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Opportunities for Patient Self-Reflection During Acute Phase of Depression Treatment

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OPPORTUNITIES FOR PATIENT SELF-REFLECTION DURING ACUTE PHASE OF DEPRESSION TREATMENT

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PROBLEM IDENTIFICATION AND COMMUNITY NEED

- At Hinesburg Family Medicine, patients fall into one of 3 categories when requesting treatment for depression:
  - Currently receiving psychotherapy, usually Cognitive Behavioral Therapy (CBT), and want to supplement with pharmacological intervention
  - Interested in starting pharmacological therapy and CBT simultaneously
  - Only interested in pharmacological intervention
- PHQ-2 and PHQ-9 are routinely used as paper screening tools during the annual wellness exam, with increased frequency of screenings dependent on:
  - patient's mental health history
  - social determinants of health
  - other co-morbidities (diabetes, HIV, systemic lupus erythematosus) that may contribute to mental illness
- Hinesburg patients rarely decline PHQ screenings

- Acute Phase of Depression Treatment:
  - The 4-to-6-week window between starting treatment and the 1st follow-up appointment, usually conducted with telehealth and with same prescribing provider
  - 1st follow-up appointment is 15-30 minutes and addresses any side effects of medication, alternatives if improvement is suboptimal and transitioning to maintenance phase of treatment
  - Treatment can be enhanced by providing patients opportunities to conduct self-reflection and identify patterns, if any, that bolster or dampen mood

PUBLIC HEALTH COST

- According to the CDC, prior to the COVID-19 pandemic, Vermont ranked 8th in depression diagnoses in the United States (22.64%) in 2019
  - Neighboring states New Hampshire and New York ranked 15th and 47th respectively
- Depression creates an economic burden estimated at $210 billion in the United States
- Vermont Department of Mental Health notes that in July 2022, 988 will be used as the new National Suicide Prevention Lifeline phone number
  - Promotes shift away from dialing 911, leading to emergency services deployed through primarily law enforcement
  - Law enforcement responding to active mental health crises and emergencies make up to 10% of its budget, variable by state
  - That would be equivalent to $1.3 million of the 2020 Vermont State Police annual budget
  - In contrast, Vermont received $2.0 million in 2020 from federal grants specifically designated to increase access to mental health services, including crisis management, peer support services and outreach, to be doled out over the course of 16 months in response to COVID-19's impact on mental health

COMMUNITY PERSPECTIVE

- Seasonal Affective Disorder Study Researcher @ UVM:
  - SAD has depression-like symptoms: loss of interest, fatigue, changes in appetite and weight, reduced concentration and suicidality
  - Study participants are evenly split into a CBT group and a UV light therapy group for 21 days
  - Daily automated text surveys allow participants to track their mood based on environmental factors (i.e. cloud cover, lack of sunlight, shorter daylight hours) and other emotional triggers
  - Dropping out of the study is very rare (n=1) and occurred due to technological obstacles (SMS texts not received so participant could not response to survey)
  - Questions are based on Beck Depression Inventory (BDI-II) that measures characteristic attitudes and depression symptoms
- Hinesburg Community Member
  - Enrolled in the multiyear SAD study
  - Text surveys allow for private self-evaluation on how CBT or light therapy contributes to mood (this member is in the CBT group)
  - Additional surveys featured goal setting reminders and positive encouragement
    - i.e. “Have you done your exercises today?”
    - Reports that reminders are beneficial, like a provider or friend is checking in on them
    - Increases CBT appointment compliance and accountability without stress
  - Notes that SAD impacts up to 1 in 10 Vermonters

INTERVENTION AND METHODOLOGY

- Implementing an automated text survey for patients immediately after initiating depression treatment
- Text survey of 5-6 questions max to be deployed twice a week for first 3 weeks
- For the next 1 to 3 weeks, depending on scheduled follow-up appointment, surveys to be deployed once a week
- Goals:
  - empower patients to recognize patterns on what worsens and what improves depression
  - pinpoint the role of CBT or pharmacological intervention and, if limited positive results, consider changing treatment
  - discuss those trends in 1st follow-up appointment
- Sample Questions Based on BDI-II:
  - "Hello, it's time for your survey! Rate how much you agree with this statement: I feel guilty often."
    - A = Strongly disagree
    - B = Disagree
    - C = Neutral
    - D = Agree
    - E = Strongly agree
  - "Pick the statement that you agree with the most at this moment."
    - A = I am not discouraged about the future.
    - B = I feel discouraged about the future.
    - C = I feel I have nothing to look forward to.
    - D = I feel the future is hopeless and things cannot improve.

DATA AND RESULTS

- Mosio is a text-message survey service used in many clinical research and medical settings, including the UVM SAD study, that has a one-time fee for a maximum number of texts
- Price is variable and dependent on number of texts, for example ~$2500 for 10,000 texts (outgoing and incoming)
- Additional fees apply when limit is reached
- 1 family practice can use the same package if all physicians agree on how many questions and which ones will be asked

- Survey should be completed in a short amount of time (5-10 minutes max) and allows patients to reflect on any patterns they may notice and the overall progression of their treatment
    - Questions should not be deployed in the same order, allowing patient to actively reflect on mood and treatment response
- Physicians would not see any results of the survey, only know whether surveys were completed
    - Mosio's data collection system has IDs attached to respondents and phone numbers can be removed keeping its data off EMR, reducing physician workload, as they will not need to track day to day patient progress
    - This keeps the information private, accessible to the patient only, by reviewing their texts
    - The patient will have an alternative to a journal to use as a tool when discussing how treatment is going at the first appointment that can be broken down on a weekly level (rather than a general summation of 6 weeks)

EFFECTIVENESS AND LIMITATIONS

EFFECTIVENESS

- Low stakes and short time commitment
  - Private, reliable method to track patterns and assess if treatment is improving patient's depression
  - 5-10 minutes twice a week spent on mental health self-evaluation may be ideal for busy patients who may forget to complete a survey if it required logging into an online portal
  - No cost to the patient
- Reduce clinic survey load for a primary care outpatient setting

LIMITATIONS

- Due to short duration of rotation, physician buy-in and enrolling patients could not be conducted
- Some patients may benefit from lengthier qualitative reflection i.e. a physical journal or mood-tracking smartphone application
- Increased age (50+) may lead to lower response rates, as seen in text-based surveys used in the postoperative setting

RECOMMENDATIONS FOR FUTURE INTERVENTIONS

- Maintaining a Weekly Journal in between initial antidepressant prescription and first follow up appointment
  - Low cost initiative, can be provided in-office at conclusion of appointment
  - A phone app like MoodKit, developed by clinical psychologists, can be purchased for $4.99 (one time fee) and can work as a private mobile journal
- Phone apps that replace physical journals or electronic documentation i.e. Microsoft Word are convenient but can have the following drawbacks:
  - may be cost prohibitive as some have high monthly fees as opposed to free or a low-cost one-time fee
  - Lacking in security if not encrypted
  - anxiety-inducing if deadlines for tasks are introduced
- Nurse or Social Worker Telehealth check-in (15-30 minutes)
  - Need to consider appropriate staffing availability so the provider has met the patient in some capacity
  - Training for red flag monitoring (medication compliance, self-reporting demonstrates worsening depression, side effects greatly outweighing signs of improving depression, no active monitoring of change)

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