The Mortality Gap in Schizophrenia

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SR was diagnosed with schizophrenia in her 20s. After many years of cigarette smoking, she was diagnosed with diabetes and hypertension. She was in and out of the hospital for years due to poor management of her psychotic symptoms forcing her to interact with dozens of doctors, years of medication changes, and no clear treatment goal other than making the voices stop. When she wasn't in the hospital, stability isn't a description that could be applied. She lived in an apartment, a homeless shelter, a group home, among other less conventional housing arrangements (i.e., the street). She had, at best, inconsistent primary care. The reality is her psychosis will likely never be cured. She will probably continue to be admitted to the hospital, and her diabetes and hypertension will never be fully managed with every new physician tweaking the plan and medication supplies being intermittent. In all likelihood, SR will die before a non-psychotic, medically-matched peer from something that could, and should, have been prevented.

What is the mortality gap?

Patients with schizophrenia are at increased risk of dying. This has been repeatedly shown over many decades. They are dying from preventable diseases, long-term adverse effects of the medications necessary to treat their psychosis, from substance use, and from self-inflicted injuries (Erlangsen, et al., 2017). They are dying sooner (between 10 and 20 year) and at higher rates than the general population (SMR[1] = 3.6) (Reininghaus, et al., 2015) and those diagnosed with other psychiatric disorders (SMR = 2.6) (Kim, et al., 2017). This is the mortality gap (Rosenbaum, 2016). Understanding the role that psychiatrists and general physicians play in perpetuating and failing to address the structural factors that contribute to this does a disservice to our patients and to the general population.

What are they dying from?

A systematic review done by Saha and colleagues (2007) has demonstrated that patients with schizophrenia have a median, all-cause SMR of 2.58 (10%-90% quantile: 1.18 – 5.76) compared to the general population. Of the leading causes of mortality, suicide (SMR = 12.86), endocrine disease (SMR = 11.66), nervous diseases (SMR = 6.57) and infectious diseases (SMR = 4.29) topped the list (Saha, et al., 2007). The authors also found that since the 1970s, the SMR for schizophrenia has increased over the preceding three decades (1970 SMR = 1.84; 1980 SMR = 2.98; 1990 SMR = 3.20). A more recent study (Reininghaus, et al., 2015) found that the SMR has increased beyond the Saha (2007) estimate (SMR = 3.6, 95% CI: 2.6 - 4.9). Saha (2007) demonstrated that, while there was an increase in SMR, there was not a significant change in case fatality rate; the authors interpreted this finding to indicate that patients with schizophrenia were not benefiting from improvements in healthcare quality or delivery. That is, the level of sickness was not changed, the level of appropriate and engaging treatment was.

[1] SMR = standardized mortality rate

Where did the gap originate?

Why the mortality gap exists is multifactorial. While patients with schizophrenia are less likely to utilize health care services (Swildens, et al., 2016), this does not entirely explain the gap. The mortality gap and the contributing factors were explored in an extensive review by Moore *et al* (2015). Of the leading contributing factors, the authors identified a divide between mind and body care and resulting disconnect in services, the lack of shared guidelines, and urban health inequalities and poverty.

Aside from these systems-level contributions, at the individual level there are aspects of schizophrenia that potentially contribute including negative symptoms, delayed help-seeking behaviour, and high rates of tobacco use (Moore, et al., 2015). Delays in help-seeking behaviour, resulting in lower early reporting of somatic symptoms have been demonstrated by other researchers (Inagaki, et al., 2006).

Not all blame is on the patient, physicians also contribute. Thornicroft (2007) showed that physicians demonstrated significant bias towards patients with schizophrenia resulting in "diagnostic overshadowing" – where the psychiatric diagnosis framed the care provided, contributing to a decrease in care quality. Additionally, while there is a disconnect between treatment guidelines, medical staff are less likely to implement existing guidelines with patients with schizophrenia (Jemal and Fedewa, 2017). However, not all is lost: Fenton (1997) found that the largest contributing factor to treatment engagement with patients with schizophrenia (and improvements in care) was the doctor-patient relationship.

Integrating medical and psychiatric care shows early promise for improved patient outcomes. One study (Salman, et al., 2014) demonstrated improved clinical care and quality of life when integrating a non-psychiatric professional (a clinical pharmacist). While this study did not examine a medical outcome, the findings support the conclusion that including multidisciplinary health professionals has a positive impact on patient care. This positive impact on patient care has also been seen in medical outcomes (Druss, et al., 2001). Druss' work showed that integrating mental health providers into medical clinics has a positive impact on medical care coordination, health education (including exercise, nutrition, and smoking), and improved patient satisfaction on access, continuity, and overall care. Training the next generation of physicians and psychiatrists to recognize the mortality gap and encouraging them to actively engage their future patients in care can stem the tide.

Why I care about it?

I met SR when I was 18; a freshly minted college student with a few psychology classes completed. I was a volunteer on the psychiatric unit at the teaching hospital of my university. I didn't have any inclination to pursue medicine. But the more I worked with SR (she would be a frequent fixture to the unit every few months) and learned more about her story, I changed. I was inspired by her insights in to the world around. How she was simultaneously "crazy" and "out-of-it" and yet, in the midst of a US presidential election, could make poignant comments on the role of race in American society. She is the reason I became interested in schizophrenia and the reason I plan to pursue residency training in medicine and psychiatry. She is the reason I'm passionate about the mortality gap in schizophrenia.

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