

Syndicat National des Infirmier(e)s-Anesthésistes (SNIA)

NATIONAL SURVEY :

*Involvement, commitment and contributions of the nurse
anaesthetists within the French hospital system confronted with
the COVID epidemic-19*



**February - May 2020
Restitution of results**

Summary

1. Aim of the survey:.....	3
2. Methodology:	3
3. Participation:.....	3
4. Validation of the panel:	3
Territorial partition:	3
Breakdown by type of employer:	5
5. Impact on working conditions of NA.....	5
Personal protective equipment	5
Schedules:	6
Time off:	6
6. Commitments in the organization.....	6
Drafting of specific protocols:	6
Training of health professionals:.....	6
7. NA Deployment	7
Creation of critical care units	7
Inter-regional reinforcement	7
8. Assignments of NAs and NA students	8
Assignment of NA students.....	8
Deployment in intensive care:	9
Deployment of the operating theatre:	11
Deployment of other sectors	12
Deployment emergency Medical Services (F. SAMU/SMUR):.....	12
Deployment in the emergency care unit:	13
9. Conclusion.....	14
10. Limitations and Critics of the Investigation	15
11. Abbreviations and Acronyms	15

1. Aim of the survey:

In the context of the CoVid-19 pandemic , the SNIA asked nurses-anesthetists on their involvement and their activities during the first months of the epidemic related to the SARS - Cov2 Pathogen Agent .

We explored the different fields of exercise where the NAs were able to operate (emergency care and Intensive Care Units, operating theatres ...) as well as the changes that accompanied the changes in the work organization.

2. Methodology:

Online questionnaire distributed on our professional networks . Relayed by our partners for 13 days.

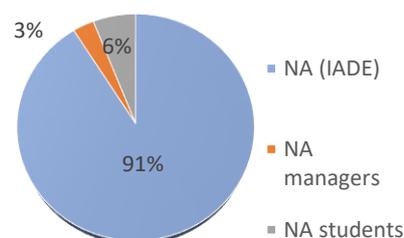
Questionnaire opening date: April 21st 2020

Closing date : May 4th 2020

3. Participation:

1984 answers, 1576 exploitable or almost 15% of the working population .

NA (IADE)	1437	91,18%
NA managers	44	2,79%
NA students	95	6,03%



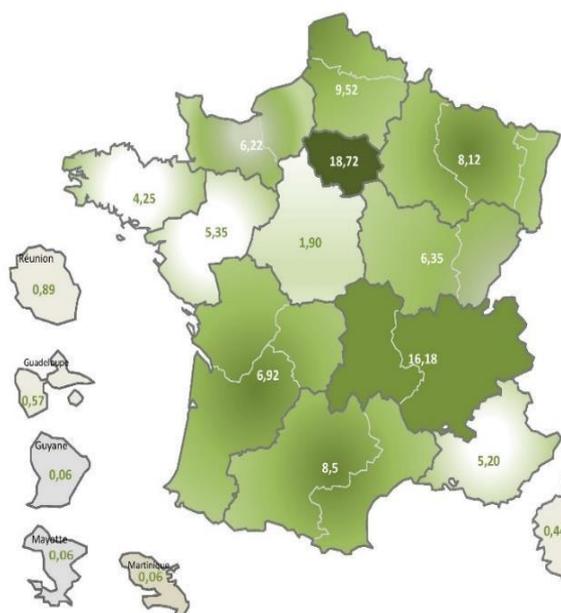
NB: 10,649 NA practice in France compared to a number of 700988 nurses (ADELI)

4. Validation of the panel:

Territorial partition:

The distribution of respondents by region of practice is as follows :

Ile de France	18,72%
Auvergne-Rhône Alpes	16,18%
Hauts de France	9,52%
Occitanie	8,5%
Grand Est	8,12%
Nouvelle Aquitaine	6,92%
Bourgogne Franche-Comté	6,35%
Normandie	6,22%
Pays de la Loire	5,65%
PACA	5,20%
Bretagne	4,25%
Centre Val de Loire	1,90%
Autres DROM	NI
Réunion	0,89%
Guadeloupe	0,57%
Corse	0,44%
Martinique	0,44%
Guyane	0,06%
Mayotte	0,06%



It is possible to compare this geographical distribution of respondents with those identified by government statistical agencies (DREES and SAE) and our latest demographic and self-reported practices survey, published in 2018 (GEIADE 2018).

Rang	DREES 2018 (%)		GEIADE 2018 (%)		SAE au 31/12/2017 (%)		Enquête IADE COVID 2020 (%)	
1	Auvergne-Rhône-Alpes	14,85	Auvergne-Rhône Alpes	13.06	Ile de France	17,08	Ile de France	18,72
2	Ile de France	14,75	Ile de France	12.35	Auvergne-Rhône Alpes	12,13	Auvergne-Rhône Alpes	16,18
3	Grand Est	10,55	Occitanie	11.26	Grand Est	9,33	Hauts de F.	9,52
4	Nouvelle Aquitaine	10,09	Nouvelle Aquitaine	8.25	Nouvelle Aquitaine	9,11	Occitanie	8,5
5	Occitanie	9,05	Hauts de France	8.14	PACA	8,68	Grand Est	8,12
6	Hauts de F.	8,12	Grand Est	7.70	Hauts de F.	8,57	Nouvelle Aquitaine	6,92
7	Bretagne	6,21	Pays de la Loire	6.39	Occitanie	8,04	Bourgogne Fr-Comté	6,35
8	PACA	5,81	PACA	6.12	Bretagne	5,86	Normandie	6,22
9	Pays de la Loire	5,22	Bretagne	5.85	Pays de la Loire	4,84	Pays de la Loire	5,65
10	Normandie	4,46	Bourgogne Fr-Comté	5.30	Normandie	4,68	PACA	5,20
11	Bourgogne Fr-Comté	4,47	Normandie	4.97	Bourgogne Fr-Comté	4,65	Bretagne	4,25
12	Centre Val de Loire	3,16	AUTRES DROM	3.44	Centre Val de Loire	3,01	Centre Val de Loire	1,90
13	DROM	2,92	Centre Val de Loire	2.95	AUTRES DROM	NR	Autres DROM	NI
14	Réunion	1.13	Réunion	1.97	Réunion	1,38	Réunion	0,89
15	Martinique	0.64	Guadeloupe	0.77	Guadeloupe	0,85	Guadeloupe	0,57
16	Guadeloupe	0.59	Martinique	0.55	Martinique	0,83	Corse	0,44
17	Guyane	0.38	Guyane	0.38	Corse	0,42	Martinique	0,44
18	Corse	0.34	Corse	0.38	Guyane	0,32	Guyane	0,06
19	Mayotte	0.19	Mayotte	0.16	Mayotte	0,24	Mayotte	0,06

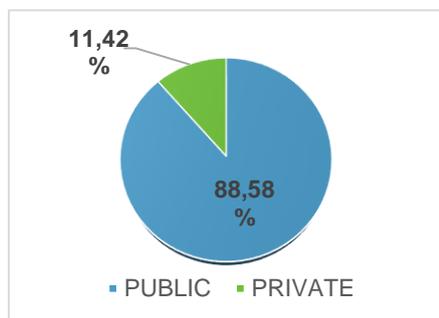
Comment:

The territorial distribution of the respondents corresponds globally to the geographical distribution of NA professionals with regard to the official statistical data (cf: SNIA's IADE 2018 Survey: https://www.snia.net/uploads/7/7/8/5/7785148/geiade_2018_snia.pdf).

There is no over-representation of regions under stress that have been strongly affected by the SARS-Cov2 epidemic, which avoids a magnifying glass effect on the impact of the crisis on the activity of nurse anaesthetists.

Breakdown by type of employer:

88.58% of the respondents work in the public sector (hospital public service). 11.42% work in the private sector (no distinction has been made between private non-profit and private for-profit)



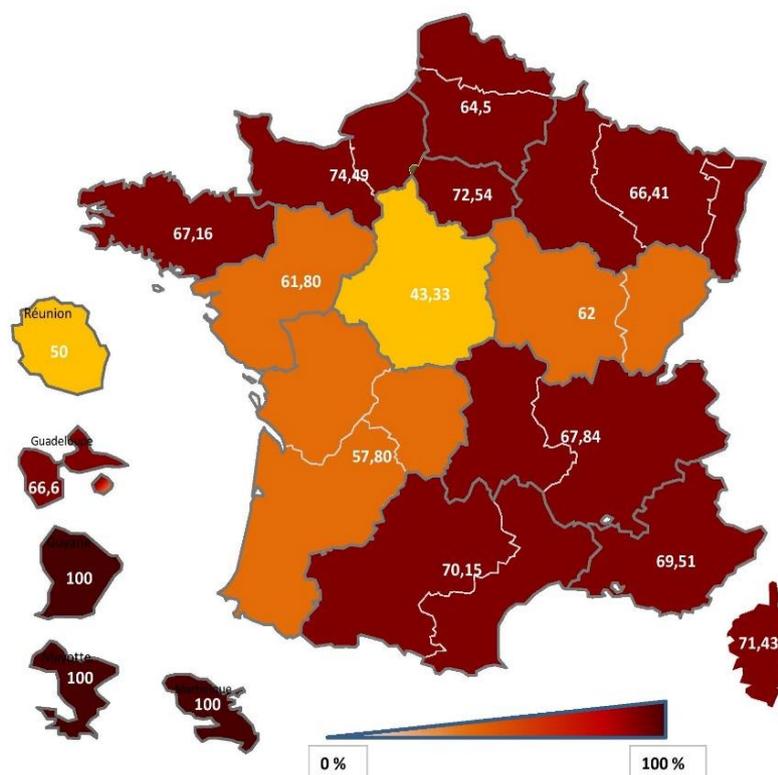
Comment:

This distribution of the public/private sectors corresponds to the statistical realities observed by the DREES and the SAE in their recent demographic data (2018).

5. Impact on working conditions of NA.

Personal protective equipment

67.13% of the NA say they have been subjected to **constraints linked to the lack of personal protective equipment (PPE)**. The strains on this equipment has not been felt in the same way across the territory as shown on our map.



After analysis of the verbatim, the majority of the training courses given by NA professionals concerned :

- The global care of intensive care patients,
- The setting of personal protective equipment (dressing and undressing),
- Airway management (intubation, use of video laryngoscopes,...),
- Mobilization of patients (decubitus abdominis, turnaround,...)
- The use of medical devices (respirators, automatic syringe pumps, BIS...),
- Specific nursing care (dilutions, use of the arterial and central vascular catheter, telemetry ...).

The audiences targeted by these formal or informal training courses were mainly composed of, in order of amount of citations: **IDE, IBODE, Health Care Assistants, medical Students.**

Comment:

Previous surveys have already shown that the NA profession is very much involved in intra-hospital training, in particular through their activity within the Emergency Care Teaching Centres (CESU). It appears that the involvement of NA in the training of health workers has intensified and diversified during the health crisis. We also observe a high level of activity by NA managers in this transfer of knowledge, which can be explained by their direct access to information and specific protocols used in the institutions and by their responsibility to organize quickly and efficiently the training courses that are essential for the safety of staff and patients.

7. NA Deployment

Creation of critical care units

70.69% of the NAs organized the setting up of critical and intensive care units in their institutions (SSPI, SI / SC, ...)

Inter-regional reinforcement

12.5% of the NAs participated in the interregional nursing reinforcement. By crossing the datas, we note that **33.3%** of the NAs of the private sector has willingly committed in these reinforcement proposals.

. This reinforcement was able to be effective for 43.33% directly from their ARS (regional healthcare administration) and for 40% from a direct recruitment on vacation by the hospital center under pressure.

. 11.11% via a temporary employment agency and 5.55% via the EPRUS

Comment:

These statistics have to be directly correlated with the increase of national capacities of hospitalization in critical care and intensive care unit.

The NA actively participated in the creation of these exceptional hospitalization streams because they know, through their professional experiences and their training, the spatial and organizational constraints of specific care in anesthesia - resuscitation.

They master the standards of care required in the intensive care unit.

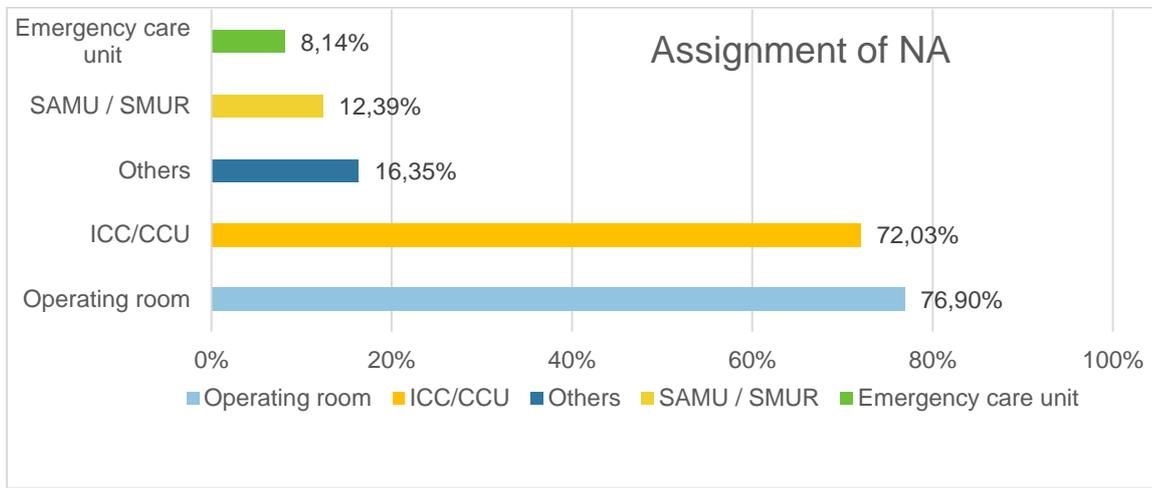
When the regions were less affected, the NA participated in the interregional reinforcement, we can record a strong implication of the NA of the private sector with 1/3 of these declarants.

This reflects the willingness of these NAs, often placed on partial unemployment, to collaborate on the national effort despite everything

8. Assignments of NAs and NA students

At the onset of the epidemic in France, NA skills were sought for allocate human resources adapted to services under stress and to those that should be created.

In addition to these new assignments, the usual management of surgical emergencies obviously continued to mobilize part of the professional corporation.

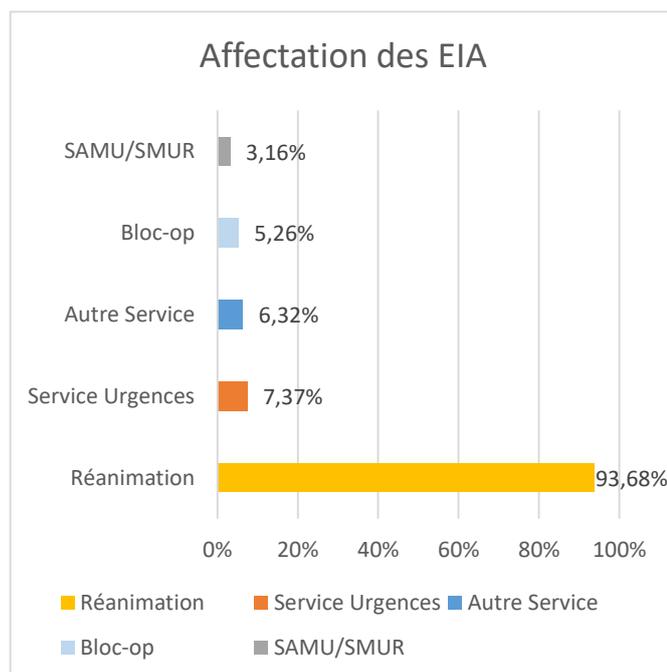


Pendant cette période, où avez-vous effectué vos heures de travail ?	
Operating room	76,90%
ICU/CCU	72,03%
Other care units	16,35%
SAMU / SMUR	12,39%
Emergency care unit	8,14%

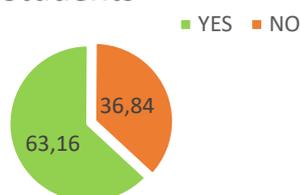
Assignment of NA students

This question is investigating the various places of care where the NA students exercised during this period. The initial assignments could be modified where a mixed exercise put in place explains the proportions.

ICU/CCU	93,68 %
Emergency care unit	7,37 %
Other care units	6,32 %
Operating room	5,26 %
SAMU/SMUR	3,16 %



Inter-institution NA Students



Comment:

The operating room remains the main place of assignment of NAs (76.90%) in order to provide the continuity of urgent care for COVID patients (-) and the settings up of pathways and procedures for COVID patients (+). The “newness” lays in the great adaptability and reactivity of the NAs in the transformation of recovery rooms (SSPI) into real ICU/CCU to, most often, receive COVID resuscitation patients (-) in order to liberate beds of the other ICU/CCU then dedicated to the care of COVID (+) patients.

As expected, ICU/CCU comes at first place in the assignment services (72%) where NA expertise has been sought.

Usually, only a small part (- 7% cf. GEIADE2018) works in these units where the place of the NA is only barely valued or requested.

A significant part (16.35%) was allocated to other types of units (critical care unit , ICU, continuing care, COVID (+) medical unit, ...)

12.39% worked in SAMU / SMUR over this period and 8.14% in ER reception unit.

The statistics obtained illustrate the versatility and mixed exercise which seems to have been the norm for a very large part of the NA corps.

The large majority of NA students (93.68%) were also deployed in the ICU/CCU.

The 24-month mandatory nursing practice requirement before being able to take the entrance exam to the NA school enabled the NA students to acquire the specific skills for a nurse in intensive care, emergency department, recovery room.

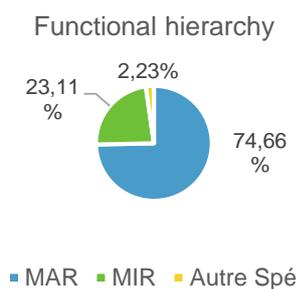
They have therefore been frequently reassigned to positions previously occupied.

For many, they were mobilized by their employing establishment when they benefited from professional promotion. NA Students also largely participated (63.16%) in inter-regional and inter-establishment reinforcements.

Deployment in intensive care:

For the 72.3% of NAs engaged in critical / intensive care unit, it was a new assignment for the whole of them (97.68%).

Among them :



- . 74.66% declared to have practiced under the supervision of a anesthesiologist MD (MAR)
- . 23.11% under supervision of an intensive care resuscitation MD (MIR)
- . 2.23% under the responsibility of organ specialists MD

This proportion tends to demonstrate that the redeployment of NAs has mainly taken place with the anesthesia-resuscitation departments which have highly contributed to the increase in the number of critical care beds on the national territory.

Identification as resource person in upper airways management

. 54.70% of them declare that they have been identified as human resources for the management of the upper airways and sedation-analgesia.

- o 58.03% when the doctor is a MAR
- o 41.84% when the doctor is an MIR
- o 73.91% when the doctor is another organ specialist MD

Practice of tracheal intubation

. 50.34% declared that they had to practice tracheal intubation of patients.

- o 52.85% when the responsible doctor is a MAR
- o 42.26% when the doctor is an MIR
- o 52.19% when the doctor is another organ specialist

Adaptation of ventilatory parameters

. 70.92% declare having had the possibility of adapting the patient's ventilatory settings.

- o 74.61% when the doctor is a MAR,
- o 59% when the doctor is an MIR,
- o 73.91% when the doctor is another organ specialist

Adaptation of sedation and curarization

. 76.65% declare having had the possibility of adapting sedation and curarization.

- o 68.49% when the doctor is an MIR
- o 73.91% when the doctor is another organ specialist
- o 79.35% when the doctor is a MAR

Practice of arterial line placement

.45.51% declare having practiced the placement of arterial catheters.

- o 47.67% when the doctor is a MAR
- o 38.91% when the doctor is an MIR
- o 43.68% when the doctor is another organ specialist

Carrying out intra-hospital transport

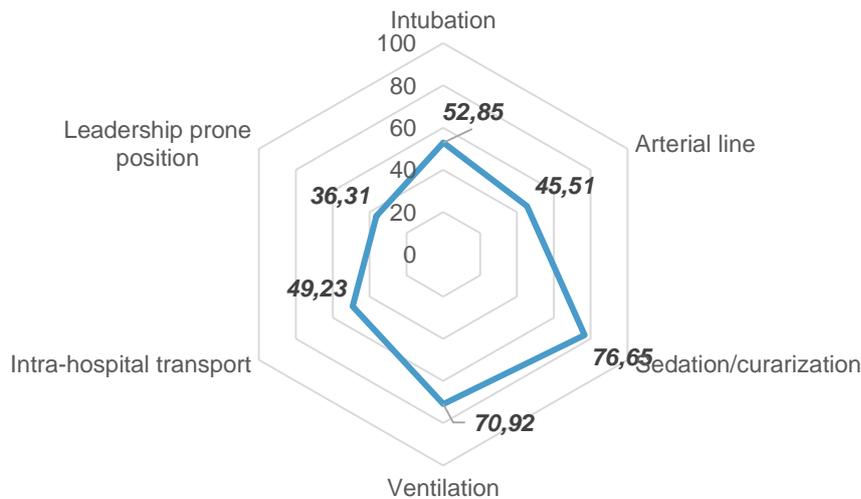
. 49.23% declare having been in charge with the intra-hospital transport of patients (CT, OR, transfer, mutation ...)

- o 48.45% when the responsible doctor is a MAR
- o 52.72% when the responsible doctor is an MIR
- o 39.13% when the doctor is another organ specialist MD

Exercise of a leadership for putting or returning in prone position

. 36.31% declare that they have been able to exercise their leadership when the patient's position changes (prone position)

- o 37.82% when the responsible doctor is a MAR
- o 30.96% when the responsible doctor is an MIR
- o 34.78% when the doctor is another organ specialist



After cross-checking the data, 81.71% of the private sector NA report having been able to carry out the adjustment of narcosis/myorelaxation and 70.92% for the adjustment of ventilatory settings.

Comment:

This episode enabled many intensive care physicians to discover the NA profession, their skills, prerogatives and capabilities. Cross-analysis of the data shows that, in the case of certain emblematic NA professional practices, the Intensive care physicians were less willing to delegate to these "new collaborators". For some practices, we see that doctors from another body speciality were sometimes more willing to rely on NA skills than their anesthesia/intensive care colleagues.

We note a greater autonomy of action of the NA of the private sector in the intensive care of their institutions whereas it was a new assignment for 100% of them.

Deployment of the operating theatre:

76.90% of the NAs were assigned to the operating theatre; 73.49% of them had their usual assignment.

Among them:

- 81.88% stated that their operating theatre maintained its surgical activity.
 - ❖ 42.03% for emergency surgery only
 - ❖ 39.86% for emergency surgery and program continuation.
 - 95.68% of these scheduled surgeries were for cancer.
- 12.74% stated that the organization of their department in this context did not fulfil the vigorous requirements concerning the possibility of immediate intervention by a doctor-anaesthetist during a procedure.
- 40.53% report having been assigned to intra-hospital transport of patients.

Comment:

Despite the crisis, urgent surgical care was provided and patients were able to benefit from emergency care and cancer treatments. Changes in the allocation of anaesthetist-intensive care physicians (MAR) within the institutions (with the expansion of intensive care units) may have changed the usual organization of operating theatres.

Deployment of other sectors

16.35% of NAs were working in sectors other than those investigated by the survey.

Among them:

- 62.5% worked in a department with COVID patients(+)
- 62.82% reported having performed intra-hospital patient transport.
- 77.77% declare having been identified as a resource person in case of emergency or quick failure.

Comment :

Certain regional hospitals (not defined as CoVid-19 reference centers) have nevertheless assumed the role of second recourse with the organization of a reception unit for non-intensive care patients who are sometimes fragile and potentially unstable. The NAs of these institutions then assumed the role of referents and critical care resource persons.

Deployment emergency Medical Services (F. SAMU/SMUR):

12.39% of the NA were engaged on SAMU/SMUR missions; 42% of them had a new assignment.

Regulation of calls in the centre 15

- 18.08% took part in the call regulation reinforcement in the centre 15

Paramedicalized primary interventions

- 34.04% performed paramedical primary interventions:
 - ❖ With COVID(+) patients: 90.625%
 - ❖ For the usual motives: 64.06% (see word cloud below F.)



Realization of inter-hospital nursing transport (F. TIH)

- 68.62% have carried out Inter-Hospital Nursing Transport (F. TIH)
 - ❖ The ¾ of these professionals (75.19%) performed IHNT of COVID(+) patients.

Realization of secondary medicalized transport

- 81.91% of them carried out secondary medicalized transport.
 - ❖ More than 90% of them performed them for the care of COVID patients(+)

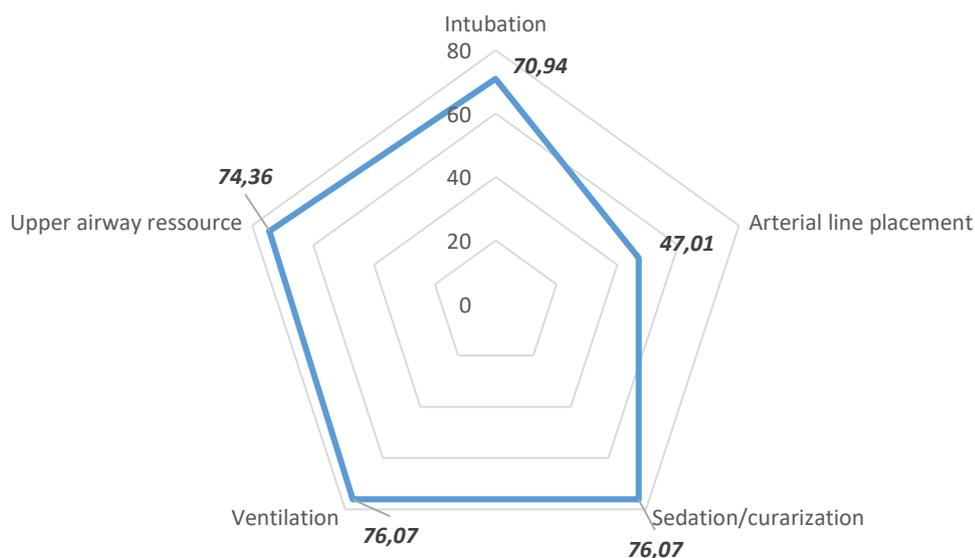
Comment : The first number to note is the significant number of new assignments in emergency medical services (F. SAMU/SMUR) with 42% of respondents. The profession therefore represents an easily deployable resource of competent professionals in emergency medicine, whether to reinforce medical regulation centres or to arm mobile units. 34% of NAs in SMUR provided paramedical primary care, this figure demonstrates the ability of these professionals to securely release medical time to take care of COVID(+) patients but also to ensure assistance for a number of other indications.

Inter-hospital transport has necessarily increased during this epidemic with the need to transfer patients to different sectors depending on the level of severity of the CoVid-19 infection. The NA have therefore actively participated in the organisational fluidity of these transfers by organising numerous inter-hospital transfers (68%). This percentage is to be put into perspective with the proportion of IHNT in relation to all the medical transports operated by the SMURs before the crisis, which represented less than 1% of the transports (SAE SAMU-SMUR slip). These figures show both the interest of developing this type of vector and the adaptation of NA skills to its implementation.

The NA have also worked closely with emergency doctors during medical transport and sometimes in exceptional conditions such as long-distance inter-regional transfers (TGV, civil and military aviation).

Deployment in the emergency care unit:

8.14% of the NA were engaged on missions within the emergency care services (ECS).



- 74.36% reported that they had been identified as resource persons for upper airway (VAS) and sedation management.
- 70.94% report having performed tracheal intubations.
- 76.07% declare that they were able to adapt the ventilation parameters
- 76.07% report that they were able to adapt sedation and curarization of patients
- 47.01% report having placed arterial catheters

Comment : 8.14% of the IADEs have worked in emergency departments, which in many institutions have organized the setting up of specific units dedicated to the reception of CoVid-19 patients. In this context, the figures show a strong involvement of the NAs assigned to these units in the management and organization of critical care for patients admitted to the emergency departments

9. Conclusion

In the unprecedented context of health crisis that we are experiencing, the SNIA is searching to use this survey to make an overview of the involvement and the role of nurse anaesthetists in the management of the CoVid-19 epidemic.

The whole NA network has actively participated in the organization and management of the CoVid-19 epidemic. This massive involvement was sometimes associated with suffering, as a result of the undeniable shortage of personal protective equipment, contamination and more or less justified adjustments to working schedules and exercise conditions. It has required self-sacrifice and effort, but the NA health professionals have been present and have carried out their mission of service to all our fellow citizens.

NA students have reinforced health care services, NA managers have organized the transfer of units and the training of professionals, and NA have taken an active part in the care of patients within all critical care services. All these actions were only possible thanks to the multidisciplinary approach of the profession. This adaptability has allowed urgent surgical activities to be maintained while guaranteeing organizational flexibility, which has enabled the reinforcement of resuscitation teams, emergency departments, emergency services and hospitalisation sectors under stress.

The skilled workforce of the profession has enabled the creation of temporary resuscitation units, special CoViD-19 units, pre-hospital management solutions and inter-hospital transport solutions in a record time. The nurse anaesthetists have been able to rely on their technical background and clinical reasoning to demonstrate their adaptability and rapidity of thinking in order of the manipulation of specific therapeutic agents that are rarely or not usually used. The autonomy and leadership of the IADE was an important element in the management of COVID(+) patients. By actively participating in their clinical and technical management, they released medical time and secured the care channels.

By virtue of its training and mode of practice, the profession of nurse anaesthetists has for decades provided a sort of tangible link between the various specific care activities of anesthesia, emergency, pain management and resuscitation. In recent years, this link has not always been easy to maintain because political tropisms overly rationalizing paramedical and medical activities have aimed to enclose and reduce the activity of NAs to a role of anesthesia executioner.

It took a health crisis of a rare magnitude to measure the interest of a profession such as ours and demonstrate its societal usefulness outside the operating theatre. A profession capable of taking an active part in the reflection and creation of temporary intensive care units and capable of rapidly integrating these new units or reinforcing existing ones. Experienced professionals, able to participate in the diversity of the missions of the SAMU/SMUR and emergency units, thus allowing a fluidization and an optimization of the medical resources. It is this adaptability, this flexibility of anesthesia/intensive care professionals that made it possible to solve the major problem of the limited number of intensive care beds, which was the source of all concerns at the beginning of the pandemic. At its level of competence and expertise, it is undeniable that the NA profession has strongly contributed, together with the other health care professions, to the resilience of our health system in this exceptional situation of threat to the French public's state of health.

Political stakeholders will have to finally take the measure of this state of affairs in order to consider our potential and organize future orientations concerning the paramedical professions.

The S.N.I.A. is a professional union (laws of 21 March 1884 and 12 March 1920), created in 1951.
Representative of the profession on the High Council of Paramedical Professions (HCPP)
Founding member and representative of the International Federation of Nurse Anesthetists (IFNA)
Founding member of the Collège Infirmier Français (CIF)
Founding member of the Conseil National Professionnel des Infirmier(e)s-Anesthésistes (CNPIA)



SNIA

157, Rue Legendre - 75017 Paris

Tél : 01.40.35.31.98

Fax : 01.40.35.31.95

contact@snia.net

www.snia.net