

“Go bag” for COVID-19

by Vidur Mahadeva, MD

In my final year of medical school, I attended a lecture by an ER physician who proposed a mental exercise for all of the soon-to-be doctors in the room. He asked us to think about the medicines we would use to treat the largest variety of conditions we would likely encounter on a desert island, sort of a “Gilligan’s Island” scenario from a medical standpoint. While I began thinking of the best prescription drugs money could buy, our attending started the list of five with the humble Benadryl, a.k.a. diphenhydramine. This is a surprisingly versatile drug you can buy at a dollar store that amazingly can treat allergic reactions, insect bites, insomnia, nausea, dystonia, used as anesthesia, and therefore analgesia.

I have often thought since then what if we apply the same logic to different conditions and diagnoses? What would a “go bag” of medications look like for treating a heart attack? What would it look like for treating community acquired pneumonia? What would it look like if you were treating COVID-19?

Two decades later, by the spring of 2020, this was no longer a hypothetical question. Patients were presenting to our clinic or calling when they were told by their employers to go home because they had tested positive, to stay in quarantine and to seek medical attention should their symptoms worsen. In our patient community, this meant a large share of Spanish-speaking patients often working in food handling, food preparation, and the hotel and casino industry along with other service industries likely to be labeled as “essential.” Despite minimum wage pay and little or no insurance, these people were also risking their lives every day along with first responders, and the whole medical team.

The first few bags went out in a hurry, sometimes only with diagnostic equipment for taking temperature, blood pressure, oxygen saturation and otherwise check vital signs to monitor patients in their homes. The kits were either picked up by a COVID-negative non-symptomatic family member, delivered without contact, or left in a combination-locked dropbox for pick up outside our clinic.

In early August, we were contacted by a 40 year old Spanish-speaking woman, living with her adult brother and mother, all three testing positive for COVID-19, all with varying symptoms of fever, chills, nausea, vomiting, diarrhea, shortness of breath, productive cough, body aches, anxiety, fear, and insomnia from the psychosocial aspects of the disease. We decided to take on the case because we had successfully treated individual family members by setting them up with a similar ‘to go’ kit mentioned above.

Along with prescription drugs including azithromycin (antibiotic), dexamethasone (steroid), albuterol metered dosed asthma inhalers, over-the-counter diphenhydramine, acetaminophen, and guaifenesin (cough syrup), patients were given strict instructions to check in every eight hours with vital signs until “they were out of the woods.” The plan was to check on them two or three times per day via video conferencing or for them to contact us for a fever over 101°F, oxygen saturation less than 92%, along with high and low blood pressure and heart rate parameters.

Voltaire once said, “Medicine is the art of entertaining the patient, as the body heals itself.” Entertainment aside, simple medications given at the right time alleviated enough symptoms to build confidence that what we were doing was working. In this case the best medicine was the least medicine, along with the knowledge and security of knowing things were being monitored and worst-case scenarios anticipated with contingency plans in place if needed.

By the third day, it became clear that the younger patients were getting better with merely the use of the inexpensive OTC medications. Their symptoms were controlled, each day they felt stronger, and they gradually fell off our radar as we turned our attention to our original patient’s mother, a pleasant but clearly suffering woman in her mid-60s from the get-go at higher risk of complications.

From the video, we could see that she was breathing faster and from the oxygen saturations we realized that pulmonary symptoms were beginning. Coughing or breathing heavily into a microphone is probably underrated as a diagnostic tool. Clearly, it’s not a stethoscope, but it’s much better than nothing. Based on treatment guidelines of viral pneumonia, low doses of steroids from the bag were started and carefully monitored. The albuterol inhaler usually used for asthma came in handy. Oxygen saturations improved almost immediately. Later, when a productive cough began, the antibiotic was implemented some four days into the illness about the time one would expect an atypical bacterial co-infection. As the patient improved, monitoring was reduced from three times a day to two times a day then ultimately via text until the patient had completely stabilized from a respiratory standpoint.

In September 2020, for the first time in my medical career, I met patients in person, a full four weeks after I began treating them virtually. It was a good time to obtain all of the past medical history and fill in the blanks. While all the patients had some lingering symptoms to remind them of the assault they had suffered, the mother in her mid-60s clearly had signs of vasculitis and treatment was started with good results. Extensive laboratory tests and a physical exam confirmed she was no longer in danger of respiratory failure. However, like many Covid-19 patients, post-infectious symptoms would drag on for several weeks and would require monitoring and ongoing treatment.

While our original “go bag” was designed for one patient, it ended up treating three. The three simple diagnostic tools in the bag probably cost more to sterilize than to replace. They will serve again as telemedicine will undoubtedly be used again not only with this family but also likely with every family in the not-too-distant future.

For me this was an eye-opening experience that we would not have dared without the unique challenges posed by COVID-19. For just the price of a meal in a moderately priced restaurant, we delivered a transparent plastic TSA-compliant zip top bag filled with everything we needed to treat successfully during the acute period. Healthcare delivery clearly doesn’t have to be as industrialized and expensive as we have made it. COVID-19 opened the door to innovate just a crack and we seized the opportunity. Our team has been gratified by the results. Perhaps in the future further innovation can be driven by the rule changes that COVID-19 necessitated, or even better, because the innovations just make sense.

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