Virtual post-sepsis recovery program may also help recovering COVID-19 patients

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Post-sepsis model may help COVID-19 patients after discharge. Credit: ATS

A new paper published online in the *Annals of the American Thoracic Society* describes a 'virtual' recovery program for sepsis patients that may also help post-COVID-19 patients and survivors of other serious
illnesses.

In "Translating Post-Sepsis Care to Post-COVID Care: The Case for a Virtual Recovery Program," Stephanie Parks Taylor, MD, Department of Internal Medicine, Atrium Health, Charlotte, North Carolina, and co-authors describe a model of virtual care they developed and successfully implemented for patients who have left the hospital after being treated for sepsis. They also address ways that this model of care may help severe COVID-19 patients who have survived their illness but need continuing care.

"Our initial health services research indicated that recommended post-sepsis care practices were inconsistently applied for sepsis survivors, but the application of these practices was associated with fewer rehospitalizations and deaths at 90 days post-discharge," said Dr. Taylor. "We decided to engage a multidisciplinary stakeholder group to develop a mechanism to deliver best-practice post-sepsis care. Given the challenges many patients experience returning for face-to-face visits after critical illness, the virtual transition program emerged as an ideal approach that combined quality, patient-centeredness and scalability."

This multicomponent sepsis transition and recovery program, known as "STAR," is conducted virtually by a specialized nurse navigator, who provides best-practice care for high-risk sepsis survivors post-hospital discharge. The nurse navigator helps deliver care through low-technology telehealth methods, including electronic health records (EHRs), secure messaging services and telephone. The sepsis nurse navigators monitor and support patients from a centralized, geographically distant location.

"While there is still a lot to learn about COVID-19 survivorship, based on what we currently know we can assume COVID survivors experience many of the same issues as recovering sepsis patients," said Dr. Taylor.
"The STAR program leverages a virtual platform that addresses the challenges of care delivery in a pandemic setting."

According to Dr. Taylor, these challenges include strain on the health care system due to a rapid surge in survivors and reduced access to traditional primary care follow-up due to physical distancing.

Dr. Taylor and colleagues cite a number of factors that they have found important to successfully implementing their program:

- Adequate human, financial and technological resources. Upfront funding and adequate training for the navigators are critical for success. Navigators should be trained in a number of areas, such as sepsis education, communication skills and cultural awareness.
- A method to identify high-risk patients. The team developed and deployed a data-driven, EHR-embedded algorithm and risk models to identify patients at high risk of post-discharge death or rehospitalization.
- Robust and effective operational processes. Among the additional elements that should be part of the program's operation are: optimization of medications, including frequent reassessment and adjustment of dosages; screening and early intervention for functional, cognitive and mental health problems, which are common among sepsis survivors and appear to be even worse for COVID-19 survivors; symptom monitoring to ensure that new infections do not occur, and to look for signs that other pre-existing conditions are worsening (such as weight gain for heart failure patients) or indications of adverse drug reactions (such as bleeding for patients receiving anticoagulants), and establishing goals of care, in partnership with patients, and communicating this information to the patient's primary care physician. STAR navigators are supported by a hospital-based physician (hospitalist) who reviews cases and discusses issues
that arise.

Dr. Taylor notes that Atrium Health is an integrated health system, and that home health or community paramedicine providers can be activated for evaluation or treatment in patients' homes. "Whether the implementing site is an integrated health system or not, programs will need to establish robust communication pathways for efficient exchange of information between navigators and relevant partners," she said. "I think a potential misstep could be implementing a transition program that identifies problems among sepsis survivors but lacks an efficient process for responding effectively to those problems."

Additionally, much of the home care and some of the post-acute skilled nursing facilities are integrated within the health system, but many are not. Dr. Taylor and co-author Marc A. Kowalkowski, Ph.D., are now studying how to overcome barriers to providing extra support to post-acute care settings, as these patients are particularly vulnerable after hospital discharge.

The authors add that there are a number of advantages of a virtual navigator platform for sepsis transition and recovery:

- Improved access and adherence to follow-up. This type of program can help ensure sepsis survivors get follow-up care, which is frequently not provided or easily accessible. It may also reduce rural, socioeconomic and disability disparities.
- Frequent reassessment and adjustment of patients' care plan. This is made possible by virtual visits with nurse navigators, who can provide long-term follow up at short intervals. The STAR navigator program continues for 90 days after hospital discharge, and patients with persistent challenges have the most frequent navigator contact.
- Consistent "check-ins" from a familiar health professional may
have psychological benefits. The nurse navigator can help alleviate the stress disorders that are common among sepsis survivors.

- The program is cost-effective and scalable. This model of care delivery enables one STAR navigator to accept 20-30 new patients a month and provide 90 days of support.

Dr. Taylor concludes, "Since severe COVID can be considered a type of sepsis, COVID patients are entering the STAR program if they meet its eligibility criteria. Currently, post-COVID patients are receiving the same elements of care as sepsis survivors, with special attention to respiratory symptoms and associated complications. Part of our research involves evaluating the extent to which post-COVID recovery differs from non-COVID sepsis recovery, so we hope to have data to determine whether there will be factors that are unique to COVID survivorship."

Provided by American Thoracic Society

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