduced chronic disease burden, better treatment engagement
2. Smoking Cessation	Address high smoking rates in SMI with tailored pharmacological and behavioral interventions	• Offer varenicline, cytisine, or bupropion • Include behavioral counseling, peer support, and follow-up • NNT for pharmacotherapy ~10	Reduced risk of pulmonary and cardiovascular disease; improved life expectancy
3. Obesity and Early Weight Gain Management	Proactively manage psychotropic-induced weight gain with structured interventions	• Use ECNP PAN-HEALTH recommendations • Early lifestyle interventions • GLP-1 receptor agonists and metformin for pharmacological support	Prevention of obesity-related conditions (diabetes, hypertension); improved quality of life
4. Hypertension Screening and Treatment	Integrate routine blood pressure monitoring and treatment into psychiatric care	• Screen for BP > 140/90 mmHg • Initiate first-line antihypertensives • Monitor regularly within psychiatric settings	20–30% reduction in cardiovascular risk; improved diagnosis and control
5. Dyslipidemia and Diabetes Prevention and Management	Screen and treat dyslipidemia and prediabetes within psychiatric settings	• Use statins for severe dyslipidemia • Initiate metformin or GLP-1 agonists for elevated HbA1c or diabetes risk	Lowered risk of cardiovascular disease and progression to diabetes
6. Integrated Care Models	Combine psychiatric and physical health care within a unified treatment setting	• Manage somatic conditions in psychiatric care • Include patient navigators or care coordinators • Ensure continuity and adherence	Reduced care fragmentation; strengthened therapeutic alliances; better long-term outcomes

significantly greater QTc prolongation, with mean differences ranging from 3.43 ms for quetiapine to 23.90 ms for sertindole. These findings underscore the importance of individualized antipsychotic selection based on cardiovascular risk profiles.

Substance misuse, which is more prevalent among individuals with SMI, may further exacerbate arrhythmic risks. The use of stimulants, alcohol, and illicit drugs can exacerbate QT prolongation, disrupt normal cardiac electrophysiology, and increase the likelihood of arrhythmias (Morentin and Callado, 2019; Dominic et al., 2022).

Additionally, data support an increased prevalence of cardiovascular autonomic neuropathy (CAN) in people with SMI, a condition also commonly observed in individuals with diabetes (Blok-Husum et al., 2023). CAN reflects impaired autonomic regulation of heart rate and blood pressure, reducing the body's ability to respond to physiological stress (Blok-Husum et al., 2023). This dysfunction not only raises the risk of sudden cardiac death but may also contribute to other arrhythmic events. For example, people with CAN often exhibit reduced baroreflex sensitivity and impaired vagal tone, which can destabilize cardiac rhythms (Shen and Zipes, 2014; Serhiyenko and Serhiyenko, 2018).

Heart rate variability (HRV), a marker of autonomic nervous system function, is lower in people with SMI compared to the general population (Ramesh et al., 2023). Recent evidence also shows that psychotropic medications may contribute to this dysregulation. Penninx et al. (2024) describes that tricyclic antidepressants and SNRIs were significantly associated with reduced HRV and elevated resting heart rate, even after adjusting for depression severity and lifestyle factors. These findings underscore that autonomic imbalance in SMI reflects both illness related factors and treatment effects, and may heighten arrhythmic risk (Penninx, 2024). Reduced HRV is associated with an increased risk of arrhythmias and adverse cardiovascular outcomes, making it a potentially useful clinical indicator for identifying high-risk individuals within this population (Goldenberg et al., 2019; Sessa et al., 2018). Reduced HRV may also reflect an underlying chronic inflammation or chronic stress.

Most existing studies on sudden cardiac death in people with SMI rely on register-based data, which are prone to misclassification of causes of death due to the limited use of autopsies (Risgaard, 2016; Vohra, 2020). People with SMI experience nearly a fourfold increase in the rate of sudden cardiac death compared to the general population (Risgaard, 2016). However, autopsy studies have not consistently confirmed cardiovascular disease as the predominant cause of death, suggesting that other mechanisms, such as arrhythmias, may play a more significant role than previously recognized (Risgaard, 2016; Vohra, 2020). The ongoing Monitoring of Arrhythmias in Patients treated with antiPsychotics (MAPP) study, which employs loop recorders to track non-fatal arrhythmias in individuals treated with antipsychotics, is expected to provide valuable insights into arrhythmic burden and its relationship to psychotropic medications. While the study is still in progress, its findings may guide future strategies for arrhythmia prevention and management in this high-risk group.

Taken together, there is a need for a more comprehensive and nuanced understanding of arrhythmic risks in people with SMI. Future research should aim to clarify the prevalence, mechanisms and clinical implications of arrhythmias in this group, particularly in the context of psychotropic drug effects, substance misuse and autonomic dysfunction. In clinical practice, closer monitoring of QT intervals, substance use patterns, HRV, and autonomic function is warranted to mitigate risks. Developing tailored interventions, such as adjusting medication regimens or incorporating lifestyle modifications to improve autonomic function, could further reduce the burden of arrhythmias and sudden cardiac death in this vulnerable population.

2.4. *Pulmonary diseases*

Pulmonary disease, especially chronic obstructive pulmonary disease (COPD) is a significant yet frequently underrecognized contributor to morbidity and mortality in individuals with SMI (Partti et al., 2015; Laguna-Muñoz et al., 2025; Jaén-Moreno et al., 2023). People with SMI

are disproportionately affected by COPD (Suetani et al., 2021), most likely due to the high prevalence of smoking in this population, and many individuals with SMI face barriers to accessing effective smoking cessation interventions (Fornaro et al., 2022). This combination of behavioural risk factors and limited preventive care results in earlier onset and more severe progression of COPD in this group.

In addition to smoking, the management of COPD in people with SMI is often hindered by delayed diagnosis and suboptimal treatment. Studies show that individuals with SMI are less likely to undergo spirometry testing, a key diagnostic tool for COPD, and are more likely to experience fragmented healthcare (Jaén-Moreno et al., 2023; De Hert et al., 2011). Even when COPD is diagnosed, use of inhaled medications, pulmonary rehabilitation, and smoking cessation efforts are most likely lower in individuals with SMI compared to the general population (Volpato et al., 2021; Albrecht et al., 2016).

Integrated care models offer a promising approach to improve outcomes for people with SMI and COPD. By embedding smoking cessation programs, spirometry testing, and COPD management directly within psychiatric settings earlier diagnosis and better treatment uptake could be achieved. Additionally, psychoeducation programs that include respiratory health literacy could empower patients to recognize early symptoms of COPD and seek timely care. Addressing COPD as part of a comprehensive strategy to improve pulmonary health in individuals with SMI could significantly reduce morbidity and mortality in this high-risk group.

2.5. Cancer

In addition to the other diseases discussed, individuals with SMI experience substantial disparities in cancer screening, diagnostic procedures and outcome of cancer resulting in reduced access to curative treatments (Charlesworth et al., 2023; Toender et al., 2018; Arffman et al., 2019; Murphy et al., 2024; Grassi et al., 2021; Kisely et al., 2023). Early detection through routine screening is critical to improving survival rates across many types of cancer. However, people with SMI are significantly less likely to undergo recommended screenings, including mammograms, colonoscopies, and Pap smears (Murphy et al., 2024).

Once in the treatment phase, evidence suggests a tendency to favour palliative rather than curative approaches for people with SMI (Grassi et al., 2021). For instance, they are more likely to receive radiotherapy but less likely to undergo surgery or chemotherapy compared to the general population. This could reflect a systemic bias that assumes poor adherence or limited capacity to tolerate intensive treatments, reflecting a sort of negative pragmatism (D'Alton et al., 2021).

Addressing these disparities requires systemic changes to better integrate cancer screening and treatment into psychiatric care pathways. Routine screenings should be proactively offered and facilitated within psychiatric settings, supported by dedicated case managers to navigate appointments and follow-up care. Oncology teams should be trained to recognize and address the unique needs of people with SMI, ensuring that treatment decisions are made collaboratively and guided by clinical evidence rather than assumptions about adherence or capacity.

2.6. Multimorbidity

Lastly, multimorbidity, the coexistence of two or more chronic health conditions, is highly prevalent among individuals with SMI and is a major contributor to their reduced life expectancy (Pizzol et al., 2023; Kugathasan et al., 2019; Ma et al., 2023; Launders et al., 2022). Danish registry data illustrate this starkly: while one-third of the general population had no recorded somatic diseases, only 12% of patients with schizophrenia were free of diagnosed physical health conditions (Kugathasan et al., 2019). Conversely, approximately one in four individuals with schizophrenia had five or more somatic diagnoses, compared to just 15% of the general population (Kugathasan et al., 2019). Chronic somatic conditions such as cardiovascular disease, diabetes, COPD, and cancer not only occur more frequently, but also develop earlier and follow more complex trajectories. Quantitative estimates from large-scale studies confirm the magnitude of this burden. The *Lancet Psychiatry Commission* reported elevated standardised mortality ratios (SMRs) across all ICD-11 diagnostic categories, ranging from 1.7 in depression to more than 3.5 in psychotic disorders, with corresponding life expectancy reductions of 10–20 years (Firth et al., 2019). Complementing this, a nationwide register-based study from Denmark including more than 7 million individuals found that mental disorders were associated with a median of 10 years of life lost in men and 7 years in women, with the highest excess mortality observed in individuals with organic, substance use, and psychotic disorders (Plana-Ripoll et al., 2019).

The burden of multimorbidity is compounded by the synergistic effects of these co-existing conditions. For instance, an individual with SMI and comorbid diabetes, hypertension, and COPD face a multiplicative increase in mortality risk compared to individuals with any single condition (Pizzol et al., 2023; Kugathasan et al., 2019; Launders et al., 2022). The adjusted mortality rate ratio associated with an increasing number of somatic diagnoses ranges from 2.5 to 5 times higher in individuals with schizophrenia compared to the general population, even when controlling for age, sex, and specific diseases (Kugathasan et al., 2019).

The presence of SMI serves as a common denominator that exacerbates the risk associated with multimorbidity. Factors such as lower treatment adherence, impaired ability to navigate healthcare systems, and limited social support further disadvantage this population (Kugathasan et al., 2019). Addressing multimorbidity in persons with SMI effectively requires integrated care models that prioritize early detection, proactive management, and seamless coordination between psychiatric and somatic healthcare providers. Beyond individual-level risk factors, the syndemic burden of physical illness in SMI is exacerbated by structural and socioeconomic disadvantage—particularly poverty—which constrains access to evidence-based interventions (e.g., GLP-1 receptor agonists) and to concrete, structured lifestyle programmes (e.g., supervised physical activity, sleep improvement, nutrition support) (ref). Poverty is both a cause and a consequence of mental illness, and economic deprivation is a critical determinant of premature mortality: a recent systematic review of randomised trials found that income loss causally increases depression and anxiety, whereas anti-poverty interventions reduce them [Ridley et al., 2020]; across high-income settings, individuals in the lowest socioeconomic brackets have a 10–18-year shorter life expectancy than their wealthier counterparts [Singh and Lee, 2021]. These observations suggest that part of the mortality gap attributed to SMI reflects underlying deprivation. Consequently, our six clinical strategies must be implemented within equitable care models that include strong welfare supports (economic assistance, stable housing, and facilitated access to healthcare), with open, accessible, affordable, and practical lifestyle psychiatry programmes embedded across pathways. Without addressing these upstream determinants, even the best clinical interventions will have limited reach and impact (Lawrence et al., 2025; Ridley et al., 2020; Singh and Lee, 2020; Marmot, 2015).

2.6.1. The bidirectional impact of mental and physical illness

The relationship between SMI and physical health is not unidirectional. While much of the existing literature has focused on how physical conditions contribute to excess mortality in people with mental illness, growing evidence underscores a reciprocal effect: mental disorders themselves can adversely influence the onset, progression, and prognosis of physical diseases (Dragioti et al., 2023). Depression, schizophrenia, and alcohol use disorder are all associated with poorer outcomes across a wide range of somatic conditions, including cardiovascular disease, diabetes, kidney disease, liver disease, and cancer (Dragioti et al., 2023). These effects are likely mediated by behavioural,

biological, and systemic mechanisms—ranging from lifestyle factors and treatment non-adherence to inflammation, autonomic dysregulation, and reduced access to appropriate medical care. Mental disorders often impair patients' ability to recognize or respond to physical symptoms, delay healthcare-seeking behavior, and complicate the coordination of care across services (Polcwiartek et al., 2024; Dragioti et al., 2023). Addressing this bidirectional burden further underscores the need to shift away from fragmented healthcare models and toward integrated treatment paradigms that recognize the complex interplay between mental and physical health, ensuring an optimal treatment of incident mental disorders in individuals with physical disease (Nielsen and Licht, 2018).

Emerging evidence also highlights the impact of environmental degradation, climate change, and pollution on both mental and physical health, particularly among socioeconomically disadvantaged populations. These factors further compound the burden of disease in individuals with SMI and should be considered in future public health and care planning efforts (Radua et al., 2024; Hayes et al., 2018).

2.6.2. Genetics

Emerging research indicates that mental and physical disorders share partly overlapping genetic architectures, including common risk loci influencing both inflammatory pathways and neuroendocrine function. This pleiotropy may help explain the high co-occurrence of psychiatric and somatic conditions, even in the absence of treatment-related or behavioural mediators. Rather than undermining the potential for intervention, this biological overlap further strengthens the rationale for integrating somatic and psychiatric care—recognizing that these domains are not distinct but interwoven at genetic, pathophysiological, and clinical levels (Hübel et al., 2019; Shen and Jiang, 2024). Improving the current understanding of the genetic links between mental and physical conditions could provide novel avenues for future personalized prevention and intervention strategies using individual-level genetic information.

3. Current treatment paradigms

In most in- and outpatient settings, people with SMI are typically managed through compartmentalized treatment pathways, that primarily focus on addressing the psychiatric disorder (Nielsen and Licht, 2018). These pathways encompass a variety of interventions, including pharmacological treatments, psychotherapy, psychoeducation, and physical interventions such as electroconvulsive therapy, repetitive transcranial magnetic stimulation, or vagus nerve stimulation (Leucht et al., 2012). While these treatments can significantly alleviate psychiatric symptoms, they often fail to address the broader health needs of patients, particularly their physical health (Nielsen and Licht, 2018). This oversight is exacerbated by the traditional focus of psychiatric care, which rarely integrates somatic health considerations into routine treatment plans. Pharmacological therapies and psychotherapy primarily target symptom management, while psychoeducation aims to help understanding of the individuals mental health condition and its trajectory (Wilson et al., 2021). Although psychoeducation is essential for improving mental health outcomes, it often overlooks physical health, leaving patients ill-equipped to recognize or manage somatic conditions (Wilson et al., 2021).

Specialized psychiatric programs that incorporate psychoeducation improve mental health outcomes (Munkholm and Kessing, 2024; Puntis et al., 2020). These programs often involve case managers who maintain patient engagement by addressing missed appointments and by coordinating care. Continuity of care, ensuring patients consistently see the same doctor or nurse, is another key factor in reducing attrition rates and improving outcomes (Munkholm and Kessing, 2024; Puntis et al., 2020; Fusar-Poli et al., 2022). However, even within these specialized settings, physical health is often treated as secondary, and individuals with somatic risk factors, such as hypertension or dyslipidaemia, are frequently referred to GPs rather than receiving integrated care within the psychiatric framework (Ngune et al., 2024). This reliance on GPs poses significant challenges. Many people with SMI do not maintain regular contact with their GP, and those who do may experience diagnostic overshadowing, where their physical symptoms are misattributed to their mental health condition (Ngune et al., 2024; Fleury et al., 2025; Naesager et al., 2024). GPs may lack the necessary mental-health literacy to effectively manage individuals with SMI, leading to delayed or inadequate treatment of physical conditions. Additionally, people with SMI often face logistical barriers, such as difficulties navigating healthcare systems or arranging transportation, which further hinder their access to necessary care (Ngune et al., 2024; Fleury et al., 2025; Naesager et al., 2024). Disparities in the management of somatic diseases is also present in a hospital-based settings in people with SMI (Lawrence and Kisely, 2010; Nielsen et al., 2021; Polcwiartek et al., 2024; Kugathasan et al., 2018; Chan et al., 2022). Systemic issues, such as fragmented healthcare pathways, insufficient funding for research on SMI-specific interventions, and limited mental-health literacy among healthcare providers, exacerbate these disparities (Nielsen et al., 2021; Polcwiartek et al., 2024). Bias against people with psychiatric diagnoses may lead to less aggressive treatment approaches, even for serious conditions (Crapanzano et al., 2023), and data indicate that rigid, protocol-driven treatment paradigms, such as those used in acute myocardial infarction management, are more effective in ensuring equitable care for individuals with SMI (Vestergaard et al., 2024). In contrast, treatments requiring clinical judgment and discretionary decisions often result in reduced treatment intensity for these patients (Vestergaard et al., 2024).

Lifestyle interventions including structured physical activity, sleep improvement, and nutrition are essential complements to pharmacological and preventive care. In the general population, increased physical activity and healthier diet are associated with reduced multimorbidity and mortality (Firth et al., 2020; Veronese et al., 2025). However, individuals with SMI face substantial barriers to engaging in these interventions, including limited access to inclusive physical activity programs, cognitive and motivational challenges, socioeconomic constraints, and a lack of tailored nutritional support (Firth et al., 2020; Veronese et al., 2025; Maurus et al., 2024). Importantly, physical activity has demonstrated beneficial effects not only on physical health but also on a broad range of psychiatric symptoms, including depressive, negative, and cognitive symptoms (Pearce et al., 2022; Schuch and Vancampfort, 2021; Roell et al., 2024). It should therefore be considered an essential component of both prevention and treatment strategies for individuals with mental disorders and integrated into routine psychiatric care alongside other interventions.

Collaborative care models, most extensively developed and evaluated in the United States, provide a well-established framework for integrating mental and physical healthcare. These models involve systematic coordination between primary care providers, mental health specialists, and case managers, often supported by shared care plans, patient registries, and regular interdisciplinary communication. A landmark randomised controlled trial by Katon et al. (2010) demonstrated that collaborative care for patients with depression and comorbid diabetes or cardiovascular disease resulted in significantly improved glycaemic and blood pressure control, depression outcomes, and quality of life. Similarly, a meta-analysis by Panagioti et al. (2016) confirmed the efficacy of collaborative care across a broad range of chronic physical conditions, showing improvements in both psychiatric and somatic outcomes. More recently, Schillok et al. (2025) identified critical success factors for collaborative care, including systematic monitoring, stepped care protocols, and active family involvement, as essential components that enhance clinical effectiveness and sustainability. These findings strongly support the case for integrating collaborative care principles into psychiatric settings treating individuals with SMI, particularly as a means of addressing the dual burden of mental and physical multimorbidity (Panagioti et al., 2016; Schillok et al., 2025; Katon et al.,

2010; Koomen et al., 2022).

4. Proposed treatment paradigms

Addressing the persistent mortality gap in individuals with SMI requires a multifaceted approach focused on actionable, evidence-based interventions. While no single solution can completely bridge the gap, targeting specific physical health risk factors through integrated care within psychiatric settings present a significant opportunity to improve outcomes (Nielsen and Licht, 2018). We believe that these interventions must prioritize prevention, education, and early management of physical health conditions while being tailored to the unique needs of patients with SMI.

First, expanding psychoeducation to include physical health literacy is critical. Psychoeducation programs are proven to improve relapse prevention and treatment adherence in mental health settings (Wilson et al., 2021). By incorporating modules on somatic health, these programs can empower people with SMI to better understand their cardiovascular risk factors, such as smoking, obesity, hypertension, and dyslipidaemia (Wilson et al., 2021). Once equipped with this knowledge, they are more likely to engage in preventive behaviours, take prescribed medications, and seek timely care for physical symptoms. This holistic approach can also foster greater acceptance of lifestyle modifications and pharmacological interventions, ultimately reducing the burden of chronic diseases (Visseren et al., 2021).

A second priority is addressing smoking cessation, as smoking prevalence remains disproportionately high among individuals with SMI (Fornaro et al., 2022) and is a major contributor to pulmonary, cerebro- and cardiovascular morbidity and mortality. Offering varenicline or cytisine, pharmacological aids for smoking cessation, to all smokers with SMI has been shown to be effective (Fornaro et al., 2022), with a number needed to treat (NNT) of approximately 10 (Anthenelli et al., 2016). Similarly, bupropion is a promising treatment for nicotine dependence (Fornaro et al., 2022), supported by a favourable safety profile in individuals with SMI (Yildiz et al., 2023). Tailored smoking cessation programs should also include behavioural counseling, peer support, and consistent follow-up to maximize success rates (Fornaro et al., 2022; Anthenelli et al., 2016).

Third, managing obesity and early weight gain is another cornerstone of improving health outcomes for people with SMI (Polcwiartek et al., 2024; Ayerbe et al., 2018). Many individuals with SMI experience significant weight gain as a side effect of psychotropic medications. The ECNP PAN-HEALTH Network has developed ten comprehensive clinical recommendations specifically addressing weight management in people taking antipsychotics and antidepressants (Solmi et al., 2024c). These evidence-based guidelines emphasize: (1) routine assessment of obesity risk factors before initiating treatment; (2) systematic monitoring of weight and metabolic measurements at regular intervals; (3) early implementation of lifestyle interventions focusing on diet and exercise; (4) consideration of non-pharmacological treatment alternatives when appropriate; (5) tailoring treatment according to disease stage, age, and prior medication response; (6) continuous monitoring of intervention effectiveness; (7) early preventive action when weight gain exceeds specific thresholds (>2 kg in 1 week, >4 kg in 2 week, or >5% total weight gain); (8) different approaches for acute versus long-term treatment phases; (9) strategic medication switching to minimize weight gain; and (10) evidence-based augmentation strategies using agents like metformin or GLP-1 receptor agonists to counteract weight gain. The introduction of GLP-1 receptor agonists for individuals with a body mass index (BMI) $\geq$27 kg/m^{2,} or even earlier for those showing rapid weight gain, has proven effective in achieving weight loss (An et al., 2025). Metformin has also been shown to be effective, safe, and well-tolerated in reducing antipsychotic-related weight gain (Vancampfort et al., 2021), including the significant weight gain associated with clozapine (Siskind et al., 2016). Research indicates a large proportion of patients achieving a clinically relevant weight loss (Michos et al., 2023). These interventions also reduce risks associated with obesity, such as diabetes and hypertension (An et al., 2025). Metformin is a widely available, low-cost option with robust evidence for modest but clinically relevant weight reduction in patients with SMI. In contrast, GLP-1 receptor agonists. while often more effective in promoting weight loss. are currently significantly more expensive and subject to availability constraints, insurance coverage limitations, and regulatory barriers in many health systems. These disparities in access raise equity concerns, as patients with the greatest need for metabolic interventions are often those with the fewest resources. Tailoring interventions to context, availability, and patient preference is therefore essential.

Fourth, hypertension management is equally essential, as elevated blood pressure is a leading cause of cardio- and cerebrovascular mortality (Visseren et al., 2021). People with SMI often have undiagnosed or poorly managed hypertension, exacerbating their health risks (Polcwiartek et al., 2024; Ayerbe et al., 2018). Initiating first-line antihypertensive treatments for individuals with consistently elevated blood pressure above 140/90 mmHg could yield significant improvements. Evidence suggests that one in four people achieves normal blood pressure levels with appropriate therapy, reducing their cardiovascular risk by 20-30% (Visseren et al., 2021). Regular monitoring and integration of antihypertensive treatment into psychiatric care pathways would ensure better medication-taking and outcomes.

Fifth, the prevention and management of dyslipidaemia and diabetes are also key components of a comprehensive treatment paradigm. For people with severe dyslipidaemia, statin therapy is essential (Visseren et al., 2021). Similarly, initiating metformin in those with elevated HbA_{1c} levels can prevent progression to diabetes, similar to improvement of HbA_{1c} levels during GLP-1 receptor agonist treatment (An et al., 2025; Michos et al., 2023). Early identification and management of these conditions within psychiatric settings would potentially address their high prevalence in people with SMI and reduce their contribution to premature mortality.

Sixth, integrated care models that combine psychiatric and physical health services are crucial for ensuring comprehensive treatment (Nielsen and Licht, 2018). Embedding somatic risk factor management into routine psychiatric care could allow for better continuity of healthcare and stronger patient-provider relationships. Psychiatrists and mental health teams could take responsibility of managing conditions such as hypertension, dyslipidaemia, and obesity, reducing fragmented care pathways. These integrated programs could also include patient navigators or case managers to assist with scheduling appointments, coordinating care, and addressing barriers to treatment adherence.

We position lifestyle interventions as foundational, cross-cutting enablers embedded within our six strategies (psychoeducation, smoking cessation, obesity management, hypertension treatment, dyslipidaemia/diabetes care, and integrated care models). While evidence for sleep and nutrition to reduce hard outcomes in SMI remains limited and heterogeneous, the balance of potential benefit, low risk, and patient preference supports routine implementation alongside rigorous evaluation within integrated care pathways. Lifestyle interventions could (i) offer or refer to structured, supervised exercise (e.g., group-based sessions or “exercise on prescription”) supported by behavioural activation and simple activity goals (such as step counts); (ii) provide brief, CBT-I–informed sleep interventions and eHealth options to enhance sleep hygiene and regularity; and (iii) ensure practical nutrition support through dietitian referral, skills-building (e.g., cooking on a budget), and links to affordable food resources.

Systematic data collection and ongoing outcome monitoring would be indispensable for refining and optimizing these interventions. Integrated care programs should track key metrics, such as cardiovascular risk scores, smoking cessation rates, weight reduction, blood pressure normalization, and glycaemic levels. These data could inform future guidelines and ensure that interventions remain evidence-based and cost-effective. Monitoring outcomes also provides valuable insights into

the long-term impacts of integrating physical health management into psychiatric care, helping to build a robust evidence base for these approaches. Additionally, the integration of Patient-Reported Outcome Measures (PROMs) would enrich data by capturing patients' perspectives on their health status and quality of life, providing a more holistic understanding (Boyer et al., 2024). This approach aligns with the principles of value-based healthcare, which emphasizes maximizing health outcomes relative to costs by focusing on what truly matters to people with SMI (Boyer et al., 2024).

By implementing these proposed treatment paradigms, as shown in Table 1, healthcare could take decisive steps toward reducing the premature mortality gap in people with SMI. These interventions not only have the potential to improve individual health outcomes but also offer significant cost savings by reducing the burden of chronic diseases. A comprehensive, integrated approach would shift from treating mental and physical health separately to addressing the whole person, fostering longer, healthier, and more fulfilling lives for individuals with SMI.

5. Conclusion

People with SMI face a significantly reduced life expectancy compared to the general population. Despite considerable advances in medical technology, these improvements have largely bypassed individuals with SMI. This highlights an urgent need to rethink how healthcare systems address the dual challenge of mental and physical health in this vulnerable population.

We propose integrating physical health education into psychoeducational interventions within psychiatric settings. While psychoeducation is already effective in reducing relapses and improving treatment adherence for mental health conditions. Expanding these programs to include physical health literacy would empower people with SMI to recognize somatic symptoms, understand their risk factors, and engage in preventive behaviours. This broader focus could reduce delays in seeking care and improve adherence to both lifestyle and pharmacological interventions, ultimately improving long-term outcomes.

Equally important is enhancing the mental health literacy of emergency room healthcare professionals. Many individuals with SMI who present with physical health complaints face diagnostic overshadowing, where their physical symptoms are misattributed to their mental health condition. By equipping emergency care providers with a deeper understanding of mental disorders, we can reduce misdiagnoses, ensuring timely and appropriate treatment, earlier diagnosis and better care coordination between emergency departments, psychiatric services, and general practitioners.

Another cornerstone of this vision is the creation of standardized treatment algorithms tailored to people with SMI. These guidelines should reflect the unique vulnerabilities of this population. By defining clear thresholds for initiating treatments such as antihypertensives, statins, and GLP-1 receptor agonists, would allow mental healthcare providers to take a more proactive role in managing conditions like hypertension, dyslipidaemia, diabetes, and obesity. Embedding such protocols within psychiatric care settings would improve follow-up and engagement by leveraging the trust and continuity people with severe mental illness already have with their mental health teams.

Specialized treatment pathways for individuals with SMI and chronic physical diseases represent another transformative opportunity. Integrated programs across mental and physical healthcare setting can reduce fragmented care and enhance patient-provider relationships. By reducing fragmentation in care delivery, such pathways can lower attrition rates and improve health outcomes.

Adopting a holistic perspective would require a cultural and structural shift in the healthcare system. This includes fostering interdisciplinary collaboration, enhancing provider training, and increasing investment in integrated care initiatives. The shift from viewing patients through a narrow psychiatric lens to recognizing and treating the *whole person* would dismantle many existing barriers to care. The rewards are substantial: improved somatic disease management, enhanced quality of life, and meaningful reductions in healthcare costs through better chronic disease control and fewer hospitalizations. We envision a future where individuals with SMI are no longer defined solely by their psychiatric diagnosis but are treated as whole individuals. This vision is one where the mortality gap is narrowed, not just through incremental changes but through a paradigm shift in how we approach care. This transformation is not only possible but necessary. Beyond its moral imperative, it is economically sustainable through reduced hospital admissions, fewer emergency interventions, and better chronic disease management. Most importantly, it holds the promise of a better quality of life for millions of people living with SMI.

Declaration of competing interest

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