Title: Navigating Homelessness and Psychiatric Illness
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Learning objectives:

1. Examine ways to integrate and coordinate care for patients with complex medical and psychiatric needs
2. Recognize the challenges in addressing chronic, longstanding health issues within short hospital stays
3. Identify the social determinants of mental health
4. Understand how supportive housing and housing first policy could alleviate homelessness for those with mental illness

Case synopsis:
Mr. D, a 51-year-old man with a history of schizophrenia and uncontrolled type 2 diabetes is admitted for right foot pain and ulceration. He was diagnosed with diabetic osteomyelitis of the right second and third metatarsals 4 months prior to admission but he declined bone biopsy, IV antibiotics or surgical intervention. Three days prior to admission, he presented to an ED for R foot pain but he refused bedside debridement and admission; he did the same 2 weeks prior to admission.

Mr. D reports that he stopped taking olanzapine, insulin and other medications about a week ago. He mumbles and displays disorganized, tangential thoughts and grandiose delusions. He is also intermittently aggressive and threatening to staff members. He has a long history of nonadherence to his psychiatric medications and has not followed up regularly with his psychiatrist or PCP. He also has a history of elopement during several prior hospital stays.
Mr. D is homeless. Sometimes, he stays with his sister and is on a wait list to a personal care home for individuals with mental illness. He had a phone at one time but does not have one now. It is unclear whether he has social security disability income. He does not smoke, drink or use illicit drugs. He walks or takes the bus to get around between shelters and hospitals.

Upon admission, his blood sugar is 470 mg/dL and A1C is 11.4. Orthopedics and podiatry are hesitant to perform an amputation at this time given his uncontrolled diabetes. Given that his foot osteomyelitis has been chronic, they do not think acute surgical intervention is needed. They also worry that his postoperative outcomes and recovery will be very poor due to poor glycemic control and unstable living situation.

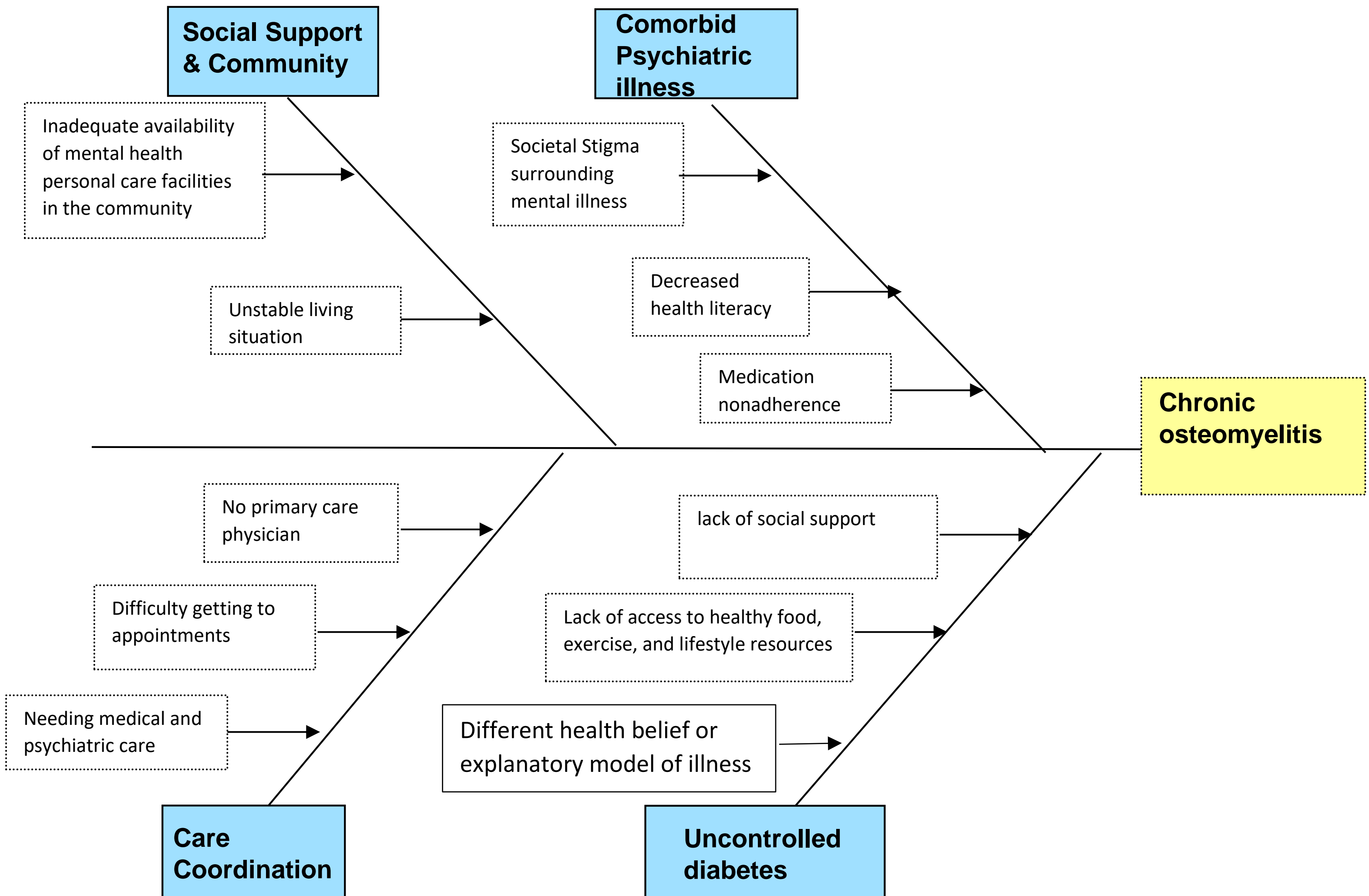
Mr. D is upset and angry that his doctors won't amputate his ulcerated toes and that everyone is so focused on his blood sugars, and he becomes increasingly argumentative with staff. He also intermittently leaves the hospital to smoke and does not inform staff of his whereabouts.

1. **Construct a problem list for this patient**
2. **Conduct a root-cause analysis for at least one problem**
3. **Describe positive/protective social determinants of health for this patient**
4. **Describe negative social determinants of health factors**
5. **Propose patient-level solution with attention to facilitators and barriers**
6. **Imagine possible health system or institutional solutions**
7. **Discuss potential community/societal-level solutions**

Facilitator’s Guide

1. **Construct a clinical problem list for this patient**
   - Chronic right foot osteomyelitis
   - Uncontrolled diabetes
   - Uncontrolled schizophrenia

2. **Conduct root-cause analysis for at least one problem**



3. **Describe positive/protective social determinants of health for this patient**
   - **Health insurance:** Despite Mr. D's very difficult situation, he does currently have Medicaid, which covers medications, testing and appointments.
   - **Social support:** He has a sister who has allowed him to sleep at her place from time to time
   - He has no problem with addiction
   - He seems to manage public transportation but we don't know if he has discount/free bus passes or medical assistance transportation program.

4. **Describe negative SDH factors.**
   - **Homelessness:**
     - Research has shown persons who are homeless face higher rates of mental illness, physical illness, and more frequent hospitalizations.
     - It is harder for Mr. D to perform healthy lifestyle modifications that would actually improve his diabetes, such as meal planning, access to healthier options, and regular exercise without a stable living situation. Persons who are homeless like Mr. D, focus on day-to-day survival and finding appropriate shelter and basic foods. Thus, he is unable to prioritize his long-term health needs. Moreover, healthy foods and gym memberships are expensive, and Mr. D is unable to afford these amenities at this time. It is also difficult for him to consistently take his insulin, olanzapine, and other necessary medications without a regular routine and a safe home and refrigeration in which to store his medications. The stress from navigating everyday circumstances, anxiety about unpredictable living conditions and perceived lack of control are additional mediators between homelessness and worsening health outcomes.
   - **Lack of consistent access to primary care**
     - Because of his unstable living situation and all the other activities of daily living challenges he faces, Mr. D does not maintain consistent follow-up with his PCP, psychiatrist and therapist. Without consistent preventative health visits, his diabetes has become uncontrolled. Without consistent meetings with his psychiatrist, he intermittently starts and stops his medications and his schizophrenia has also become unmanaged. Without consistent follow-up and medical management, he experiences more episodes of psychosis and delusions, which further impact his ability to care for himself.
     - One of the main reasons he cannot get an amputation to cure his osteomyelitis is because of how uncontrolled his diabetes is, so his lack of primary care is directly preventing him from obtaining a necessary procedure.
     - Mr. D's lack of consistent primary care also leads him to seek care in the ED very frequently. Within the past few months itself, he has had several visits to the ED to manage his osteomyelitis. These visits will require him to spend much more money on his healthcare.
   - **Lack of social support:**
     - Mr. D occasionally lives with his sister, but overall has an unstable living situation and does not have close friends and family around for regular social support. This leads to more difficulty managing his chronic health conditions. It is not clear whether he has a care manager to coordinate all of his physical and behavioral healthcare needs.
     - The fact that he does not have a stable living situation and won't have a place to recover from surgery is a major factor deterring the surgeons from performing the operation.
   - **Current psychiatric illness:**

    - Mr. D's uncontrolled schizophrenia and lack of consistent medical care makes it very difficult to build relationships with his care team. It is also challenging to elicit a complete medical and social history from him.
    - He also faces the societal stigma of having a mental illness and can experience discrimination in the healthcare setting.

Facilitator to students: What other social determinants regarding Mr. D's case that we have not brought up, discussed, that you would like to know? Potential answers: adverse childhood experiences, relationship with parents and siblings, prior employment, educational attainment, history of incarceration or legal problem.

5. **Propose patient-level solution with attention to facilitators and barriers**
    - Connect Mr. D with a PCP and psychiatrist/therapist who share clinic space (co-location model) or better yet, a medical home that incorporates physical and mental healthcare as well as social services. Assertive community treatment (ACT) is an intensive, integrated approach to community mental health service delivery and is available in cities throughout the US. The mental health professionals within ACT teams include nurses, therapists, peer counselors, social workers and intensive service coordinators who could engage a patient several times a week and are available 24 hours a day for crisis intervention. If team members are able to meet him during the hospitalization and establish rapport, it is more likely that he will follow up. Many cities have street medicine teams that employ clinicians, peer supporters, social workers to do street outreach, build relationship and trust and connect them with services including housing.
    - Provide Mr. D with a phone to facilitate post discharge and inter-visit care. The government runs a program called Lifeline Assistance which gives low income individuals access to free cell phones and inexpensive cell phone plans. Once Mr. D has reliable and consistent access to cell phone, we could help him set up online patient portal and telehealth. Experiences with telemedicine due to Covid-19 pandemic have allowed healthcare providers to connect with patients without requiring face-to-face visits.
    - Providing on-demand ride service to patients like Mr. D could decrease missed appointments and improve follow-up attendance and transitions of care.
    - Connect Mr. D with a diabetes educator, who checks in with him on a weekly basis to assess symptoms, review blood sugar log (if he is able/willing to use a glucometer) and provide ongoing health education.

6. **Imagine possible health system or institutional solutions**

Facilitator to students: (to stimulate discussion) how much is the average charge for one night in the hospital? If Mr. D had not left AMA, he might need to stay for 1-2 weeks in the hospital for antibiotics and blood sugar controlled before he could get an operation. Some patients could get IV antibiotics at home with picc line, home health, etc. How could we help someone like Mr. D if resource is not an issue?

- A number of health systems in the US have invested in affordable housing with the recognition that social, economic, and environmental and behavior-related factors account for up to 80% of health outcomes. Hospitals can donate lands or buildings, help finance or provide a direct loan for construction, renovation or rehabilitation. With recent federal policy changes that encourage or allow hospitals to allocate charity dollars for housing, many hospitals realize it's cheaper to provide housing than to keep patients in the hospital. Even if homeless individuals with mental illnesses are provided with housing, they are unlikely to achieve residential stability unless they have access to continued treatment and services. This is the supported housing model.
- Care managers and social workers in the hospitals could connect patients with programs and services before patients are discharged. Although these valuable health professionals are tasked with connecting patients with

resources, care coordination and care transition, it is very challenging for them to continue their work after patients are discharged. Health systems should try to decrease barriers for the inpatient and outpatient care teams to communicate and provide better hand-off.

- Some health systems have established "community resource desk" staffed full-time by specialists from local nonprofit social services agencies to help clients enroll in health insurance, find affordable housing and nearest food pantry, obtain dental care, deal with utility providers and landlords. Their on-site presence also means that clinicians and administrators can easily refer patients directly to them for specific needs.

7. **Discuss potential community/societal-level solutions**
    - There is considerable evidence on the links between social determinants and mental health outcomes. Multilevel interventions aimed at eliminating systemic social inequalities and institutional racism—such as education and employment opportunities, housing and safe neighborhood, are crucial to lessen mental health inequalities. Health policies that promote investing in and integrating social services with mental health care will result in positive outcomes. Moreover, public policies that address social norms (e.g., mental health stigma) can also impact homeless individuals with mental illness.

    Facilitator to students: can you think of any policy or law that impacts survival and quality of life for homeless individuals? Many cities routinely punish or harass unhoused people for their presence in public places. How does criminalization of homelessness impact healthcare for patients like Mr. D? What about housing discrimination? What happened to the number of psychiatric hospital beds in the US over the years? And why?

Case outcome:

Mr. D was angry that we were not able to perform his amputation during the hospital stay. He stayed with us for two days while we tried to titrate his insulin regimen to optimize his blood sugars. Despite many conversations, he did not understand why we were unable to do the amputation. We tried to impress on him the importance of taking his insulin upon discharge. However, after two days in the hospital, he eloped and was lost to follow-up. On reflection, if we had been able to connect him with an intensive community treatment team and housing, we might be able to stop the vicious cycle of ED visits and persistent homelessness. We might be able to prevent further complications including extensive amputation to Mr. D's leg and possibly death.

References

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