**Introduction**: Nordic research shows that psychiatric patients live 15–20 years less than the general population. This excess mortality is mainly due to somatic disease, the high prevalence of which among individuals with severe mental disease largely can be attributed to physical inactivity, unhealthy diet and side effects from psychopharmacological drugs. Additionally, research suggests that individuals with severe mental disease do not receive adequate treatment for their somatic diseases. Underdiagnoses and undertreatment of somatic disease are well documented. Knowledge is needed on how to optimize the detection of somatic disease and how to initiate and maintain medical treatment in this patient group. New models targeting this problem should build on the experiences and perspectives of both professionals and patients.

The study objective is to develop an intersectoral intervention aiming at optimizing the detection and treatment of cardiac ischaemia, heart failure, diabetes, hypertension and high cholesterol in patients with severe mental disease.

**Methods**: A modified version of experience-based co-design was used, involving intersectoral knowledge sharing meetings, observations, and interviews in general practice, mental outpatient clinics and the municipality. Additionally, we visited patients with severe mental disease in their homes together with municipal social workers. Finally, the intervention was discussed with decision-makers from each sector. Prior to the implementation of the intervention, a kick-off-meeting for all healthcare professionals was held.

**Results**: The developed intervention includes screening and treatment. Patients aged ≥36 ≤ 65 years who appear in their individual general practitioner’s record system with schizophrenia, schizoaffective disorder or bipolar disorder are invited for screening for the selected somatic diseases. Patients diagnosed with somatic disease receive an individualized course of treatment in general practice in cooperation with the patient and his/her family, and supervision and support from a local mental health centre, clinical pharmacologists and relevant staff from the municipality.

The intervention differs from current practice by introducing a new way of identifying and actively recruiting patients with severe mental disease for screening for somatic disease and by strengthening the intersectoral cooperation.

**Discussions**: The active involvement of all stakeholders throughout the development process and the relatively few changes to the current organization of services optimizes the success of the implementation.
**Conclusions:** A modified version of experience-based co-design is a suitable methodology for developing new ways of organizing services within mental health care.

**Lessons learned:** Early stakeholder involvement from the project definition phase and throughout the development process is crucial.

**Limitations:** Most general practitioners in Denmark are paid on a combined capitation and fee-for-service basis. The fees are defined in the collective agreement for general practice. The payment for consultations in this study is slightly higher than the standard payment to compensate for longer consultations and data collection. Implementation of the intervention after the project would require changing the agreement.

**Suggestions for future research:** If the intervention proves feasible, testing it in a larger scale that allows for analysis of changes in patients’ clinical data is appropriate.

**Keywords:** severe mental illness; detection of somatic disease; experience-based co-design; intersectoral intervention