Special guidelines for medical workers during the Covid-19 Pandemic*

Paige Voltaire, Chen Shen and Yaneer Bar-Yam
New England Complex Systems Institute
April 8, 2020

Doctors, Nurses, Medics, and Medical Assistants: You are on the front line in a war against the COVID-19 viral Pandemic. Due to your position and importance, we rely on you to perform at your best, and follow a few simple, yet strict guidelines to slow the spread of this virus—saving even more lives than you already are in the process.

1) **Obviously wear appropriate PPE** when available. Review appropriate methods to place and remove (don and doff) specific equipment safely. Note that the Highest risk is during removal of equipment. Reuse PPE if directed to do so. There are several disinfection methods approved by the CDC. Including UV light and Ozone. Look toward your hospital leadership and Medical Director on processes for sterilizing/disinfecting PPE for re-use. Supplies, equipment and support are on their way, if not already there.

2) **Work/Sleep Schedules**: As a Nation and society we rely on you to be able to perform your medical duties at your best. To make this possible, **you need adequate sleep**. This is absolutely a necessity. Try to get with your Medical Director(s), Charge Nurse(s), Floor Nurse(s) and/or other leadership to set up and implement mandatory sleep and rest periods for each worker or team. The Recommended strategy in this emergency scenario is a **maximum 18 hours of patient care** (work), with a **minimum of 12 hours of uninterrupted rest and sequestered sleep**.

3) Access routes, including hallways and elevators, within the hospital are not safe spaces and require a level of protection. Having designated safe areas for staff is extremely helpful for arrival, departure and breaks. When pressure is very high the challenge of getting in and out of PPEs for drinking, eating and restroom breaks should be reduced as much as possible.

4) Appropriate procedures should be standardized for medical personnel to put on and take off their protective equipment. Separate zones should be identified. Make flowcharts of different zones, provide full-length mirrors and observe the walking routes strictly.

5) We cannot have Healthcare workers being sleep deprived, immune compromised, over worked or demoralized. When these things happen, mistakes are made, needle sticks happen, dosing errors occur, people disagree and deteriorate, patient care suffers, workers become ill, workers can quickly become patients. This can lead to a complete breakdown of your local hospital system. Getting time to relax and sleep will benefit you, your patients, co-workers, and anyone else inside and outside the Hospital.

6) The consecutive work time should be reduced further when there are additional staff to join the battle. For reference, anecdotaly, in Wuhan when the doctors/nurses arrived from other regions, the doctors worked 8h a day and nurses 6h, because it is really exhausting and intensive. Heroic actions, while laudable, lead to higher death rates. So mandatory rest orders are essential.

7) **Social Distancing**: Due to this unique situation, we must (sadly) advise that you absolutely **DO NOT return home where you would come into contact with loved ones and family members**. You will spend most of your time working in a cloud of COVID-19 and other nasty infectious pathogens. At the moment, it is far too risky to act as if things are routine. Unnecessary contact is **highly inadvisable**. At the moment, it is likely you could communicate this virus to others in your family or household group and each one of them can spread to other groups, regions and so forth. This quite easily makes all of the other methods we are using less effective at “crushing the curve”. If at all possible, you should keep away from all people that are not necessary to your vital profession and position.

8) Please consider hotels, unused hospital beds/rooms, or other available lodging. If you live alone, or know someone who does, you may want to ask if you and some you work with, can stay there for some time. If you must go home, please isolate yourself from others, wear a mask, bathe with hot water and soap, and put your dirty clothes in a ziplock or trash-bag. We are working to supply you with extra space of your own at no cost.

9) **Organize teams**, typically of 3-5 people, for ease of operations, to facilitate scaling up care as the number of cases increases, to provide high quality patient care, and to support each other for signs of illness, injury or being over worked. Examples of teams that are adapted for this crisis: Intubation teams, prone positioning teams, extra cardiac code teams.

10) Healthcare institutions should limit outsiders (visitors, families, contractors) to reduce exposure to them and the staff. At risk healthcare workers who are unable to work with patients can help as the communication team to reach out to families and allow the clinical teams to focus on clinical work.

*Reviewed and edited by Dr. Christian DePaola and Dr. Margit Kaufman*