



Mobile Post-COVID Units: A Win-Win Proposition?

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DESCRIPTION

A significant proportion of patients develop persistent symptoms in response to infection with Severe Acute Respiratory Syndrome-Coronavirus-2 (SARS-CoV-2). This condition is identified as post-COVID syndrome if symptoms persist longer than 12 weeks [1]. Although there are some estimates of the overall frequency of post-COVID syndrome, it will be difficult to determine the incidence or prevalence of this condition given the number of current infections, despite the reduced risk of developing post-COVID syndrome in response to infection with the omicron variant [2]. Typical patients present with more than one symptom; to date, more than 50 different post-COVID symptoms have been described [3]. Fatigue, cognitive dysfunction, and dyspnea are the most frequent presenting symptoms [4]. Given the complex nature of this condition, a multidisciplinary therapeutic approach will be needed to provide optimal care for these patients [5-7]. Another important aspect of post-COVID syndrome and its treatment is the rapidly increasing knowledge base and the rapid adoption of new diagnostic and therapeutic concepts. This is particularly important given that many of the "traditional" diagnostic tools fail to produce relevant findings [8]. Many experienced tertiary care centers have developed specialized post-COVID outpatient clinics that offer interdisciplinary diagnostic strategies and patient care. However, given the current number of patients presenting with post-COVID syndrome, many more of these clinics will be needed in the near future. Rapid construction of these interdisciplinary teams presents a significant challenge due to limitations in infrastructure and the rapid changes to the relevant knowledge base. It is also difficult to arrange this type of high-quality care for patients residing in rural areas that are far from specialized centers. Currently, these patients have little to no access to specialized post-COVID diagnostics and treatment.

To overcome these problems, mobile clinics were developed

using specially furnished traveling buses. Mobile health clinics are currently used to provide a wide variety of services, including general practitioner care [9] and vaccinations [10] as well as specialized stroke [11] and breast cancer screening units [12]. At this time, an estimated 2000 mobile clinics operate across the United States alone; these clinics provide healthcare services to seven million individuals each year [13,14]. Therefore, a mobile outpatient clinic bus may be a promising and feasible strategy for providing care for patients with post-COVID syndrome [15].

The use of a mobile post-COVID bus, or "PoCoBus", will result in several critical benefits.

- The PoCoBus will be designed to provide a compact and structured diagnostic workup, including all relevant procedures needed to determine the physical and mental status of post-COVID patients. This will include a structured anamnestic workup and the possibility of drawing blood samples via a multidisciplinary team that can provide "one-stop shopping" services for post-COVID patients.
- Additionally, these services can be combined with telemedicine-based therapeutic interventions. This will facilitate the introduction of these concepts and services in rural areas and can be individually adapted for use by each patient based on his/her symptoms. These interventions include but are not limited to neurocognitive training, assessment of vital parameters, video consultations with psychiatrists, psychologists, or physiotherapists, post-COVID blogs, post-COVID diaries, and video instructions.
- New therapeutic and diagnostic concepts can be adopted rapidly given the limited number of persons involved in designing and providing care.
- The PoCoBus offers patients the opportunity to receive post-COVID care at or near their places of residence.

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The major benefits of this strategy:

- Patients will no longer need to travel long distances to reach a specialized traditional outpatient clinic. This is a notable advantage for patients suffering from severe fatigue or post-exertional malaise. Many of these patients will be unable to complete a full diagnostic workup after traveling for several hours and/or are unable to drive due to the severity of their post-COVID symptoms.
- Reductions in patient travel will reduce carbon dioxide emissions and will thus promote environmental protection.

We recognize that there are some limitations to the mobile care concept. Most important are the high-level logistical requirements, for example, the need to coordinate patient appointments with the PoCoBus schedule. Furthermore, while the diagnostic workup will be optimized to provide care for post-COVID patients, it may be somewhat inflexible and thus unable to provide appropriate care for patients who present histories that reveal significant medical problems in addition to post-COVID syndrome. Despite these limitations, the mobile care concept remains a promising option for patients suffering from post-COVID syndrome as it will permit them to receive high-quality, state of the art diagnosis and care from a highly trained multidisciplinary team. This is particularly important for the large numbers of patients living in rural areas with limited access to traditional outpatient clinics. Ultimately, these concepts will need to be evaluated and validated in a large cohort of post-COVID patients.

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CONFLICT OF INTEREST

Authors declare no conflict of interest.

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