

The COVID-19 Crises: Healthcare Resource Management Strategies

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Dear Editor,

The recent pandemic of coronavirus disease-19 (COVID-19) poses an immense challenge to the response capacity of healthcare systems worldwide especially of low and low to middle income nations. To ensure that COVID-19 patients can access healthcare facilities without compromising the safety of health care workers, we propose key action steps that may be undertaken in less resourceful settings in order to enable necessary and timely clinical operations.

With available data from China, 40% of COVID-19 patients had mild symptoms not requiring hospital admission, 40% developed moderate symptoms requiring hospital admission, 15% had severe disease requiring oxygen therapy and inpatient intervention and 5% were critical requiring invasive ventilation and intensive care unit admission (1). However, with the recent outbreak in other nations, there was a larger proportion of severe and critically ill COVID-19 patients indicating a dire need to rapidly increase surge capacity for preventing exhaustion of health care resources (2).

Presently, countries already are responding rapidly to the pandemic while ensuring modification to their approaches which are relevant to their local context. They most likely are or will have to deal with cases ranging from massive outbreaks to clusters developing sporadically through local/acquired infection (3).

We believe that in the event of surge, there is a need for multiple COVID-19 treatment areas. Two essential treatment areas will always remain to be hospitals that will serve as dedicated COVID-19 units (C-19U) consisting of triage and inpatient (ward

and intensive care unit) service and the primary health centers which will serve as COVID-19 Satellite (C-19S) zones consisting of triage and temporary treatment rooms. Both areas will be connected via a robust referral system along with emergency medical services for transport of moderate to critically ill cases from C-19S to C-19U if required (4).

We suggest the following grid for ease of understanding which will help us divide COVID-19 cases into all possible presentations along with disposition strategies for each.

	COVID-19 positive	COVID-19 suspected
Stable	Stable and confirmed (A)	Stable and suspected (B)
Unstable	Unstable and confirmed (C)	Unstable and suspected (D)

On the basis of above, the cases can be designated as a “cold” COVID-19 patient (not requiring admission) and a “hot” COVID-19 patient (requiring management) as discussed in following detail below;

Cold Covid-19	Hot Covid-19
A = No admission needed. Offer symptomatic therapy with and counsel for home quarantine measures	C = Admission for COVID-19 testing and management
B = No admission needed. Advise COVID-19 testing, offer symptomatic therapy and counsel for home quarantine measures	D = Admission for COVID-19 testing and management

We advise that all relevant stakeholders must continue to ensure basic safety of health care staff by providing personal protective gear and biomedical equipment (oxygen, ventilators etc.) including contingency plans for shortages in supplies.



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There should be adequate laboratory facilities with defined testing strategies in the event of a surge. Strict policies should be enforced to restrict visitor entry in designated treatment zones and public movement in order to prevent community spread. Debriefing measures should be performed frequently in order to highlight and implement modifications as per perceived experiences (5).

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