

Context

The unexpected Covid pandemic revealed our unpreparedness. Challenges were multiple including managing a large number of highly contagious and severely ill patients. Among the strategies adopted, several dedicated Covid units were opened and included an increase in ICU beds capacities.¹ Caregivers with previous ICU experience, OR staff, and volunteers to work in those units were identified as backup. Knowing Covid is highly contagious,² it was mandatory to maintain both the quality of care and a high level of security regarding contamination for patients and caregivers.³ It appeared necessary that all caregivers should benefit from specific (re)training early before managing Covid patients.⁴

We report the creation of an intense, massive and targeted Covid personal protective procedures training campaign to precede the arrival of cases and enable caregivers in all potential Covid units to be operational early to ensure high quality and safe care.

Methods

A day before the 1st Covid patient hospitalization, 6 specific procedural simulation courses were designed for hand sanitizing, fitting N95 masks, donning, and doffing specific to droplet precautions, and airway management for Covid negative and confirmed patients. Over 3 days and six steps the training sessions were designed: (1) definition of pedagogical frameworks and concepts, (2) drafting of adapted procedures for airway management, (3) sequencing of procedural steps for (4) construction of cognitive aids, checklists (of procedures and validation of skills) and the necessary video tutorials, (5) recruitment of trainers and (6) development of the training schedule. In order to train a maximum of caregivers before the arrival of large numbers of patients, 10 experienced instructors with dual skills as simulation instructors and caregivers was gathered. Their instructor training lasted half a day and began early so that they could immediately initiate training for priority services.

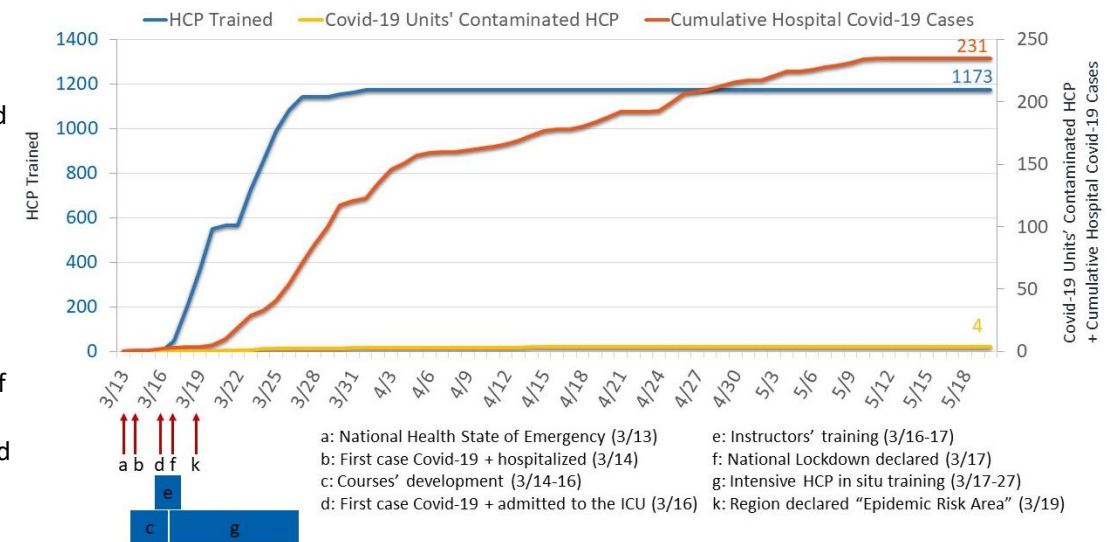
Results

Social distancing was followed which led to a strategy of nights and days of in situ training in groups of 6 learners trained by a duo of instructors. This made it possible to train 1143 caregivers in 10 days, i.e. 27% of the hospital's caregivers and 96% of those involved with Covid patients (Figure). With a timeframe of 7 weeks, 231 patients with Covid have been hospitalized. Among all hospital caregivers, 62 (1.5%) became Covid positive including 4 (0.35%) trained and working in Covid units. Despite being potentially more exposed, caregivers in Covid units converted at a rate of 4 times lower than others. We hypothesized our training helped with those results (not directly tested). Training materials were freely accessible online so that others could use them.⁵ Surrounding hospitals were contacted and simulation equipment was made available so that they could also carry out training. Media and social networks contributed in dispersing the training material (>45,000 views in 10 days).

Discussion

It is difficult to prepare for the unlikely, and impossible to prepare for everything. However, we can now speculate that there will be a need for rapid, possibly massive and targeted adaptation to a future health crisis. By applying solid educational theory and targeted practical training to achieve competence, we were urgently able to support acquisition of skills in new procedures for a large number of caregivers. We have demonstrated that such an organization is possible with a high degree of safety (in this case, low rates of contamination in our large number of trained caregivers). The use of modern technologies (video tutorials and social networks) made it possible to extend the benefit beyond our hospital's walls to a national forum. These concepts deserve more study for future Covid-19 new waves or other pandemics.

Figure : Cumulative numbers of trained caregivers, Covid-19 units contaminated caregivers and Covid-19 patients hospitalized from our declared national health emergency state onset until the time of submission of this letter (3/13 to 5/20).



References

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5. UNICAEN. NORSIMS; Available from: <http://norsims.unicaen.fr/>