A Comprehensive Diagnostic Intervention for Medically and Psychiatrically Complex Patients:
Describing the Prototype Through a Case Report

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Background

Value-based reimbursement models have created the opportunity to engage more thoughtfully with highly complex and costly patients. These patients tend to have complex life stories, with a tangle of medical, behavioral, and social needs that require comprehensive and integrated care teams.

Analysis of our electronic data warehouse revealed that patients with a chronic health condition cost the system two to three times as much if they also have a behavioral health diagnosis. However, these diagnoses alone are insufficient to understand complex defects in value, which remain invisible and unresolved.

Objective

Design and implement a team with the ability to engage a highly complex patient with a behavioral health diagnosis, comprehensively conceptualize their situation and its unique obstacles, and plan a stepwise intervention around which all their care teams can align.

Intervention

ACCENT (Assertive, Comprehensive, Continuous Engagement & Navigation Team) conceptualizes the "whole patient" by building and maintaining a **problem diagram** (figure 1), a flow network diagram which overlays their various health conditions, behavioral factors and social determinants. This endeavor requires repeated direct engagement and assessment with the patient's **care community**, including their family and all of their health care teams. By aligning with the patient around their strengths, values and goals, the problem diagram is then used to map a **pathway to wellness** (figure 2), which prioritizes interventions that prevent acute decompensation while targeting root problems that fuel the process.

Prototype

In our 35,000-member employee plan, we identified over five hundred patients with high complexity and utilization as candidates. Social determinant risk scores trended high and significant obesity was common, so the team was built accordingly, run by a physician with training in psychiatry and internal medicine who would be supported by a social worker and dietitian. Five patient have been engaged so far, and one case is detailed here.

Case

This patient, who gave consent for this report, was identified as described above and enrolled following engagement with her PCP. She was in her forties and had unspecified depression, alcohol use disorder of unknown severity, and class 3 obesity with multiple sequelae including hypertension, obstructive sleep apnea nonadherent to CPAP, chronic venous insufficiency, and diabetes with an A1c of 9.1%, complicated by lower extremity neuropathy with chronic toe ulcers as well as mild renal impairment.

On initial interview, it was clear the patient was anxious and fearful about her mounting health conditions, which seemed hopelessly overwhelming. She was formally connected to our intervention team, which was reassuring, and she was confident she could stop drinking and partner on weight loss interventions with the team dietitian. Ongoing titration of citalopram was continued, and the team case manager engaged around practical disease management strategies.

Over the next few weeks of assertive engagement, the shortcomings of this initial plan soon became apparent, as progress on alcohol cessation, weight loss, and CPAP adherence stalled for various reasons. Practical strategies based on motivational interviewing techniques all failed due to one explanation or another, and after communicating with the patient's wound care team and addiction intake psychologist, it became apparent that other providers were also having difficulty with adherence to plans, leading to frustration on behalf of both the patient and her care teams.

We used this discovery as an opportunity to explore deeper barriers to adherence and found that the patient's anxiety about her health had roots in a traumatic period during her youth. This anxiety had been self-managed with avoidance strategies including alcohol abuse and stress eating but was never fully treated. In addition, it extended beyond anxiety about illness to chronically intense fear of death, manifested in avoidance of being alone or in the dark. In fact, fear of the dark was a major factor driving alcohol abuse and CPAP nonadherence – the idea of lying awake and aware in bed, in the dark, while others were already asleep, was intolerable.

This discovery allowed the intervention team to reconceptualize its approach to treatment, which we shared with the patient and her family in the form of a **problem diagram** (figure 1), which was then used to map a **pathway to wellness** (figure 2). Psychotherapy intake is pending, but alcohol cessation has already been achieved and subsequent insomnia appear to have resolved. We plan to remain involved until the root anxiety is being treated successfully.

Figure 1: Problem Diagram

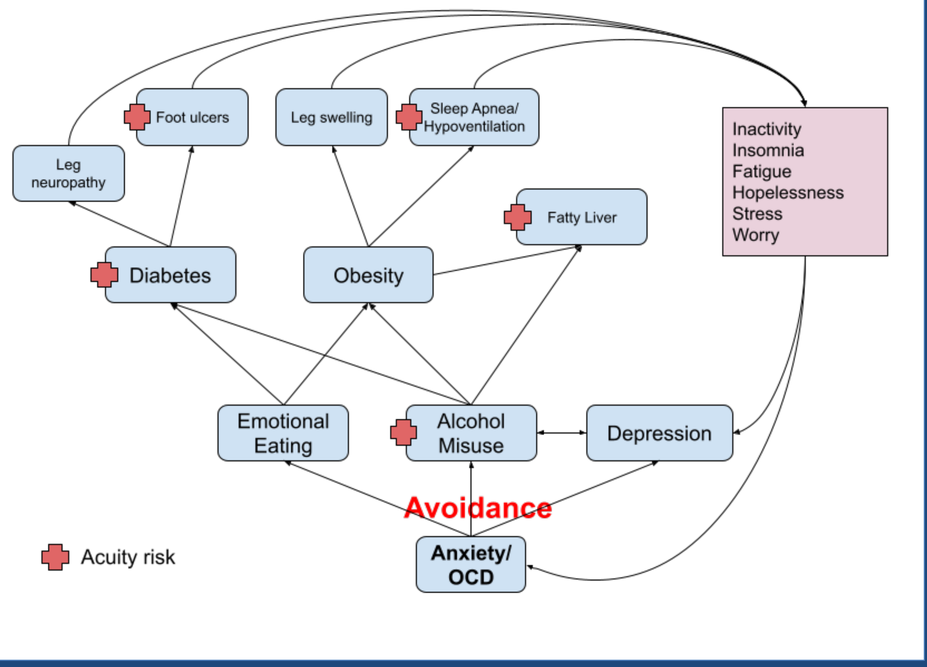
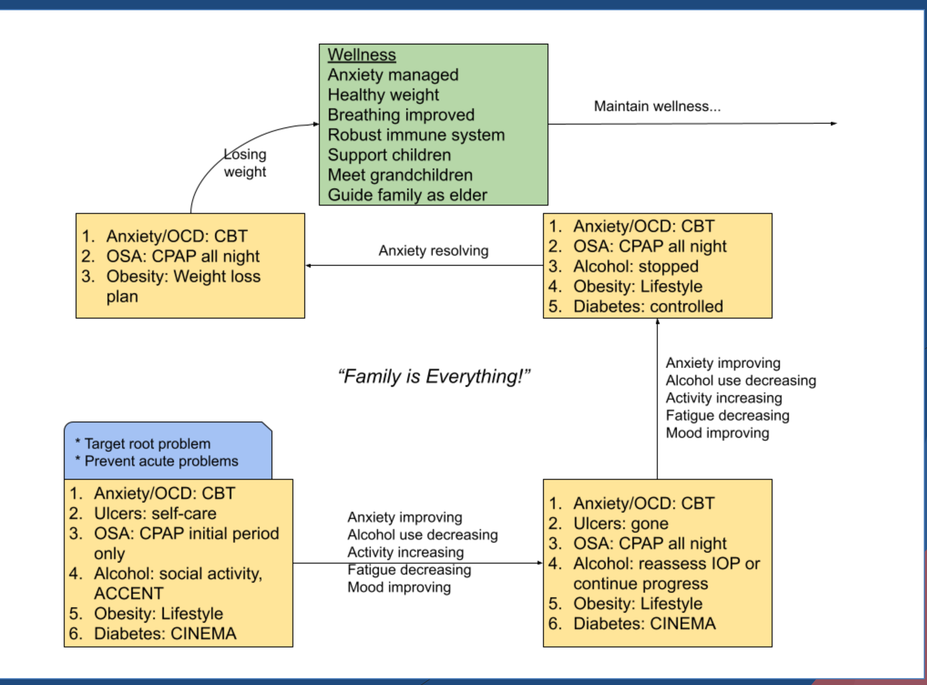


Figure 2: Pathway to Wellness



Discussion

This case helped us recognize that the underlying behavioral barriers to improvement for highly complex patients may not be visible until a process of trial and error reveals them. Even then, the path forward is only a rough guide which requires repeated reimagining and compromise as the patient implements what works for them in practice.

Thus far, we have seen five patients with similar complexity, and anxiety has played a prominent role for them as well. However, the object of anxiety and the ensuing maladaptive coping mechanisms can lead to a wide variety of cases and optimal engagement strategies.

We also realize that high utilizing employees represent a significantly different type of case than in a Medicare or Medicaid population, for example, and only some aspects of this intervention well translate effectively.

Conclusions

We are early in our journey and do not yet know if our approach will reduce suffering and utilization in these patients. Still, our experience so far has been impactful, and the process is continually being refined.

Future Plans

Once we have found success with our first group of patients, we can retrospectively plot individual health care expenditures over time to see if the intervention creates value. If so, we may advance to a prospective trial.

Given the high volume of patients meeting criteria, an intensive, team intervention is not a viable solution. Therefore, we also aim to identify **common patterns** of pathology and system shortcomings, with an eye to **recommending system-level interventions** for preventing and reducing high utilization.

Finally, we see first-hand that engaging patients during periods of high acuity makes stabilization difficult. We hope to **identify variables** that may allow for **prediction and prevention** of high acuity in complex patients.

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