EHR-driven Support System to Enhance Functioning and Quality of Life (ESSENTIAL)
Research Team

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Community Partners
Primary care clinicians lack tools to efficiently and effectively identify patients at risk for poor health-related quality of life (HRQoL), who might otherwise remain unidentified until a health crisis occurs.

Primary care providers are aware and engaged but many translational hurdles remain.
Research Project Description

HRQoL is a patient-reported measure of well-being and functional status that encompasses physical, mental, and social domains¹

Not only important to patients, but a strong predictor of clinical, economic, and social consequences of health and disease, including response to treatment, future health, cost of healthcare, return to work, work productivity, job loss, and mortality²,³

Ability to predict which patients are at-risk for poor quality of life is important to community-based primary care providers who wish to intervene early
Research Project Description

No broadly utilized, evidence-based method exists to identify patients at high risk for poor health related quality of life (HRQoL) in early stages of poor or lost function.

Patient-reported quality of life data are infrequently used to inform care delivery and improve outcomes, despite their predictive value.

Existing Quality of Life (QoL) screeners are validated but:
- not free to use or score
- require patients to fill out fairly length surveys
- do not make use of data which already exists in electronic health records
- do not provide results in real-time
- do not offer clinical guidance based on scores
- are not integrated into provider workflows
Research Project Description

**Data Collection**
Prospective collection of patient-reported data; Up to 40 questions required for valid & reliable estimate of QoL risk. No standard data collection procedure.

**Send Away**
Raw patient-reported QoL data collected, sent off for scoring and returned to clinician for interpretation. Unknown timeline.

**Risk Scores**
Risk estimates for 15+ composite scores & sub-scales; In the form of Excel/csv which does not lend itself to easy clinical interpretation and use.

**Patient eHR Data**
Existing patient demographic and clinical data within the eHR which may have predictive value.

**React**
No information on appropriate actions or care pathways associated with different levels of risk.

**Result**
No clear plan for providers to use validated risk prediction tools in a meaningful way.
Research Project Description

ESSENTIAL Pilot

Scan eHR
Leverage any patient demographic or clinical data already living in the eHR to create an initial panel of at-risk patients.

Initial Risk
Forwarded to clinician through eHR messaging for review. Determine which patients warrant additional attention.

Outreach
List of patients to outreach forwarded to clinic schedulers through eHR messaging. Collect additional data from patients identified in previous step and enter data into eHR.

Update Risk
Integrate the prospectively collected data into risk prediction algorithm embedded in eHR. Allows for updated risk estimates in-real-time.

Inform
Updated risk estimates are made available to clinicians through eHR. Providers can schedule as needed.

React
Clinician has updated risk estimates available at the time of patient visit and can launch reactive care plan as appropriate.
At each stage, we will investigate facilitators and barriers to implementation and adoptability.
Repeat implementation at 4 additional sites. Repeat review of effectiveness and adapt the model as needed.
Equity Impact

Systematically identify the top 20% of panel at high risk for poor medical outcomes and use that data to improve access and generate early intervention upstream, affecting disease course.

We know that SDOH impact development of chronic conditions and poor quality of life compounds the affect on marginalized populations.

Gain entry to and to receive services from primary care, regardless of race, ethnicity, age, income, ability, sex, gender, sexual orientation, geographic location, or health status.

Respond appropriately.
TSBM Benefits

- Diagnostic algorithm will allow for early identification individuals at risk for poor quality of life and worsening clinical outcomes.

- Racial/ethnic minorities and those who live in poverty are more likely to have chronic comorbidities and health disparities that place them at higher risk for morbidities.

- Early intervention could reduce morbidity and mortality which decreases the cost burden on healthcare system.

- Our learning collaborative will test initial algorithms and align efforts for meaningful implementation which can be used to inform policy.

- Built into existing eHR-solutions to streamline access to the risk prediction for clinician.
Lessons Learned

It is critical that we find solutions that providers will use!

Many community-based practices are not equipped to systematically collect or use patient data

There are often limited resources to collect and use eHR or other patient data

There is an inherent inclusion bias against at-risk patients who do not often attend regular appointments and thus are not represented in our risk prediction work
References


