Role of health simulation centres in the COVID-19 pandemic response in Italy: a national study

Pier Luigi Ingrassia 1,2, Mattia Ferrari, 1 Matteo Paganini 3, Giulia Mormando 3

ABSTRACT

Introduction The COVID-19 pandemic has dramatically affected the Italian health systems and drastically impacted healthcare workers’ daily routine and training. Simulation is an efficient tool to provide medical education, especially in the case of incoming public health emergencies. This study investigated the role and activities of Italian simulation centres (SCs) during the acute phase of the COVID-19 pandemic.

Methods The population was identified through a web search. The directors of Italian SCs were contacted via email and then enrolled. A structured interview was created, internally validated and administrated by phone to participants.

Results Following the government’s ordinance, 37 (88.37%) SCs had to be closed to the public. Twenty (46.51%) SCs organised in situ simulation while 7 (16.28%) of them organised simulation inside the centre. Twenty-three (53.49%) SCs resorted to telematic modalities to provide training about COVID-19 and 21 (48.84%) of them for other training. Up to date, 13 SCs are still closed to the public.

Conclusions Italy has been severely hit by COVID-19, with differences between the regions. Almost all the SCs were closed, with only a few delivering training. The SCs took advantage of emergent technologies to create new ways to train people safely. Unfortunately, nearly one-fourth of Italian SCs have not reopened yet. The evolution of the COVID-19 epidemic calls for reconsideration about training activities including adequate safety measures implemented for all individuals.

INTRODUCTION

The COVID-19 pandemic has put a difficult burden on the entire world. With an increasing number of infected patients needing assistance, most healthcare systems had to face high pressure and some of them were brought on the brink of collapse. Italy was the first European country to be severely hit by SARS-CoV-2.1 The case of virus diffusion and the need for infection control required changes in almost every aspect of life, especially for healthcare workers’ (HCWs) daily routine and training.

Simulation is a well-known tool to train and prepare HCWs for difficult and hazardous scenarios. In particular, simulation improves HCWs’ skills and can be used to validate protocols, identifying threats and issues, and test solutions.

Simulation centres (SCs) represent safe places for learning a variety of skills with the help of qualified training staff before getting in touch with patients or coordinated with direct patient contact.2

Despite the demonstrated potential of simulation in contributing to the management of previous pandemics3–5 and the current global COVID-19 crisis,6 to our knowledge, there is no study which addresses how simulation facilities coped with this pandemic, and how they contributed to the health response to the outbreak. The evolution of this worldwide crisis necessitates a review of all activities performed in SCs and we believe that sharing challenges and policy experiences will ultimately foster the dissemination of good practices. For these reasons, we investigated the role and activities of Italian SCs during the acute phase of the COVID-19 pandemic.

METHODS

Study design and population

An observational transversal study was designed. A list of all the Italian SCs was created on 1–7 September through a web search conducted on the websites of the Italian Society of Health Simulation (Società Italiana di Simulazione in Medicina, www.simmed.it) and the Society in Europe for Simulation (www.sesam-web.org).1 The list was enhanced by consulting SC registry of the Italian Society of Anaesthesia and Intensive Care (Società Italiana Anestesia, Analgesia, Rianimazione e Terapia Intensiva, http://www.siaarti.it) and through free internet searches. Contact details of SC directors or representatives were then collected in a spreadsheet.

An email containing the study purpose and protocol was sent to each SC contact person on 9–10 September 2020. The interviews were conducted on 11–15 September. A second email was sent to non-respondents and they were recontacted by phone in the following 2 weeks (16–28 September). The telephone interview method was preferred to assist the respondents in understanding the questions and to reduce interviewees’ tendency to satisfice and give top-of-the-head answers.10

Study instrument

A 10 min standardised interview instrument was developed and hosted on SurveyMonkey (Survey-Monkey, Palo Alto, California, USA). It consisted of four sections: (1) general and demographic characteristics of the centres; (2) SC activities before the COVID-19 pandemic and (3) during the COVID-19 pandemic; and (4) reopening of the SC.

The interview content was reviewed for accuracy by experts with specialised knowledge on simulation and previous experience in survey design, who provided appropriate modifications to ensure the validity of the study. The interview included


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multiple-choice and open-ended questions and is available in online supplemental files 1-2.

Statistical analysis
Qualitative data were analysed descriptively through their distribution frequency (n, %) using SurveyMonkey software (SurveyMonkey).

RESULTS
A total of 53 SCs were identified across Italy. Forty (75.5%) were interviewed by phone while 3 (5.7%) were asked to answer via email. Of the remaining, 8 (15.1%) did not answer and 2 (3.8%) lacked essential contact information, thus were excluded from the study.

Demographics and general characteristics of Italian SCs
The identified centres were mostly located in northern regions (19, 44.2%) (figure 1) and affiliated to a university (16, 37.2%). Most SCs were located inside hospital facilities (25, 58.1%) and covered a surface of less than 250 m² (20, 46.5%). Funding was similarly provided by hospitals (18, 41.9%) and universities (18, 41.9%) (table 1).

Most SCs rely on a part-time workforce to lead (35, 81.4%), administer (15, 34.9%), deal with information technology and simulators (34, 79.0%) and deliver the training initiatives (43, 100%). The staff comprehends physicians (41, 95.4%), nurses (30, 73.2%), psychologists (16, 39.0%) and others (20, 48.9%) such as midwives, psychotherapist and social workers. Most SCs (33, 76.7%) are accredited to at least one simulation society. Details are available in table 1.

Before the COVID-19 pandemic
Before the outbreak of COVID-19, 38 (88.4%) SCs reported to organise in situ simulations (ISS)—either for clinical training or diagnostic and/or therapeutic pathway test—and 40 (93.0%) in-centre simulation—either for technical and non-technical skills or high-fidelity simulation. Only a few (14, 26.4%) offered some form of telematic simulation.

In most cases (38, 88.4%), the spaces of the SCs were reserved for simulation and training while 5 (11.6%) SCs were available as a potential treatment area. Equipment (ie, ventilators, ultrasound scanners) were devoted to simulation in 30 (71.4%) SCs but were shared with clinical activities in 12 (28.6%) centres. The health furniture was also regularly employed for simulation only in 39 (90.7%) SCs.
In 31 cases (72.1%), no formal agreements were established with healthcare facilities to use SC space and stuff in case of patient surge.

During the COVID-19 pandemic

Thirty-eight (88.4%) SCs were closed to the public: 23 (60.5%) following the lockdown decree of the Italian government issued on 9 March and 15 (39.5%) even before as a precautionary measure. Specifically, 1 SC reopened after 2 weeks and 2 remained open in Northern Italy (2/19, 10.5%), 3 in Central Italy (3/14, 21.4%) and 0 in Southern Italy (0/10, 0.0%). Twenty SCs (46.5%) organised ISS training and 7 (16.3%) in-centre simulation. Of the 25 SCs located inside a hospital, only 12 (48.0%) organised some sort of ISS while 12 of the 18 (66.7%) centres outside a hospital organised ISS initiatives.

Twenty-three SCs (53.5%) resorted to telematic modalities to provide education about COVID-19 and 21 (48.8%) for other training. The details of simulation modalities delivered during the emergency are available in table 2. Figures 2 and 3 report the differences in training modalities delivered before and during COVID-19 emergency and figure 4 reports their distribution in the various regions. Most centres (26, 61.9%) adopted the European Resuscitation Council guidelines to deliver life support and organise the training during the pandemic.

Only 6 (14.0%) SCs used their space to deliver COVID-19 training, 1 (2.3%) other training and 4 (9.3%) set up mixed sessions. Three (7.0%) SCs were repurposed to patient care areas.

Either the medical devices (33, 76.7%) or health furniture (37, 86.1%) available in SCs were not used in hospitals to increase surge capacity.
Seven SCs hired additional staff to design and deliver training about the clinical management of patients with COVID-19 (4, 9.3%), psychological management of COVID-19 emergency (1, 2.3%) or others. Only 1 (2.3%) SC reported a temporary increase of staff to urgently train and credential hospital personnel reallocated to emergency departments and intensive care units to face the pandemic.

After the COVID-19 pandemic
Thirty SCs (69.8%) reopened after the acute phase of the outbreak but the return to activity occurred in the summer (mean months of no activity: 5). Only one centre reopened in the middle of March with an immediate restart of operation during the acute phase. Up to 30 September, 13 SCs were still closed to the public and interviewees reported the planned reopening date between October and January 2021.

At the time of reopening, all centres have taken measures to prevent and control the diffusion of SARS-CoV-2 such as social distancing, face masks and remodelling of the room layout.

DISCUSSION
The study investigated the role and the activities put in place by Italian SCs during the acute phase of the COVID-19 pandemic. In particular, the manuscript analysed what types of simulation were conducted and how SCs managed personnel, spaces and equipment during the emergency. To our knowledge, this is the first study conducted with the aim to capture a snapshot of the national situation on the subject. There is still great uncertainty about how COVID-19 will impact the future of healthcare, including the modalities of training. The evolution of the crisis necessitates a review of all activities performed in SCs to redesign the new normal. Providing an intuitive overview of what have been done in the acute phase could help policymakers.

Almost all centres were closed to the public during the acute phase of the pandemic, either as a precautionary choice of SC executives or in accordance with the government regulations. Unfortunately, this deprived the healthcare system of a useful resource. Only a few SCs conducted ISS, and about half of the SCs that were normally delivering ISS training before the emergency suspended it. Conducting a simulation session in the actual patient care setting/environment provides a unique opportunity to identify system errors and latent hazards and improve the interdisciplinary performance of the care teams much more effectively compared with similar training carried out in SCs separate from the clinical context. There is already evidence that ISS improved protocol compliance, knowledge and procedural skills of HCWs during the early phase of the COVID-19 response. However, amid the COVID-19 pandemic, ISS training requires the adoption of specific strategies aimed to prevent the spread of SARS-CoV-2 among HCWs, patients and ISS participants. In particular, educators, facilitators and on-duty staff must be effectively trained in implementing the prescribed safety procedures within the facility. It is noteworthy that SCs located outside the hospital delivered more ISS activities compared with those SCs located inside the hospital. We would have expected the opposite, thinking that SCs integrated within the hospitals would have been facilitated in the organisation of such sessions. A possible interpretation could be that contagion risk was perceived by SC staff as higher within the hospital premises, where most patients with COVID-19 were pooled and treated. This is a gap in our study and we hope it will be investigated in the future.

Italy has been severely hit by the COVID-19 pandemic, although with deep differences between the Italian regions. The highest number of cases was registered in the north, mostly in Lombardia, Piemonte, Veneto and Emilia Romagna. Our study did not show any difference in the organisation of simulation training for healthcare providers throughout the country. Only half of the SCs organised some form of ISS or in-centre simulation, either COVID-related or not.

The role of telematics and virtual simulations have been already demonstrated throughout the years as effective educational methods for both technical and non-technical skills in various educational settings. The present study shows that during the pandemic SCs took advantage of these technologies to create new ways to deliver health education while promoting safety. This is consistent with other studies that reported how these educational methods were efficient and effective during the early phases of the COVID-19 emergency. The increased use of alternative simulation modalities than traditional simulation reflected also the invitation of international simulation societies to act and resort to these methods to ‘continue education efforts seamlessly’. The COVID-19 pandemic brought a unique challenge to the Italian healthcare system. In a few weeks, even congress venues or public assembly spaces were converted into temporary patient care facilities that eased the pressure on mainline hospitals by providing more space for patient beds. SCs normally integrate educational environments, such as classrooms and debriefing rooms, and simulation environments which replicate sufficiently the clinical environments, sometimes equipped with real ventilation and medical gas supply system. Our report showed that only a few SCs were repurposed to treatment areas. Whether this can be more difficult for those SCs out of the health infrastructures, the simulation environments in the hospital premises might be identified among those spaces that are regularly used for non-clinical purposes and they may support patient care during a surge response. In fact, as a measure of the COVID-19 surge capacity management, healthcare authorities in several countries recommend identifying suitable space within existing hospitals that may retain the power, data and medical gases needed to provide care to patients. Nonetheless, it is noteworthy that simulation facilities are generally designed and built to be learning contexts and accommodate the needs of its programmes and learners, and not with the primary purpose of serving the patients. The very close resemblance of educational environments to real clinical spaces might be taken in consideration by healthcare providers if they repurpose them to clinical areas.

Over recent months, the world witnessed a severe shortage of high-quality medical devices, such as ventilators, to respond effectively to the COVID-19 public health emergency. Ventilation-related products are still considered among those devices potentially in shortage. The study shows that SC medical devices and equipment were not used for real patient care purposes in the majority of cases. When asked for the reason, most interviewees responded that either (A) SCs had outdated materials devoted to education activities or (B) did not receive a specific request from the affiliated hospitals. Similar findings were reported in the USA where most SC directors were either conflicted or ‘against’ the provision of their devices, mostly because of their obsolescence. The COVID-19 pandemic inevitably impacted HCWs due to an increased influx. To shift towards contingency and crisis levels of activation, hospitals recruited retired personnel, mobilised staff to specialised areas and credentialled junior doctors. SCs are fundamental in delivering primers and condensed courses...
to rapidly meet the sudden need for trained staff in such emergency situations. Our findings showed that Italian SCs were underused to help healthcare facilities organise and implement these crucial programmes. This is probably due to a massive call to action of facilitators and educators, already working part-time in SCs, that shifted to full-time practice and did not have time to organise such training.

This study also found that, even at the end of the COVID-19 first wave, nearly one-fourth of Italian SCs were still closed. There is strong evidence that simulation in healthcare curricula and continuing education improves clinicians’ learning outcomes and clinical practice and enables local transformation that improves access to care. Therefore, today’s clinicians and students have an expectation that simulation laboratories are part of lifelong healthcare education.

The evolution of the COVID-19 epidemic calls for reconsideration about the delivery of training activities including adequate safety measures implemented for all individuals involved. Our findings show that, at the time of reopening, all the centres have taken measures to prevent and control the diffusion of SARS-CoV-2 such as social distancing, face masks or remodelling of the room layout. In fact, the audience is mainly formed by healthcare professionals, who might face exposure to COVID-19 infection. Additionally, for many simulation-based activities, such as teamwork training, adequate physical distancing cannot be maintained.

While the uncertainty from COVID-19 persists throughout the globe, we hope that sharing policy experiences will ultimately foster dissemination of good practices. To achieve this result, it would be advisable to establish a sort of national or international community of practice which, as in reported in other fields of healthcare, breaks down geographical and organisational barriers and can help SC executives and educators to share information, reduce professional isolation and facilitate the implementation of new processes.

CONCLUSIONS

The COVID-19 pandemic has altered the traditional training experience in an unprecedented and sudden manner. Data for the global picture show that the pandemic is far from over.

What is already known on this subject

- Simulation is an efficient tool to improve skills and knowledge, test new protocols and search for threats and their solutions.
- The potential of simulation in contributing to the management of previous pandemics and the current global COVID-19 crisis.

What this study adds

- How COVID-19 pandemic impacted simulation centres and how these coped with it in one of the most affected countries.
- The rising importance of new technologies in perpetuating education in emergency.
- Sharing common problems and policy experiences will help simulation centre executives and educators in maintaining high operational readiness at the beginning of the second wave of COVID-19.

We presented how SCs in one of the most affected countries in the world responded to the COVID-19 acute emergency phase. Simulation is a key training resource for quality care and improving healthcare provider and patient safety also during the COVID-19 pandemic response.

We remain optimistic in the future of healthcare, but challenging times require difficult decisions. We believe that sharing common problems and policy experiences will ultimately foster dissemination of good practices and will help SC managers and educators to better adapt the training activities to the new normal and continue to deliver high-quality simulation.

Limitations

Our study had several limitations. First, the structured interview was not validated but designed by a group of experts from our SC. However, it is the first study that shows a nationwide snapshot of SCs and their role in this recent pandemic.

Second, the interview was designed to investigate the most general aspects of the activities carried out by SCs without analysing what type of simulators was available and then used. The authors also decided to keep the structured interview as brief as possible (no longer than 10 min) in order to increase the study participation rate. The interview was conducted by phone to avoid misinterpretation of questions by respondents and reduce interviewees’ tendency to satisfice and give top-of-the-head answers.

Twitter Pier Luigi Ingrassia @PLIngrassia and Giulia Momando @GiuliaMomando

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Contributors PLI developed and refined the ideas in this paper. MF and PLI wrote the first draft, and all the authors discussed it actively and revised the draft until the final agreement on the submitted version. All the authors read and approved the final manuscript.

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Competing interests PLI holds a professorship and leads the Centro Interdipartimentale di Didattica Innovativa e di Simulazione in Medicina e Professioni Sanitarie (SIMNOVA) at the Università del Piemonte Orientale in Novara, Italy. MF is a medical student in the Medical School at the Università del Piemonte Orientale. GM is a PhD candidate at the Università degli Studi di Padova. Paganini is MD at the Università degli Studi di Padova.

Ethics approval Participation in the study was voluntary, anonymous, and independent. Confidentiality of information was ensured and no financial incentive to participate in the study was offered. Verbal informed consent was obtained, and the participants could withdraw from the interview at any time. Since all data were collected such that individual subjects could not be identified or exposed to risks or liabilities, the study was deemed exempt from institutional review approval by the local ethics committee.

Provenance and peer review Not commissioned; externally peer reviewed.

Data availability statement All data relevant to the study are included in the article or uploaded as supplementary information. The authors confirm that the data supporting the findings of this study are available within the article as its supplementary materials.

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ORCID iDs Pier Luigi Ingrassia http://orcid.org/0000-0002-3123-2862
Matteo Paganini http://orcid.org/0000-0002-7556-6928

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6


Original research


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SUPPLEMENTARY FILE 1

Instrument used for the interview

First section: General characteristics and demographics

Is your SC affiliated to?

- Hospital
- University
- Private society
- Other [specify]

Where is your lab located?

- Inside the hospital
- In a structure completely separated from hospital’s wards

From an economic point of view, your centre is funded by: (more than one answer)

- Hospital
- University
- Private foundation
- Government
- Other [specify]

How many staff members has your centre up to date? (indicate the number)

- Full-time directors
- Part-time directors
- Full-time administrative staff
- Part-time administrative staff
- Full-time IT staff
- Part-time IT staff
- Full-time instructors/facilitators
- Part-time instructors/facilitators

Are you accredited to simulation societies?

- Società Italiana di Simulazione in Medicina – SIMMED
- Società Europea di Simulazione in Medicina – SESAM
- Società Americana di Simulazione in Medicina – SSH
- Società Italiana di Anestesia Analgesia Rianimazione e Terapia Intensiva – SIAARTI
- Società Italiana di Medicina d’Emergenza e Urgenza – SIMEU
- Other [specify]

Second Section: Before the COVID-19 pandemic

What type of simulation did you organize before the pandemic? (More than one answer)

In situ simulation for:

- clinical training
- creation and testing of diagnostic and/or therapeutic path

Simulation inside the SC for:

- technical skills (skill lab)
- non-technical skills
- high-fidelity simulation
- Telematic modality:
The spaces of the sim centre were:

- Dedicated only to simulation
- Used also for clinical purpose

The devices (such as ventilators, ultrasounds, etc.) meant for the simulation were:

- Dedicated only to simulation
- Used also for clinical purpose

The furniture (such as beds, stretchers, wheelchairs, etc.) meant for the simulation were:

- Dedicated only to simulation
- Used also for clinical purpose

The staff of the SC:

- Was dedicated only to simulation
- Had also other roles

What roles did they have?

- IT technician for other activity or institution
- Welfare activity as physicians
- Welfare activity as nurses
- Psychologists
- Other [specify]

Were there formal agreements with health care structures to provide materials and/or spaces from the SC in case of emergency?

- Yes
- No

Third section: During the COVID-19 pandemic

Did you close the centre?

- Yes
- No

If yes, did you close it before or after the government legislations?

- Before
- After

How long did it stay closed? [specify the months]

During the emergency, did you organize simulations?

In situ simulation for

- training of COVID-19 patient’s care
- technical skills for COVID-19 patient’s care (Donning and doffing, etc.)
- creation and testing of COVID-19 patients’ path (triage, screening, etc.)
- non-technical skills for COVID-19 patient’s care (communication with patient and relatives, decisions on life ending, etc.)
- other training (trauma, airway management, cardiac arrest, etc.)
- creation and testing of diagnostic and/or therapeutic path for other patients
Simulation inside the SC for
  training of COVID-19 patient’s care
  technical skills for COVID-19 patient’s care (Donning and doffing, etc.)
  creation and testing of COVID-19 patients’ path (triage, screening, etc.)
  non-technical skills for COVID-19 patient’s care (communication with patient and relatives, decisions on life ending, etc.)
  other training (trauma, airway management, cardiac arrest, etc.)
  creation and testing of diagnostic and/or therapeutic path for other patients

Telematic modality for COVID-19 training
  Webinar
  Video Recorded
  Virtual Reality
  Augmented Reality

Telematic modality for other training
  Webinar
  Video Recorded
  Virtual Reality
  Augmented Reality

None

*Did you take in consideration the ERC guidelines [57] to adapt training to COVID-19 pandemic?*

  Yes
  No

*How were the SC spaces used?*

  They have been readapted to real patients’ care areas
  They have been readapted to COVID-19 patients’ care areas
  They have been used for COVID-19 training
  They have been used for other training
  They have been used for mixed training (COVID-19 and other)
  The centre has been closed

*The electro-medical devices (such as ventilators, US scanner, etc.) meant for the simulation were used for:*

  Real patients
  COVID training
  Other training
  Other [specify]

*The furniture (such as beds, stretchers, wheelchairs, etc.) meant for the simulation were used for:*

  Real patients
  COVID training
  Other training
  Other [specify]

*Did you need to use and/or recruit new staff specifically dedicated to simulations addressed to:*

  Health-care staff moved on clinical practice
  Technical staff moved to technical assistance for clinical practice
Psychological staff per COVID-19 pandemic (COVID-related stress, etc.)
COVID training
Other training
No
Other [specify]

### Fourth section: After the COVID-19 pandemic

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<th>Did the SC reopen?</th>
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<td>Yes</td>
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<td>No</td>
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<th>When? (specify the month)</th>
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<th>Have specific measures of infection control and prevention been adopted (social distancing, face masks, classes remodelling, etc.)?</th>
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<td>Yes</td>
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<td>No</td>
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SC: Simulation Centre; IT: Information Technology; ERC: European Resuscitation Council
Ruolo COVID Sim Centres

Q1. Centro:
Answered,43
Skipped,0

Q2. Il vostro centro di simulazione è:
Answer Choices,Response Percent,Responses
Ospedaliero?,30.23%,13
Universitario?,37.21%,16
Privato?,16.28%,7
Altro (specificare),16.28%,7
Answered,43
Skipped,0

Q3. Dove si trova il centro?
Answer Choices,Response Percent,Responses
All'interno della struttura dell'ospedale,58.14%,25
In una struttura completamente separata dai reparti ospedalieri,41.86%,18
Answered,43
Skipped,0

Q4. Quali sono le dimensioni del centro?
Answer Choices,Response Percent,Responses
< 250 m²,46.51%,20
250-500 m²,25.58%,11
> 500 m²,27.91%,12
Answered,43
Skipped,0

Q5. Da un punto di vista economico, il vostro centro è finanziato (più di una risposta possibile):
Answer Choices,Response Percent,Responses
Dall'ospedale,41.86%,18
Dall'università,41.86%,18
Da fondazioni private,23.26%,10
Dallo Stato,0.0%,0
Q6. Di che tipo di personale dispone il centro?
Answer Choices,Response Percent,Responses
Direttore Full-time,93.02%,40
Direttore Part-time,97.67%,42
Personale Amministrativo Full-Time,97.67%,42
Personale Amministrativo Part-Time,93.02%,40
Personale informatico e tecnico di simulazione Full-Time,95.35%,41
Personale informatico e tecnico di simulazione Part-Time,97.67%,42
Istruttori/Facilitatori Full-time,95.35%,41
Istruttori/Facilitatori Part-time,100.0%,43
Answered,43
Skipped,0

Q7. Siete accreditati presso una o piú società di simulazione (SIMMED, SESAM, SIARTII, etc)? Indicare quale.
Answer Choices,Response Percent,Responses
Società Italiana di Simulazione in Medicina â€“ SIMMED,48.48%,16
Società Europea di Simulazione in Medicina â€“ SESAM,24.24%,8
Società Americana di Simulazione in Medicina â€“ SSH,6.06%,2
Società Italiana di Anestesia Analgesia Rianimazione e Terapia Intensiva â€“ SIAARTI,51.52%,17
Società Italiana di Medicina d’Emergenza e Urgenza â€“ SIMEU,12.12%,4
Altro (specificare),33.33%,11
Answered,33
Skipped,10

Q8. Che tipo di simulazioni organizzavate prima dell’emergenza COVID?
Answer Choices,Response Percent,Responses
Simulazioni In situ per addestramento clinico,86.05%,37
Simulazioni In situ per creazione e test di percorsi diagnostici e/o terapeutici,65.12%,28
Simulazioni nel centro di simulazione per addestramento di abilità tecniche (skill lab),88.37%,38
Simulazioni nel centro di simulazione per addestramento di abilità non tecniche,81.4%,35
Simulazioni nel centro di simulazione per esecuzione di simulazione ad alta fedeltà,81.4%,35
Modalità telematica Webinar,18.6%,8
Modalità telematica Video Registrato,11.63%,5
Q9. Gli spazi del centro di simulazione per cosa venivano usati?
Answer Choices, Response Percent, Responses
Solo per training, 88.37%, 38
Anche per uso clinico, 11.63%, 5
Answered, 43, Skipped, 0

Q10. I dispositivi elettromedicali (ventilatori, ecografi, etc) dedicati alla simulazione per cosa venivano utilizzati?
Answer Choices, Response Percent, Responses
Solo per training, 71.43%, 30
Anche per uso clinico, 28.57%, 12
Answered, 42, Skipped, 1

Q11. Gli arredamenti (barelle, letti, sedie a rotelle, etc) dedicati alla simulazione per cosa venivano utilizzati
Answer Choices, Response Percent, Responses
Solo per training, 90.7%, 39
Anche per uso clinico, 9.3%, 4
Answered, 43, Skipped, 0

Q12. Il personale del centro di simulazione:
Answer Choices, Response Percent, Responses
Era solo dedicato alla simulazione, 4.65%, 2
Svolgeva anche altri incarichi, 95.35%, 41
Answered, 43, Skipped, 0

Q13. Se svolgeva anche altri incarichi, quali?
Q14. Esistevano accordi formali con strutture assistenziali per fornire materiali e/o utilizzare spazi in caso di emergenza?
Answer Choices, Response Percent, Responses
Sì, 27.91%, 12
No, 72.09%, 31
, Answered, 43
, Skipped, 0

Q15. Avete dovuto chiudere il centro?
Answer Choices, Response Percent, Responses
Sì, 88.37%, 38
No, 11.63%, 5
, Answered, 43
, Skipped, 0

Q16. Se sì, lo avete chiuso prima o dopo l’emanazione delle normative governative?
Answer Choices, Response Percent, Responses
Prima, 39.47%, 15
Dopo, 60.53%, 23
, Answered, 38
, Skipped, 5

Q17. Per quanto tempo siete rimasto chiuso?
Answered, 41
Skipped, 2

Q18. Durante l'emergenza, avete utilizzato od organizzato:
<table>
<thead>
<tr>
<th>Answer Choices, Response Percent, Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Simulazione In situ per addestramento clinico al trattamento del paziente COVID, 33.33%, 14</td>
</tr>
<tr>
<td>Simulazione In situ per addestramento di abilità tecniche per trattare il paziente COVID (vestizione/svestizione DPI, etc.), 40.48%, 17</td>
</tr>
<tr>
<td>Simulazione In situ per creazione e test di percorsi diagnostici e/o terapeutici per paziente COVID (triage, screening, etc.), 23.81%, 10</td>
</tr>
<tr>
<td>Simulazione In situ per addestramento di abilità non tecniche per trattare il paziente COVID (comunicazione con paziente e famiglia, decisioni sul fine vita, etc.), 7.14%, 3</td>
</tr>
<tr>
<td>Simulazione In situ per altro training (es: trauma; gestione arresto cardiaco; gestione vie aeree, etc), 19.05%, 8</td>
</tr>
<tr>
<td>Simulazione In situ per la creazione e test di percorsi diagnostici e/o terapeutici per altri pazienti, 4.76%, 2</td>
</tr>
<tr>
<td>Simulazione nel centro di simulazione per addestramento clinico al trattamento del paziente COVID, 11.9%, 5</td>
</tr>
<tr>
<td>Simulazione nel centro di simulazione per addestramento di abilità tecniche per trattare il paziente COVID (vestizione/svestizione DPI, etc.), 11.9%, 5</td>
</tr>
<tr>
<td>Simulazione nel centro di simulazione per creazione e test di percorsi diagnostici e/o terapeutici per paziente COVID (triage, screening, etc.), 7.14%, 3</td>
</tr>
<tr>
<td>Simulazione nel centro di simulazione per addestramento di abilità non tecniche per trattare il paziente COVID (comunicazione con paziente e famiglia, decisioni sul fine vita, etc.), 4.76%, 2</td>
</tr>
<tr>
<td>Simulazione nel centro di simulazione per altro training (es: trauma; gestione arresto cardiaco; gestione vie aeree, etc), 9.52%, 4</td>
</tr>
<tr>
<td>Modalità telematica per COVID (Webinar), 47.62%, 20</td>
</tr>
<tr>
<td>Modalità telematica per COVID (Video Registrati), 28.57%, 12</td>
</tr>
<tr>
<td>Modalità telematica per COVID (Realtà Virtuale), 7.14%, 3</td>
</tr>
<tr>
<td>Modalità telematica per COVID (Realtà Aumentata), 2.38%, 1</td>
</tr>
<tr>
<td>Modalità telematica per altro training (Webinar), 47.62%, 20</td>
</tr>
<tr>
<td>Modalità telematica per altro training (Video Registrati), 23.81%, 10</td>
</tr>
<tr>
<td>Modalità telematica per altro training (Realtà Virtuale), 7.14%, 3</td>
</tr>
<tr>
<td>Modalità telematica per altro training (Realtà Aumentata), 4.76%, 2</td>
</tr>
<tr>
<td>Nessuna, 19.05%, 8</td>
</tr>
</tbody>
</table>

Q19. Avete tenuto conto delle indicazioni ERC (European Resuscitation Council) sugli adattamenti dei training durante la pandemia COVID?

<table>
<thead>
<tr>
<th>Answer Choices, Response Percent, Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sì, 61.9%, 26</td>
</tr>
<tr>
<td>No, 38.1%, 16</td>
</tr>
</tbody>
</table>

Q20. Come sono stati utilizzati gli spazi del centro di simulazione?

<table>
<thead>
<tr>
<th>Answer Choices, Response Percent, Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sono stati riadattati come area di cura per pazienti reali, 2.33%, 1</td>
</tr>
<tr>
<td>Sono stati riadattati come area di cura per pazienti COVID, 4.65%, 2</td>
</tr>
<tr>
<td>Sono stati usati esclusivamente per training per COVID, 13.95%, 6</td>
</tr>
<tr>
<td>Sono stati usati esclusivamente per training per altro, 2.33%, 1</td>
</tr>
</tbody>
</table>
Sono stati usati per training misto (COVID e altro), 9.3%, 4
Il centro è stato chiuso, 65.12%, 28
Altro (specificare), 2.33%, 1
Answered, 43
Skipped, 0

Q21. I dispositivi elettromedicali [ventilatori, ecografi, etc] previsti per le attività di simulazione sono stati utilizzati per:

<table>
<thead>
<tr>
<th>Answer Choices</th>
<th>Response Percent</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pazienti reali</td>
<td>23.26%, 10</td>
<td></td>
</tr>
<tr>
<td>Training COVID</td>
<td>11.63%, 5</td>
<td></td>
</tr>
<tr>
<td>Altro training</td>
<td>6.98%, 3</td>
<td></td>
</tr>
<tr>
<td>Altro (specificare)</td>
<td>58.14%, 25</td>
<td></td>
</tr>
</tbody>
</table>
Answered, 43
Skipped, 0

Q22. Gli arredamenti [barelle, letti, sedie a rotelle, etc] previsti per le attività di simulazione sono stati utilizzati per:

<table>
<thead>
<tr>
<th>Answer Choices</th>
<th>Response Percent</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pazienti reali</td>
<td>13.95%, 6</td>
<td></td>
</tr>
<tr>
<td>Training COVID</td>
<td>13.95%, 6</td>
<td></td>
</tr>
<tr>
<td>Altro training</td>
<td>6.98%, 3</td>
<td></td>
</tr>
<tr>
<td>Altro (specificare)</td>
<td>65.12%, 28</td>
<td></td>
</tr>
</tbody>
</table>
Answered, 43
Skipped, 0

Q23. Avete dovuto usare e/o arruolare nuovo personale da dedicare appositamente a simulazioni indirizzate a:

<table>
<thead>
<tr>
<th>Answer Choices</th>
<th>Response Percent</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staff sanitario spostato su pratica clinica</td>
<td>2.33%, 1</td>
<td></td>
</tr>
<tr>
<td>Staff tecnico spostato ad assistenza tecnica per area clinica</td>
<td>0.0%, 0</td>
<td></td>
</tr>
<tr>
<td>Staff psicologico dedicato ad emergenza COVID (es. stress in COVID o post-COVID)</td>
<td>2.33%, 1</td>
<td></td>
</tr>
<tr>
<td>Training esclusivo per COVID</td>
<td>9.3%, 4</td>
<td></td>
</tr>
<tr>
<td>Training esclusivo per altro</td>
<td>2.33%, 1</td>
<td></td>
</tr>
<tr>
<td>Nessuno</td>
<td>88.37%, 38</td>
<td></td>
</tr>
<tr>
<td>Altro (specificare)</td>
<td>2.33%, 1</td>
<td></td>
</tr>
</tbody>
</table>
Answered, 43
Skipped, 0
Q24. Il centro ha riaperto regolarmente dopo il termine della fase acuta dell'emergenza?
Answer Choices, Response Percent, Responses
Sì, 69.77%, 30
No, 30.23%, 13
Answered, 43
Skipped, 0

Q25. Quando?
Answered, 41
Skipped, 2

Q26. Sono state adottate delle specifiche misure di prevenzione del contagio? (Distanziamento sociale, rimodulazione delle sale didattiche, mascherine, visiere, etc)
Answer Choices, Response Percent, Responses
Sì, 95.35%, 41
No, 4.65%, 2
Answered, 43
Skipped, 0