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Strategies for preventing excess mortality after discharge from psychiatric emergency room.

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Abstract

Patients with severe mental illness have increased risk for severe physical diseases. In addition, there is evidence that this patient group is less likely to receive standard levels of care for most physical diseases, which may contribute to their shortened life expectancy. Further, illness behaviour among individuals with schizophrenia is different as they are less likely to seek medical attention, which emphasise the need for increased awareness and early intervention when visiting an emergency psychiatric facility. Adults with severe mental illness have increased rates of substance abuse, which adversely affect their illness and outcome. Separate and parallel mental health and substance abuse treatment systems do not offer interventions that are integrated or personalised for the presence of substance abuse concurrent with severe mental illness. Therefore, the authors suggest an establishment of multidisciplinary teams capable of delivering a full range of psychiatric interventions and integrated treatment for substance use disorder in the community and psychiatric emergency room to those who otherwise would have required admission to an acute hospital bed.

Keywords:

Psychiatric emergency room; Crisis resolution; mortality; severe mental illness

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1. Introduction and background

People with a severe mental illness, including schizophrenia, schizoaffective, bipolar disease, have an excess mortality rate, about two to three times as high as the general population^{1,2}. The average life expectancy in patients with a severe mental illness have remained unchanged compared to the general population, even in countries where there is an easy access to health care services^{3,4}. These findings suggest, that people with a severe mental illness have not fully benefited from the improvements in health outcomes available to the general population, which indicate a disparity of outcome in health for this group⁵. In addition to unnatural causes of death, accidents, homicide, or suicide, the leading cause of excess mortality in patients with a severe mental illness is physical diseases, especially neoplastic disease, respiratory disease, and cardiovascular disease^{6,7}. People with severe mental illness are disposed to many different diseases. While these diseases are prevalent in the general population, their impact is significantly greater in patients with a severe mental illness^{7,8}. When patients with a mental illness are admitted with a physical disease, they risk incomplete examination and treatment because of their coexisting mental illness⁹.

The purposes of this paper are to provide an

overview of the causes behind the excess mortality in patients with severe mental illness, to discuss possible interventions and changes in the emergency service system, and to present an agenda for further research.

Over the last decades, the burden on psychiatric emergency facilities have increased significantly in many countries, including Denmark, due to continuing deinstitutionalising, causing a significant reduction in the number of psychiatric beds, without supplementary development of the community psychiatric service¹⁰. These organisational changes have meant that the psychiatric emergency room have had to undertake a gatekeeping function, increasing the threshold for admission in order to reduce admissions and access to acute in-patient beds¹¹. At the same time, there have been an increase of patients with a severe mental illness with concurrent substance abuse disorder, which have increased the workload of psychiatric emergency rooms. These patients are less compliant to treatment and have higher rates of admission¹². This group of patients represent a disproportionately share of the visits in psychiatric emergency rooms and they require more resources and greater effort from the psychiatric staff, making it more time-consuming for the psychiatric staff members to provide good

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clinical care. Therefore, they might be opposed towards this resource demanding group of recurring patients¹⁰. The continuity of care for psychiatric patients with a psychical illness is often complicated, but nevertheless of great importance. The care is characterised by many involved, among these the psychiatric departments, the general physician, the somatic hospital, the community health care as well as the patient and his relatives. This often leads to missing agreement about who is responsible for the treatment of the patient, not least of the patient's physical health⁸.

This particular vulnerable group has a different illness behaviour causing them to disregard physical sign, and therefore, only unintentionally when visiting a psychiatric emergency room will they receive medical attention for their physical symptoms¹³. Furthermore, patients with a psychiatric disorder tend to use medical services to lesser extent, which could lead to an increased mortality¹¹. Therefore, diagnosis, treatment, and care management of chronic physical disease in persons with severe mental illness must be improved, however providing optimal care for this group of patients is complex because they need coordinated care.

Although the prevalence of some physical diseases and causes of death seems to be the

same higher among people with severe mental illness, the risk from early death caused by other physical diseases or suicide should be kept in mind. It is important to understand that people with a severe mental illness die from the same natural causes as the general population, the most common being cardiovascular^{1,14,15}. The increased incidence of cardiovascular diseases in patients with severe mental illness can partially be attributed to lifestyle factors and antipsychotic treatment, in particular atypical antipsychotics that have been associated with weight gain and metabolic syndrome^{15,16}. While the general population has experienced a gradual decline in cardiac mortality due to improvements in cardiac procedures and lifestyle changes, it seems that patients with severe mental illness are not benefitting similarly from the same improvements and are not receiving the same standard of care^{5,7}. Cardiovascular comorbidities are a group of simple modifiable risk factors, which contributes to the excess mortality in patients with mental illness, particularly in patients with schizophrenia. There are in these patients particularly two issues that require special attention to improve treatment. Firstly, cardiovascular diseases are being diagnosed later in the group and is often not adequately treated compared to non-mentally ill¹. Secondly, there is an increased risk for cardiac arrhythmia when

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treated using antipsychotics¹². These observations, along with the higher mortality in psychiatric patients indicate that this group are at higher risk for heart disease, and thus should have higher attention due for symptoms of heart disease. There are numerous studies emphasizing that cardiovascular diseases share responsibility for the premature mortality observed in this group of patients¹⁷⁻¹⁹. However, there have been no successful attempt in reducing this high cardiac mortality in clinical settings. There is a need for novel approaches to investigate this problem to promote physical health for people with severe mental illness and reducing disparities in medical care compared to the general population. Aagaard et al. are currently conducting a study with debuting and chronic schizophrenia, the results might provide clinical useful predictors for premature mortality, possible interventions, and suggestions for clinical changes for cardiac disease amongst patients with schizophrenia and other severe mental illness²⁰.

Patients with severe mental illness also show a higher use of both illicit and prescription drugs, many of which, including the antipsychotics, promote weight gain and metabolic syndrome. In particular, the psychiatric drugs may have cardiac related side effects²¹. The concept of a

dual diagnosis is a clinical term that refers to the presence of both a substance use disorder and a mental health condition²². Substance abuse is the most common and clinically significant comorbid disorder among adults with severe mental illness²². About half of these patients have a concurrent substance abuse disorder¹². In the psychiatric emergency room, it has proven to be a great challenge identifying this group of people, because only every fifth would self-report a concurrent substance abuse. This diagnosis is associated with a variety of negative outcomes, including high rates of relapse and readmission²². In addition, a concurrent substance abuse disorder can further contribute to development of cardiovascular diseases⁹. Providing services for persons with dual diagnosis presents a dilemma. In the traditional system of parallel substance abuse and mental health service, only few people with severe mental illness are able to access needed treatments for both disorders. Often, they are refused or dismissed from services in one system because of the comorbid disorder and told to return when the other problem is under control. For those reasons, there have been a demand for an integration of mental health and substance abuse services^{21,22}. Hence, integrated treatment means that the same clinicians or team of clinicians, working in one setting, provide

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appropriate mental health and substance abuse interventions in a coordinated manner. In other words, the health professionals take responsibility for merging the interventions into one coherent approach²². Recent research has shown that psychiatric patients with substance abuse and a psychiatric disorder benefit more significantly from a specially integrated treatment, as opposed to the normal treatment available in traditional psychiatric and substance abuse treatment facilities¹².

It is recognised that providing good care to psychiatric patients requires a variety of services organised into a comprehensive and coordinated system. The basis of this system is an effective response to a psychiatric crisis²³.

It is not that long ago, the response to a psychiatric crisis was an assessment of the severity and planning course of treatment. Depending on the severity of the crisis, the plan was either an appointment to an outpatient clinic or hospitalisation. The result was either inadequate or they did not receive the help they needed, leading to higher hospital admission rates, more frequent readmissions causing distress for both patients and their relatives. Therefore, there is a need for novel strategies on how to manage a psychiatric crisis. Earlier studies have shown that mortality is higher

shortly after discharge which declines over time^{10,11}, which is why a crisis resolution team is needed to deliver and ensure intensive treatment to continue care at home.

2. Discussion

This paper has identified an overall trend that corresponds to earlier findings, that patients with some psychiatric diagnosis have an excess mortality compared to the general population, and that concurrent substance abuse increases the mortality^{4,11,14}. An explanation for the observed increase in mortality rates might be insufficient awareness of the psychical morbidity in psychiatric patients⁴. This seems to have had effect especially in the patients with existing substance abuse¹². Increased awareness of physical morbidity in this risk group must be assured, as well as securing continuity in treatment for this group after visiting psychiatric emergency room. Previous studies have revealed that excess mortality peaks the first year after the patients are discharged from psychiatric emergency room¹⁵. When psychiatric patients visits a psychiatric emergency room it presents as a rare opportunity to perform a physical examination to search for early disease¹⁰. In terms of reducing in-patient admission rates, the best available evidence for the effectiveness for a crisis resolution and home treatment have been

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provided by a randomised trial which found that those allocated to a crisis resolution team were less likely to be admitted to a hospital eight weeks after the crisis²⁴.

There have been studies concluding that patients with a substance abuse are overrepresented in emergency room settings due to health problems associated with their abuse^{12,25}. The significant under-diagnosing of substance use disorders indicates a general problem. A possible explanation to this problem could be that substance abuse disorders are generally difficult to expose and diagnose, that recurrent short-term admissions results in insufficient observational time for recognising early abuse or psychotic symptoms concealing the substance abuse symptoms¹². Furthermore, insufficient knowledge about treatments options for substance abuse disorder might contribute to lower diagnostic attention. To improve diagnostic attention relating to substance use disorders in the future, a more systematic and precise assessment would be recommended.

In order to accommodate this problem, a crisis resolution team to support the community mental health care system and the psychiatric emergency room ought to be established. Crisis resolution and home treatment teams can provide rapid assessment in mental health crisis and offer

intensive home treatment as an alternative to acute admission^{23,26}. The wider context for crisis resolutions teams is the deinstitutionalisation, where there is a need for effective alternatives to hospital in-patient care. The primary objectives would be to reduce hospital admissions, increase continuity in care and improve psychosocial outcome. The implementation of a crisis resolution team can lead to a reduction in hospital admissions^{24,26}. There could be many explanations for this. First, the fact that the team is able to offer home-based treatment as an alternative to hospital admission is likely to be an important factor, since patients taken on for home treatment who otherwise would have required admission to an acute hospital bed²⁶. Another benefit to this model is the continuity of care associated with crisis resolution and home treatment that have shown to increase overall satisfaction. People allocated to crisis intervention care and their relatives were more satisfied with their treatment and level support than those given standard care. And by twelve months significantly fewer people in the crisis intervention care group felt unimproved, when compared to the standard care group²⁴. Some of the important challenges when implementing a crisis resolution and home treatment include achieving a close integration with the rest of the mental health system,

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delivering continuity of care and effective relationships despite the involvement of multiple persons handling each crisis. There is evidence indicating that increased collaboration between different parts of the health care system, results in a better outcome for patients with concurrent substance abuse in people with a severe mental illness^{5,10,11}. Several studies indicate that in everyday clinical practice, crisis resolution team leads to a sustained reduction in admissions rates to in-patient facilities^{23,24,26}. The close knowledge of the patient gives the crisis resolution team good conditions for making an integrated and viable treatment plan that is adapted to the individual patient and considers the patients overall mental and physical health¹¹. Henceforward, we hope that it will be the predominant way of delivering acute care in the community.

3. Conclusion

There is a need for systematic psychological monitoring to ensure prevention of and early intervention to psychological comorbidities. When patients with a severe mental illness seek medical attention at the psychiatric emergency room, it provides a rather rare opportunity for efficient screening of early physical symptoms and opportunity to intervene for concurrent substance abuse. Integration of a mental health and

physical health service is important if we are to address the high mortality rates in people with severe mental illness and reduce the difference in mortality in this population. It is clear that assessment and management of physical health conditions in people with severe mental illness is below standard level of care. The reasons for this are complicated and not entirely understood. But we know that awareness of modifiable risk factors, effective treatment of psychosis and earlier detection of physical diseases play a role in reducing morbidity and mortality in this population. Our paper highlights the highly important function of implementing a crisis resolution team to reduce readmission following discharge from a psychiatric emergency room.

4. Clinical implications

Severe mental illness is associated with increased mortality and morbidity rates, with most of the excess mortality due to common physical health conditions. In order to address this problem, several lines of action can be identified. Raising awareness of the problem among mental health professionals, primary care practitioners, patients and their families is undoubtedly a priority. Mental health professionals and primary care practitioners should be educated and trained in recognising psychological illness in people with

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severe mental illness^{8,9}. Another step is the development of an appropriate integration between mental health and physical health care¹¹. Finally, further research in this area is needed. Physical illnesses should not always be

regarded as confounding variables in studies with severe mental illness. They should be studied by specific protocols, so that the interaction between mental illness and the various physical diseases can be better understood²⁰.

References

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1. Laursen TM, Munk-Olsen T, Agerbo E, Gasse C, Mortensen PB. Somatic Hospital Contacts, Invasive Cardiac Procedures, and Mortality From Heart Disease in Patients With Severe Mental Disorder. *Arch Gen Psychiatry*. 2009;66(7):713. doi:10.1001/archgenpsychiatry.2009.61. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2645006/>.
2. Laursen TM. Life expectancy among persons with schizophrenia or bipolar affective disorder. *Schizophr Res*. 2011;131(1-3):101-104. doi:10.1016/j.schres.2011.06.008.
3. Nielsen RE, Uggerby AS, Jensen SOW, McGrath JJ. Increasing mortality gap for patients diagnosed with schizophrenia over the last three decades - A Danish nationwide study from 1980 to 2010. *Schizophr Res*. 2013;146(1-3):22-27. doi:10.1016/j.schres.2013.02.025.
4. Laursen TM, Wahlbeck K, Hällgren J, et al. Life Expectancy and Death by Diseases of the Circulatory System in Patients with Bipolar Disorder or Schizophrenia in the Nordic Countries. *PLoS One*. 2013;8(6). doi:10.1371/journal.pone.0067133.
5. Moore S, Shiers D, Daly B, Mitchell AJ, Gaughran F. Promoting physical health for people with schizophrenia by reducing disparities in medical and dental care. *Acta Psychiatr Scand*. 2015;132(2):109-121. doi:10.1111/acps.12431.
6. Qin P, Nordentoft M. Suicide Risk in Relation to Psychiatric Hospitalization. *Arch Gen Psychiatry*. 2005;62(4):427-432. doi:10.1001/archpsyc.62.4.427.
7. De Hert M, Corell CU, Bobes Ju, et al. Physical illness in patients with severe mental disorders. I. Prevalence, impact of medications and disparities in health care. *World Psychiatry*. 2011;10(1):52-77. doi:10.1002/j.2051-5545.2011.tb00014.x.
8. Maj M. Physical health care in persons with severe mental illness: a public health and ethical priority. *World Psychiatry*. 2009;8(1):1-2.
9. Leucht S, Burkard T, Henderson J, Maj M, Sartorius N. Physical illness and schizophrenia: A review of the literature. *Acta Psychiatr Scand*. 2007;116(5):317-333. doi:10.1111/j.1600-0447.2007.01095.x.
10. Aagaard J, Aagaard A, Buus N. Predictors of frequent visits to a psychiatric emergency room: A large-scale register study combined with a small-scale interview study. *Int J Nurs Stud*. 2014;51(7):1003-1013. doi:10.1016/j.ijnurstu.2013.11.002.
11. Aagaard J, Buus N, Wernlund AG, Foldager L, Merinder L. Clinically useful predictors for premature mortality among psychiatric patients visiting a psychiatric emergency room. *Int J Soc Psychiatry*. 2016;62(5):462-470. doi:10.1177/0020764016642490.
12. Hansen SS, Munk-Jørgensen P, Guldbaek B, et al. Psychoactive substance use diagnoses among psychiatric in-patients. *Acta Psychiatr Scand*. 2000;102(6):432-438. doi:10.1034/j.1600-0447.2000.102006432.x.
13. Munk-Jørgensen P, Mors O, Mortensen PB, Ewald H. The schizophrenic patient in the somatic hospital. *Acta Psychiatr Scand Suppl*. 2000;102(407):96-99. doi:10.1034/j.1600-0447.2000.00019.x.
14. Honkonen H, Mattila AK, Lehtinen K, Elo T, Haataja R, Joukamaa M. Mortality of Finnish acute psychiatric hospital patients. *Soc Psychiatry Psychiatr Epidemiol*. 2008;43(8):660-666. doi:10.1007/s00127-008-0344-y.
15. Laursen TM, Nordentoft M, Mortensen PB. Excess Early Mortality in Schizophrenia. *Annu Rev Clin Psychol*. 2014;10(1):425-448. doi:10.1146/annurev-clinpsy-032813-153657.
16. Allison DB, Mentore JL, Heo M, et al. Antipsychotic-induced weight gain: A comprehensive research synthesis. *Am J Psychiatry*. 1999;156(11):1686-1696. doi:10.1176/ajp.156.11.1686.

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17. Polonsky TS. Coronary Artery Calcium Score and Risk Classification for Coronary Heart Disease Prediction. *Jama*. 2010;303(16):1610. doi:10.1001/jama.2010.461.
18. Shaw LJ, Raggi P, Schisterman E, Berman DS, Callister TQ. Prognostic Value of Cardiac Risk Factors and Coronary Artery Calcium Screening for All-Cause Mortality. *Radiology*. 2003;228(3):826-833. doi:10.1148/radiol.2283021006.
19. Budoff MJ, Shaw LJ, Liu ST, et al. Long-Term Prognosis Associated With Coronary Calcification. Observations From a Registry of 25,253 Patients. *J Am Coll Cardiol*. 2007;49(18):1860-1870. doi:10.1016/j.jacc.2006.10.079.
20. Aagaard J, Kugathasan P, Jensen SE, others. Coronary artery disease as a cause of morbidity and mortality in patients suffering from schizophrenia: protocol for a prospective cohort study with long-term follow-up. *Clin Trials Degener Dis*. 2016;1(4):141.
21. Drake RE, Mueser KT, Brunette MF. Management of persons with co-occurring severe mental illness and substance use disorder: program implications. *World Psychiatry*. 2007;6(3):131-136.
22. Drake RE, Essock SM, Shaner A, et al. Implementing Dual Diagnosis Services for Clients With Severe Mental Illness. *Psychiatr Serv*. 2001;52(4):469-476. doi:10.1176/appi.ps.52.4.469.
23. Johnson S. Crisis resolution and home treatment teams: an evolving model. *Adv Psychiatr Treat*. 2013;19(2):115-123. doi:10.1192/apt.bp.107.004192.
24. Johnson S. Randomised controlled trial of acute mental health care by a crisis resolution team: the north Islington crisis study. *Bmj*. 2005;331(7517):599-0. doi:10.1136/bmj.38519.678148.8F.
25. Cherpitel CJ, Ye Y. Drug use and problem drinking associated with primary care and emergency room utilization in the US general population: Data from the 2005 national alcohol survey. *Drug Alcohol Depend*. 2008;97(3):226-230. doi:10.1016/j.drugalcdep.2008.03.033.
26. Jethwa K, Galappathie N, Hewson P. Effects of a crisis resolution and home treatment team on in-patient admissions. *Psychiatr Bull*. 2007;31(5):170-172. doi:10.1192/pb.bp.106.010389.