Health services should learn long-term lessons of earlier coronavirus outbreaks

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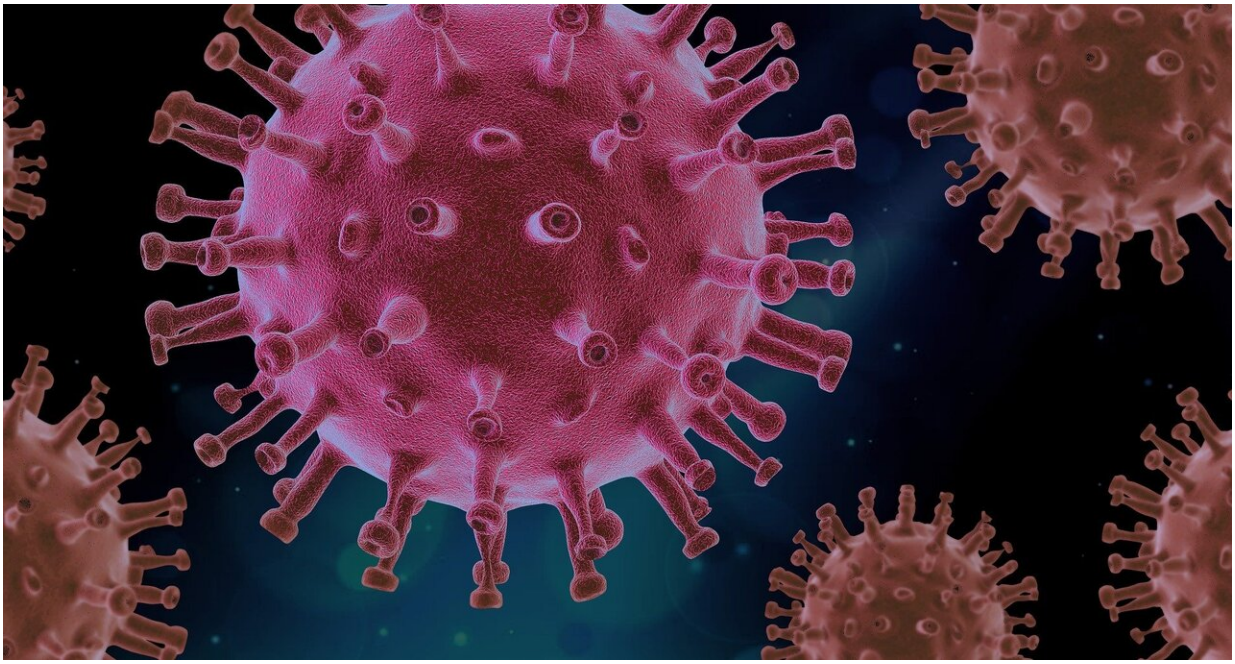

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Patients recovering from COVID-19 could suffer significant long-term effects, according to research into the experiences of people hospitalised by previous coronavirus outbreaks.

Researchers at the universities of Leeds, Manchester and Hull have for the first time collated evidence on physical, psychological and social

impacts among patients who fell victim to Severe Acute Respiratory Syndrome (SARS) and Middle East Respiratory Syndrome (MERS) – two previous viral infection outbreaks similar to the current COVID-19 pandemic.

These previous outbreaks resulted in respiratory and exercise capacity problems in the first six months after hospitalisation, mental health problems including post-traumatic stress disorder, anxiety and depression in up to a third of survivors at six months and beyond. Quality of life for one third of survivors was impaired even 12 months after discharge from hospital.

Publishing their findings in the Journal of Rehabilitation Medicine, the researchers warn that rehabilitation clinicians and services should anticipate similar health problems in survivors of COVID-19.

Dr. Manoj Sivan, an Associate Clinical Professor and Consultant in Rehabilitation Medicine at the University of Leeds' Institute of Rheumatic and Musculoskeletal Medicine, was lead clinician on this research.

He said: "COVID-19 is a new illness and the acute phase has already been devastating for people in many countries across the globe.

"While we have all rightly been busy creating capacity in acute service and saving lives, we must not forget those being discharged from the hospitals. We don't really know the long-term health problems these survivors face in the recovery phase of this pandemic.

"We do though have the two previous coronavirus outbreaks to learn from. This research gives us a rough idea of the rehabilitation needs in the first year after discharge. This allows us to prepare and plan services to meet their needs and work towards the best possible care for these

patients in the community."

Co-author Dr. Stephen Halpin, Senior Research Fellow and Consultant in Rehabilitation Medicine at Leeds is, like Dr. Sivan, also a member of the University of Manchester's Division of Neuroscience and Experimental Psychology.

He said: "This highlights the importance of developing strong follow-up multidisciplinary rehabilitation services and has directly informed our management of COVID-19 patients in Leeds."

Co-author Dr. Abayomi Salawu is Honorary Senior Lecturer at Hull York Medical School and Consultant in Rehabilitation Medicine at Hull University Teaching Hospitals NHS Trust.

He said: "Considering the novel nature of COVID-19, we can only guess what the impact in the medium to long term on the survivors will be. However, we do know that patients who required ICU input for more than two weeks are likely to have ongoing rehabilitation needs irrespective of the diagnosis.

"This work has enabled us to develop a unique comprehensive follow-up and rehabilitation pathway. This has been designed despite current prevailing circumstances that have had significant impact on what services can be provided by the rehabilitation therapy teams in the community.

"It is anticipated that when we subsequently do a service evaluation of this follow-up pathway that we have created across Yorkshire for patients with COVID-19, we will be able to add more evidence to the expanding knowledge base in managing it."

The authors identified almost 1,200 previous international studies into

the harmful long-term clinical outcomes for survivors of SARS and MERS coronavirus infections after hospitalisation or intensive care unit admission. They carried out a systematic review of 28 of those studies—the majority of which related to SARS cases; 23 were included in their meta-analysis.

The researchers cautioned: "At this stage it is not possible to conclude whether the long-term outcomes identified in SARS and MERS patients will also occur in COVID-19 survivors.

"However, as SARS and MERS belong to the same family of virus as COVID-19, and the clinical features are looking identical, including severe respiratory distress and intensive care admission in severe cases, the long-term picture is likely to be similar with COVID-19.

"Rehabilitation clinicians and services should plan ahead for timely follow-up, screening and interventions to enable best possible recovery and quality of life for these individuals."

Acute multidisciplinary rehabilitation while in hospital, post-acute rehabilitation in rehabilitation or respiratory units once discharged from hospital, and long-term rehabilitation interventions in the community are all recommended to optimise physical, psychological and functional recovery for those recovering from coronavirus.

Ideal multidisciplinary rehabilitation teams must include physiotherapists, occupational therapists, psychologists, speech and language therapists, dietitians, and physicians in rehabilitation medicine—with links to acute respiratory and intensive care teams and relevant community rehabilitation teams.

The authors also recommend that further research should be carried out into COVID-19 survivors, focusing on capturing lung function

abnormalities, exercise capacity, psychological and cognitive impairments and, ultimately, quality of life.

The paper, "Long-term clinical outcomes in survivors of severe acute respiratory syndrome and Middle East respiratory syndrome coronavirus outbreaks after hospitalisation or ICU admission: a systematic review and meta-analysis," is published in the *Journal of Rehabilitation Medicine*.

More information: H Ahmed et al. Long-term clinical outcomes in survivors of severe acute respiratory syndrome and Middle East respiratory syndrome coronavirus outbreaks after hospitalisation or ICU admission: A systematic review and meta-analysis, *Journal of Rehabilitation Medicine* (2020). DOI: 10.2340/16501977-2694

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