Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.
SAMU and residential care homes (EHPAD) COVID cell crisis

Cellule de crise Covid-Samu-EHPAD

Catherine Bertrand a
Marie Laurent b,c
Eric Lecarpentier a
On behalf of the HORIZON 2020 NO FEAR project 1

SUMMARY
The Covid-19 health crisis forced the French emergency call centers (SAMU), to quickly adapt and reorganize on a daily basis. Call centers had to come up with specific responses to all types of calls and was to be the gatekeeper of the surge in referrals of elderly patients to in-hospital emergency departments. SAMU 94 and the Health faculty of the University of Créteil, France, jointly set up an online unit dedicated to nursing homes. Feedback shows that this geriatric unit is a valuable concept and that we should not wait for a second-wave crisis to consolidate its foundations.

© 2020 Published by Elsevier Masson SAS on behalf of Société Française de Médecine de Catastrophe.

RÉSUMÉ
La crise sanitaire COVID a obligé les Samu à adapter leurs organisations au jour le jour. La régulation a dû trouver des réponses spécifiques aux types d’appels et être le garant d’une juste orientation des patients âgés vers les services hospitaliers. Le Samu 94 et l’UFR santé de Créteil ont créé une cellule dédiée aux EHPAD. Le retour d’expérience montre que cette cellule est un bon concept et qu’il ne faut pas attendre un rebond de crise pour en consolider les fondements.

© 2020 Publié par Elsevier Masson SAS au nom de Société Française de Médecine de Catastrophe.

INTRODUCTION
The activity of French emergency call centers (Services d’aide médicale urgente [SAMU]), dramatically peaked during March 2020. End of May, the coronavirus situation in France is as follows. About 28,596 deaths have been reported, and at least 10,336 in socio-medical homes including nursing homes.
Public and private hospitals in France are still under pressure with 1429 COVID patients in intensive care unit (ICU) and 6600 COVID patients still in hospital. The average age of patients in ICU is 59.
In fact, the proportion of deaths in nursing homes has reached 51% (27 April) if we count the patients who were hospitalized and died in hospital. To this must be added 37,066 reported cases among nursing home staff, including 16,659 confirmed cases (for a total of 125,770 cases across France).

CONTAINMENT IN CARE HOMES
When the crisis first started, the problem was to define who and when to hospitalize. We had to take into account that age proved to be the main factor of poor prognostic preventing

KEYWORDS
COVID crisis
Nursing homes
French emergency call centers (SAMU)

MOTS CLÉS
Crise sanitaire
COVID-19
EHPAD
Samu

1 The NO-FEAR (Network Of practitioners For Emergency medical systems and Critical care consortium is comprised of 18 partners, including two joint partners, from 12 countries (Austria, Belgium, France, Germany, Ireland, Israel, Italy, the Netherlands, Norway, Romania, Spain and the United Kingdom). The project is coordinated by a practitioner providing Disaster Medicine education, Università del Piemonte Orientale, Italy. The NO-FEAR partners represent a combination of practitioners, industry/SMEs, and academia. AP-HP is one of the partners. http://www.no-fearproject.eu.

Corresponding author:
C. Bertrand,
Samu 94, AP-HP, CHU Henri Mondor, 51, avenue du Maréchal de Lattre de Tassigny, 94000 Créteil, France.

© 2020 Published by Elsevier Masson SAS on behalf of Société Française de Médecine de Catastrophe.
doi:10.1016/j.pxur.2020.07.004

209
access to acute care, and that treatment in ICU was not practical for elderly patients with many health risk factors. In addition, the overloading of emergency departments and the shortage of resuscitation beds pushed decision-makers to persuade nursing homes to confine their residents. However, the containment plan did not work well for a number of reasons:

- firstly, there were the structural ones, with consequences on health: First of all, care homes are places designed for living and are not healthcare institutions. Hence, the medical coordinator does not work full time and was not authorised to prescribe treatment to residents before this crisis; the residents have their own general practitioner (GP) but unfortunately GPs did not go to nursing homes during the peak of the crisis; moreover, there are few nurses at night. Consequently, the lack of medical resources and care in nursing homes without any help from the hospitals was harmful [1].
- In contrast, when a specific treatment was administered early against pulmonary infection or when at least the usual treatment of a chronic disease was renewed, the rate of deaths was not so high;
- secondly, there were also major contextual reasons resulting on a lack of anticipation. Instructions are issued by the government via regional health agencies (ARS) but they did not provide efficient solutions in real time. As a result, nursing homes had to deal with:
  - a lack of personal protective equipment (PPE),
  - a lack of PCR tests meaning separate COVID + units could not be set up in time to prevent the spread of infection,
  - a late alert to take into account various other symptoms of COVID disease, such as falls, diarrhoea and not just respiratory distress,
  - a lack of communication with families leading to directives not being anticipated and palliative procedures not being fully understood.

This situation contributed to absenteeism among staff due to a lack of confidence in procedures, fear or sickness. In contrast, public or private nursing homes whose managers showed resourcefulness and efforts to train staff in hygiene had better results.

**THE EHPAD COVID CRISIS CELL AT THE SAMU PREMISES**

When our hospital came under pressure, decisions were made by the hospital crisis unit on a daily basis applying the « AGIL management process », meaning that adaptable decisions were made step-by-step to fit the evolving situation. During the peak of the crisis a COVID crisis unit was set up:

- hosted by our SAMU and coordinated by a geriatrician and an emergency doctor;
- based on the concept of immediacy in responding to emergency calls 24/7 by dialling the number 15 [2];
- with a standby 24/7 unit for advice on geriatric and palliative care in an on-call mode;
- providing remote training in hygiene or psychological support via WhatsApp;
- providing residents with access to a day hospital to speed up diagnosis and treatment without hospitalization;
- participating in mobile geriatric teams sent to EHPADs with the objective of establishing an action plan.

The aim was to gather all competencies in an organised network.

**CONTAINMENT EXIT PLAN**

A new map of France with green and orange areas for phase 2 of the containment exit plan started 2 June. Île-de-France is still orange: our hospital is inside this area. This orange criteria is explained by the number of people in hospital and ICU still being high, the density of the population in this region and high mobility due to public transportation.

It is a delicate time for nursing homes as they are now allowing families to visit relatives and are seeking new admissions of residents to compensate for the financial shortfall due to the many deaths.

At the same time, new clusters are emerging, while there is an urgent need to release residents from containment. They suffer too much from isolation, with medical and psychological consequences such as depression, undernutrition, dehydration all of which are identified as side effects of COVID-19.

More nursing homes will reopen but it is important to be ready in case a second wave occurs and to program and update training of previously involved healthcare workers.

Jean Castex, New Prime Minister said that emergency re-containment should be anticipated « and implemented if the number of positive cases per day was to double up in comparison with what it is today ».

If France is to face a resumption of the infection, reopening ICU beds should be made « very quickly (in a 24, 48 or 72-hour period) ». In addition, « special care will be paid to human resources in a context where medical staff are worn out, especially in the regions most affected by the crisis » such as ours.

It is important to determine when nursing homes could relax restrictions on visits and group activities and when such restrictions should be reimplemented.

**LESSONS LEARNED**

We must ensure the following best practices developed during the crisis are maintained:

- the EHPAD cell set up as the bridgehead of a network of effectors and acting as the link between hospitals and medical-social facilities, which are currently completely separate;
- the possibility of sending geriatric teams to visit nursing homes, considered to have considerable added value. More generally, public authorities should listen more to geriatricians;
- the day hospital offering a flexible solution for elderly people and easy to set up rapidly;
- the capacity for sending mobile geriatric assessment teams on a regular basis.

And, of course:

- reinforce medical staff in nursing homes and facilitate the use of telemedicine;
- have a plan and mechanism for regular communication with residents and families;
- educate residents, healthcare personnel, and visitors about COVID-19, including current precautions being
taken in the facility and actions they should take to protect themselves. The overriding message is to set up this action plan on a daily basis and not only in case of a crisis.

CONCLUSION

As demonstrated by the COVID-19 pandemic:
- strong infection prevention is critical to protect both residents and healthcare personnel;
- the ethical impact and strategies for managing stress and anxiety among staff and personnel must be anticipated;
- strategies for communicating with families must be established: French people felt that the elderly were being abandoned;
- supplies and personal protective equipment must be anticipated.

On top of this we must keep in mind psycho-social risks and that the number of vulnerable people will increase due to the coming economic crisis. The SAMU geriatric unit is a valuable concept and we aim to consolidate its foundations

FUNDING

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 786670.

Disclosure of interest
The authors declare that they have no competing interest.

REFERENCES

[1] Bertrand C. Urgences en milieu gériatrique à l’usage des professionnels de santé, 1ere éd, Rungis: Institut Mermoz; 2018.
[2] Mouchet A. Bertrand C. Décider en urgence au Samu centre 15. Toulouse: Octares Editions; 2018.