

Update in Surgery

Changes in surgical behaviOrs dUring the CoviD-19 pandemic. The SICE CLOUD19 Study.

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Suppl. Digit. Content. Table 1. Geographical distribution and hospital characteristics of surveyed surgeons

Geographical distribution	Northern regions	116 (51.2%)	Lombardia	52 (23%)
			Piemonte	20 (8.8%)
			Veneto	19 (8.4%)
			Emilia-Romagna	15 (6.6%)
			Friuli Venezia Giulia	4 (1.8%)
			Liguria	3 (1.3%)
			Trentino Alto Adige	2 (0.9%)
			Valle d'Aosta	1 (0.4%)
	Central regions	35 (15.6%)	Lazio	11 (4.9%)
			Abruzzo	6 (2.7%)
			Marche	6 (2.7%)
			Umbria	6 (2.7%)
			Toscana	5 (2.2%)
			Molise	1 (0.4%)
	Southern regions	75 (33.2%)	Campania	33 (14.6%)
			Puglia	12 (5.3%)
			Calabria	11 (4.9%)
			Basilicata	7 (3.1%)
Sardegna			7 (3.1%)	
Sicilia			5 (2.2%)	
Hospital characteristics	Not-teaching Hospital		153 (67.7%)	
	Teaching Hospital		73 (32.3%)	
	Hub Hospital		132 (58.4%)	
	Spoke Hospital		94 (41.6%)	
	Public Hospital		198 (87.7%)	
	Hospital affiliated to NHS		27 (11.9%)	
Private Clinic		1 (0.4%)		

Suppl. Digit. Content. Table 2. Elective and Urgent Surgery Rate across the three phases

Procedures	Range	First Phase (%)	Second Phase (%)	Third Phase (%)	P value
Elective	< 20	29.2	10.3	18.3	< 0.00001
	20 - 50	33.5	21.9	27.8	
	50 - 100	21.9	22.3	28.2	
	100 - 200	13.3	24.9	15.8	
	> 200	2.1	20.6	9.9	
Emergency	< 20	43.3	27.1	36.5	0.001843
	20 - 50	33.0	33.0	33.9	
	50 - 100	17.2	24.9	21.9	
	100 - 200	5.6	12.0	7.3	
	> 200	0.9	3.0	0.4	

Suppl. Digit. Content. Table 3. Rate of laparoscopic adoption in elective and urgent surgery across the three phases

Procedures	Range	First Phase (%)	Second phase (%)	Third Phase (%)	P-value
Elective laparoscopy	< 20%	25.8	12.4	19.3	0.000703
	20 – 50%	36.4	33.5	27.0	
	50 – 80%	22.3	34.8	35.2	
	> 80%	15.5	19.3	18.5	
Urgent laparoscopy	< 20%	44.6	30.9	36.1	0.037716
	20 – 50%	35.2	40.7	34.7	
	50 – 80%	13.3	20.2	22.3	
	> 80%	6.9	8.2	6.9	

Suppl. Digit. Content. Table 4. Rate of COVID+ surgeons across the three phases

	Range	First Phase (%)	Second Phase (%)	Third Phase (%)	P value
Percentages of COVID+ Surgeons	< 5%	74.4	88.9	68.6	0.00002
	5 – 10%	10.6	4.9	15.9	
	10 – 20%	8.4	4.9	8.0	
	20 – 30%	6.6	1.3	7.5	

Suppl. Digit. Content. Table 5. Use of Personal Protective Equipment (PPE)

Patient	Kind of PPE	First Phase (%)	Second Phase (%)	Third Phase (%)	P-value
COVID -	Surgical mask	76.6	72.1	66.8	0.32912
	FFP2	59.3	64.2	74.3	
	FFP3	5.8	4.0	7.1	
	Glasses/Visors	52.7	50.4	53.1	
COVID +	Surgical mask	43.8	43.4	43.4	0.999655
	FFP2	70.8	69.0	68.6	
	FFP3	35.8	37.6	38.1	
	Glasses/Visors	92.0	91.2	91.6	
Not tested in emergency.	Surgical mask	43.3	40.3	37.1	0.682168
	FFP2	61.9	59.3	58.4	
	FFP3	21.2	22.1	21.7	
	Glasses/Visors	70.4	65.5	66.4	
	All patient tested	35.4	43.8	46.9	

SURVEY QUESTIONS

General organization of the departments

1. The hospital you work in is:
 - Teaching hospital
 - Non-teaching hospital

2. The hospital you work in is:
 - Hub center
 - Spoke center

3. The hospital you work in is:
 - Public
 - Private
 - Affiliated to National Health System

4. The hospital you work in during Phase I of the pandemic could be defined as:
 - dedicated exclusively to the care of Covid-positive patients
 - dedicated exclusively to the care of Covid-negative patients
 - mixed care (both Covid-positive and Covid-negative patients)

5. The hospital you work in during Phase II of the pandemic could be defined as:
 - dedicated exclusively to the care of Covid-positive patients
 - dedicated exclusively to the care of Covid-negative patients
 - mixed care (both Covid-positive and Covid-negative patients)

6. The hospital you work in during Phase III of the pandemic could be defined as:
 - dedicated exclusively to the care of Covid-positive patients
 - dedicated exclusively to the care of Covid-negative patients
 - mixed care (both Covid-positive and Covid-negative patients)

7. How many beds are assigned to the surgery department where you work?
 - <20
 - 20-30
 - >30

8. How many effective beds dedicated to surgical activity did the surgery department where you work have during phase I of the pandemic?
 - <20
 - 20-30
 - >30
 - It has been closed

9. How many effective beds dedicated to surgical activity did the surgery department where you work have during phase II of the pandemic?
 - <20
 - 20-30

- >30
- It has been closed

10. How many effective beds dedicated to surgical activity did the surgery department where you work have during phase III of the pandemic?

- <20
- 20-30
- >30
- It has been closed

11. How many elective surgical procedures were performed during Phase I of the pandemic in your department?

- <20
- 20-50
- 50-100
- 100-200
- •> 200

12. How many elective surgical procedures were performed during Phase II of the pandemic in your department?

- <20
- 20-50
- 50-100
- 100-200
- •> 200

13. How many elective surgical procedures were performed during Phase III of the pandemic in your department?

- <20
- 20-50
- 50-100
- 100-200
- •>200

14. Out of the total number of surgical procedures performed in election during phase I of the pandemic in your department. how many were performed with a minimally invasive technique?

- <20%
- 20-50%
- 51-80%
- •> 80%

15. Out of the total number of surgical procedures performed in election during phase II of the pandemic in your department. how many were performed with a minimally invasive technique?

- <20%
- 20-50%
- 51-80%

- •> 80%

16. Out of the total number of surgical procedures performed in election during phase III of the pandemic in your department. how many were performed with a minimally invasive technique?

- <20%
- 20-50%
- 51-80%
- •> 80%

17. How many urgent surgical procedures were performed during Phase I of the pandemic in your department?

- <20
- 20-50
- 50-100
- 100-200
- •> 200

18. How many urgent surgical procedures were performed during Phase II of the pandemic in your department?

- <20
- 20-50
- 50-100
- 100-200
- •> 200

19. How many urgent surgical procedures were performed during Phase III of the pandemic in your department?

- <20
- 20-50
- 50-100
- 100-200
- •> 200

20. Out of the total number of surgical procedures performed in emergency during phase I of the pandemic in your department. how many were performed with a minimally invasive technique?

- <20%
- 20-50%
- 51-80%
- •> 80%

21. Out of the total number of surgical procedures performed in emergency during phase II of the pandemic in your department. how many were performed with a minimally invasive technique?

- <20%
- 20-50%
- 51-80%

- •> 80%

22. Out of the total number of surgical procedures performed in emergency during phase III of the pandemic in your department. how many were performed with a minimally invasive technique?

- <20%
- 20-50%
- 51-80%
- •> 80%

23. How many Covid-19 positive patients were operated in election during Phase I of the pandemic in your department?

- <10
- 10-20
- 21-30
- •> 30

24. How many Covid-19 positive patients were operated in election during Phase II of the pandemic in your department?

- <10
- 10-20
- 21-30
- •> 30

25. How many Covid-19 positive patients were operated in election during Phase III of the pandemic in your department?

- <10
- 10-20
- 21-30
- •> 30

26. How many Covid-19 positive patients were operated in emergency during Phase I of the pandemic in your department?

- <10
- 10-20
- 21-30
- •> 30

27. How many Covid-19 positive patients were operated in emergency during Phase II of the pandemic in your department?

- <10
- 10-20
- 21-30
- •> 30

28. How many Covid-19 positive patients were operated in emergency during Phase III of the pandemic in your department?

- <10

- 10-20
- 21-30
- > 30

29. In your department. during Phase I of the pandemic. what percentage of medical personnel were referred to other departments dedicated to the care of Covid-19 positive non-surgical patients?

- 0%
- 1-20%
- 21-50%
- 51-80%
- > 80%

30. In your department. during Phase II of the pandemic. what percentage of medical personnel were referred to other departments dedicated to the care of Covid-19 positive non-surgical patients?

- 0%
- 1-20%
- 21-50%
- 51-80%
- > 80%

31. In your department. during Phase III of the pandemic. what percentage of medical personnel were referred to other departments dedicated to the care of Covid-19 positive non-surgical patients?

- 0%
- 1-20%
- 21-50%
- 51-80%
- > 80%

32. In your department. during Phase I of the pandemic. what percentage of medical personnel tested positive for Covid-19?

- <5%
- 5-10%
- 11-20%
- 21-30%

33. In your department. during Phase II of the pandemic. what percentage of medical personnel tested positive for Covid-19?

- <5%
- 5-10%
- 11-20%
- 21-30%

34. In your department. during Phase III of the pandemic. what percentage of medical personnel tested positive for Covid-19?

- <5%

- 5-10%
- 11-20%
- 21-30%

Screening of the patients

1. What Covid-19 screening test was used in your department for the admission of elective patients during Phase I of the pandemic? (NB: allow multiple answers)
 - PCR on nasopharyngeal swab
 - Antigenic on nasopharyngeal swab
 - Serological on blood sampling
 - Serological on lancing device
 - Chest X-ray
 - Chest ultrasound
 - CT of the chest
 - No one

2. What Covid-19 screening test was used in your department for the admission of elective patients during Phase II of the pandemic? (NB: allows multiple answers)
 - PCR on nasopharyngeal swab
 - Antigenic on nasopharyngeal swab
 - Serological on blood sampling
 - Serological on lancing device
 - Chest X-ray
 - Chest ultrasound
 - CT of the chest
 - No one

3. What Covid-19 screening test was used in your department for the admission of elective patients during Phase III of the pandemic? (NB: allows multiple answers)
 - PCR on nasopharyngeal swab
 - Antigenic on nasopharyngeal swab
 - Serological on blood sampling
 - Serological on lancing device
 - Chest X-ray
 - Chest ultrasound
 - CT of the chest
 - No one

4. What Covid-19 screening test was used in your department for the admission of urgent patients during Phase I of the pandemic? (NB: allows multiple answers)
 - PCR on nasopharyngeal swab
 - Antigenic on nasopharyngeal swab
 - Serological on blood sampling
 - Serological on lancing device
 - Chest X-ray
 - Chest ultrasound

- CT of the chest
 - No one
5. What Covid-19 screening test was used in your department for the admission of urgent patients during Phase II of the pandemic? (NB: allows multiple answers)
 - PCR on nasopharyngeal swab
 - Antigenic on nasopharyngeal swab
 - Serological on blood sampling
 - Serological on lancing device
 - Chest X-ray
 - Chest ultrasound
 - CT of the chest
 - No one

 6. What Covid-19 screening test was used in your department for the admission of urgent patients during Phase III of the pandemic? (NB: allows multiple answers)
 - PCR on nasopharyngeal swab
 - Antigenic on nasopharyngeal swab
 - Serological on blood sampling
 - Serological on lancing device
 - Chest X-ray
 - Chest ultrasound
 - CT of the chest
 - No one

Safety of surgical procedures

1. What personal protective equipment (PPE) did the surgeons in your department wear in the operating room during Phase I of the pandemic with Covid-negative patients? (NB: allows multiple answers)
 - Surgical mask
 - FFP2 mask
 - FFP3 mask
 - Glasses and/or Facial shield
 - No one

2. What personal protective equipment (PPE) did the surgeons in your department wear in the operating room during Phase II of the pandemic with Covid-negative patients? (NB: allows multiple answers)
 - Surgical mask
 - FFP2 mask
 - FFP3 mask
 - Glasses and/or Facial shield
 - No one

3. What personal protective equipment (PPE) did the surgeons in your department wear in the operating room during Phase III of the pandemic with Covid-negative patients? (NB: allows multiple answers)

- Surgical mask
 - FFP2 mask
 - FFP3 mask
 - Glasses and/or Facial shield
 - No one
4. What personal protective equipment (PPE) did the surgeons in your department wear in the operating room during Phase I of the pandemic with Covid-positive patients? (NB: allows multiple answers)
- Surgical mask
 - FFP2 mask
 - FFP3 mask
 - Glasses and/or Facial shield
 - No one
5. What personal protective equipment (PPE) did the surgeons in your department wear in the operating room during Phase II of the pandemic with Covid-positive patients? (NB: allows multiple answers)
- Surgical mask
 - FFP2 mask
 - FFP3 mask
 - Glasses and/or Facial shield
 - No one
6. What personal protective equipment (PPE) did the surgeons in your department wear in the operating room during Phase III of the pandemic with Covid-positive patients? (NB: allows multiple answers)
- Surgical mask
 - FFP2 mask
 - FFP3 mask
 - Glasses and/or Facial shield
 - No one
7. What personal protective equipment (PPE) did the surgeons in your department wear in the operating room during Phase I of the pandemic with not tested patients in an emergency regime? (NB: allows multiple answers)
- Surgical mask
 - FFP2 mask
 - FFP3 mask
 - Glasses and/or Facial shield
 - No one
 - All operated patients had been tested for Covid-19
8. What personal protective equipment (PPE) did the surgeons in your department wear in the operating room during Phase II of the pandemic with not tested patients in an emergency regime? (NB: allows multiple answers)
- Surgical mask
 - FFP2 mask
 - FFP3 mask

- Glasses and/or Facial shield
 - No one
 - All operated patients had been tested for Covid-19
9. What personal protective equipment (PPE) did the surgeons in your department wear in the operating room during Phase III of the pandemic with not tested patients in an emergency regime? (NB: allows multiple answers)
- Surgical mask
 - FFP2 mask
 - FFP3 mask
 - Glasses and/or Facial shield
 - No one
 - All operated patients had been tested for Covid-19
10. Have surgical smoke evacuation devices been used in your operating room during laparoscopic interventions in Phase I of the pandemic?
- Yes
 - No
11. Have surgical smoke evacuation devices been used in your operating room during laparoscopic interventions in Phase II of the pandemic?
- Yes
 - No
12. Have surgical smoke evacuation devices been used in your operating room during laparoscopic interventions in Phase III of the pandemic?
- Yes
 - No
13. If surgical smoke evacuation devices had been used during laparoscopic interventions during the three phases of the pandemic. which device was used (note: allows multiple responses)
- "Home made" devices
 - Airseal
 - Olympus UHI-4
 - Stryker Pneumoclear
 - Erbs IES
 - Storz S Pilot
 - Ethicon Megadyne
 - Medtronic Rapid Vac
 - Braun PG 150
 - Other
14. Which of the following energy devices listed did you reduce use during Phase I of the pandemic?
- Monopolar electro-surgical unit
 - Bipolar electro-surgical unit
 - Ultrasound energy devices

- Bipolar electrothermal energy devices
- We have only reduced the use of ultrasonic devices and bipolar electrothermal energy
- We have not reduced the use of any of the devices listed above

15. Which of the following energy devices listed did you reduce use during Phase II of the pandemic?

- Monopolar electrosurgical unit
- Bipolar electrosurgical unit
- Ultrasound energy devices
- Bipolar electrothermal energy devices
- We have only reduced the use of ultrasonic devices and bipolar electrothermal energy
- We have not reduced the use of any of the devices listed above

16. Which of the following energy devices listed did you reduce use during Phase III of the pandemic?

- Monopolar electrosurgical unit
- Bipolar electrosurgical unit
- Ultrasound energy devices
- Bipolar electrothermal energy devices
- We have only reduced the use of ultrasonic devices and bipolar electrothermal energy
- We have not reduced the use of any of the devices listed above