

Pediatric Intensive Care Nursing

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Face book



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Pediatric Intensive Care Nursing

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Note: Although this issue of *Pediatric Intensive Care Nursing* (PICN) is dated December 2019, we delayed publication to better speak to growing international corona virus concerns, which were eventually declared by the World Health Organization as a COVID-19 pandemic. This issue of PICN was actually published in mid-March 2020, at which time the global situation was still rapidly changing.

Editorial

COVID-19: Implications for pediatric intensive care nursing

Franco A. Carnevale, RN, PhD Editor, Pediatric Intensive Care Nursing Montreal, Canada

A personal message from a colleague and friend, an ICU Nurse working in Northern Italy (Translated from Italian)

Dear Franco, I am writing to you from the Italian frontline, yes the frontline — like a wartime frontline. I am now working during the night in the intensive care unit. We are at the frontline, facing the invasion of COVID-19 in Italy.

We are invaded and we are 'shooting' in the hospital and on the streets with masks on! It all started 2 weeks ago in Lombardy, and a few days ago my hospital was also invaded by symptomatic patients. We have modified the entire hospital; we are doing pre-triage assessment outdoors.

As of today, visits by relatives have been banned (except for children). We are receiving patients in intensive care even in these night time hours... it's surreal!!

Nobody expected such a tsunami!! Italy has closed its borders, flights and commercial activities. Only supermarkets and pharmacies are open. Travel from town to town is prohibited. You can only drive around for work or for shopping, by presenting a permit.

We try to stay at home as much as possible. I am tired physically and psychologically because we are always on alert and our concentration level is always very high. Holidays have been suspended.

COVID-19: Implications for pediatric intensive care nursing

I have delayed writing this editorial, waiting for an optimal time; waiting for when the global COVID-19 situation might stabilize – when it might be clearer what an editor should write. Sadly, a time of stability and clarity is not expected for a long time.

With all that is going on, I am using PICN's fairly unique forum, as a space for pediatric intensive care unit (PICU) nurses around the world, to highlight implications of COVID-19 for pediatric intensive care nursing – as I understand these implications. I welcome your comments and additional suggestions, on PICN's Twitter feed: @PedICUnursing

One small consolation amidst this global tragedy is that children do not seem to be particularly vulnerable to critical illness or death as a result of a COVID-19 infection. The rate of severe illness in children seems lower than in adults. However, the population impact evidence is still emerging and pathophysiological explanations are still poorly developed.

For some initial evidence, see:

- American Academy of Pediatrics/News/Coronavirus
- American Academy of Pediatrics/News/Pediatrics

That said, it seems foreseeable that some pediatric sub-populations will likely be highly vulnerable, such as children with existing respiratory illnesses or immunosuppression. Given the current lack of effective anti-microbial agents to treat COVID-19, such infections could entail fatal consequences for these especially vulnerable children. Maximal preventive measures should be used to protect these children.

Although the risks for severe COVID-19 infections among children are lower than for adults, children within PICUs will be exposed to other problems related to this current pandemic.

Here is an initial list of these problems:

- Critical care resources (human and material resources) are being severely overstretched globally, which can compromise resources available within PICUs;
- Many nurses are being infected or are quarantined because of possible COVID-19 contact, which is limiting nurses available within PICUs;
- Social distancing practices are understandably limiting the numbers of families/visitors that can enter pediatric centers, which will diminish social supports available for children and families within PICUs;
- Some parents are being infected or quarantined, which limits access to valuable family comfort for critically ill children and profoundly stresses parents who cannot be with their critically ill children;
- Many nurses are socially stressed because of diminished social supports (e.g., daycare or school closures for their children); and
- Many parents are financially stressed because of loss of income (e.g., suspension of some jobs) and socially stressed because of diminished social supports (e.g., daycare and school closures for their other children). There are surely many more problems that are impacting PICU nurses...

COVID-19: Implications for pediatric intensive care nursing

The current situation is imposing significant additional stress on nurses working within PICUs, even if the number of children with COVID-19-related critical illness is relatively low. It is crucial that PICU nurses are consulted - within their workplaces as well as internationally through social media — for their input on the supports that they require to help ensure they can do the extraordinary work that they will be required to perform for an extended period of time.

Needed supports will vary depending on the specific demands and supports within their respective settings.

It is important to recognize that in the face of a healthcare crisis, such as a pandemic, nurses on the frontline are bearing serious risks and exhausting work conditions. The safety and wellbeing of affected populations are directly dependent on nurses' extraordinary and frequently heroic dedication to vulnerable members of their communities.

Nursing leaders and other healthcare leaders need to help support frontline nurses by advocating for needed supports as well as recognizing their valuable contributions. It is inspiring to see that some national leaders in Italy that are bringing these issues into the spotlight. For example, the Italian National Federation of Professional Nursing Orders (i.e., FNOPI: Federazione nazionale degli ordini delle professioni infermieristiche) has posted an online video with graphic images demonstrating the severe strain being endured by Italian nurses as well as their outstanding courage.

FNOPI pleads (in Italian) 'There is no more time. Help us stop the spread of the virus'. Even if you do not speak Italian, the images are powerful – and heart-breaking (<u>link</u>)

Additionally inspiring is a statement published in this issue of PICN, titled 'COVID-19: Lessons learned in Italy'. This statement has been submitted by the Italian Critical Care Nurses Association (i.e., Aniarti: Associazione Nazionale Infermieri di Area Critica).

They draw on their tragic experience to highlight important lessons for the rest of us around the world.

A few days ago, a Canadian newspaper published by a commentary by Dr. Kevin Patterson, a physician. He wrote (referring mainly to nurses working on the frontlines in this pandemic) 'And still, they rush into battle. Under-armoured and unarmed, in Italy and Iran and China, mostly women, mostly poorly paid, not respected nearly enough. In full knowledge of the risk they run. When this is over, there had better be a parade' (*Link*)

I am looking forward to the day that we can look back and properly celebrate the tremendous nursing heroism that is helping our world survive this devastating problem as well as possible!

Franco A. Carnevale Editor, Pediatric Intensive Care Nursing

COVID-19 - lessons learned in Italy



The Italian Critical Area nurses represented by Aniarti are working hard at the moment. We believe that it is important to share, our first impressions and experiences on what we learned in the first days of the COVID-19 epidemic.

We have seen a very high number of hospitalizations in intensive care, almost entirely due to severe hypoxemic respiratory failure that rapidly worsens in ARDS and requires mechanical ventilation and pronation at least in the first 48 hours. The measures put in place of isolation and some changes in the usual habits and conventions of social and community life have the aim to try to contain the rapid spread we are observing throughout Europe and the world. These actions, although apparently drastic, are necessary and it is not time to underestimate what is happening. Consider that about 15% of those infected are health workers, and this puts us in a position to be the category most at risk.

About 10% of those infected are admitted to an intensive or sub-intensive care unit. For this reason it is necessary to adopt adequate safety measures and contain the risk of virus spread during all phases of treatment and care of people in critical conditions.

Given the rapidity of the evolution of the epidemic (which could soon become a pandemic), pending confirmation from clinical research, some aspects that have been put in place, and others that deserve to be considered for the most prudent and judicious management are as follows:

- Organization (or strengthening) of a national ICU Network
- Definition and verification of pandemic emergency plans (with verification of organ care and support devices, personal protective equipment and appropriate training as extensive as possible)
- Establishment of appropriate Rapid Triage protocols on the territory and in front of Emergency Departments to identify patients with suspicion of COVID-19 at an early stage and insert them in dedicated logistical and clinical pathways which are separate from the other clinical conditions of non infected users
- Accurate and extensive training with appropriate simulations on dressing and undressing procedures with Personal Protective Equipment (PPE)
- Identification of the hospitals that should receive COVID-19 patients, or strict separation of
 the treatment areas (of any intensity level) dedicated to people with COVID-19, and their
 transit and transport routes, including areas for radiological diagnostics
- Redefine the number of nurses with care skills in ICU in consideration of a working model
 with a patient nurse ratio 1:1 and where possible 2:1 for procedures with a high
 workload. The workload is greatly increased due to the physiological slowdown that
 wearing PPE involves, in addition to the need to increase attention levels to avoid possible
 contamination and dispersion of SARS-Cov-2 viruses. Organize shifts so that a nurse or an
 Health Carer Assistant (HCA) always remains "clean" outside the area where PPE is to be
 used and provide for the possibility of having free nurses on shift who can support or
 lighten the workload.



SCENARIO*

associazione nazionale infermieri di area critica

COVID-19 - lessons learned in Italy



- Increase of beds in intensive and sub-intensive care unit, with priority recruitment of
 already experienced nurses, as the need to care for a large number of patients can
 suddenly arise and evolve very quickly so as not to allow training and integration of newly
 hired or inexperienced in intensive care.
- Expect increased workloads due to high pronation needs, and PPE dressing and undressing procedures
- Need to aggregate care interventions and anticipate any preventable/predictable situations to reduce the patient's bedside time and allow adequate interval times without PPF
- Need to schedule shifts on COVID 19 patients such that nurses do not wear PPE for more than 3 hours (4 hours maximum), and take appropriate measures to prevent pressurerelated injuries related to PPE (protective hydrocolloids on contact points of filter masks)
- Predict the need to extend shifts due to workload, but also cases of possible increase in illness among care staff
- Strengthening of support operators for logistical needs linked to the decontamination and reconditioning of multi-use care and assistance equipment
- Meticulous monitoring of daily and terminal environmental hygiene procedures, with
 particular attention to common and repeated contact surfaces such as keyboards, PCs,
 telephones, switches, door handles, and personal mobile phones
- Need to consider the possibility of psychological support for intensive therapy teams facing
 up this situation due to the increase of work-related stress, the possibility of burn-out in
 relation to the lengthening of "health emergency" times, the feeling of isolation and
 anxiety of the operators (also related to the health of their meaningful)
- Particular attention should be paid to refreshing the internal safety rules aimed at limiting the dispersion of contaminants containing SARS-Cov2 viruses, particularly for procedures at risk.
 - o Tracheal intubation
 - Tracheostomy bedside
 - Tracheal suction (closed circuit)
 - Limit as much as possible the oxygenation and ventilation methods that can nebulize particles
 - Aerosol therapy (privilege the installation of the systems directly at the time of intubation of the patient)
 - o Avoid accidental disconnection of the ventilator circuit
 - Use the "expiratory pause block" functions combined with the closure of the endotracheal tube in case of programmed opening of the circuit
 - Avoid the use of high diffusion droplet systems (High Flow Nasal Cannula, Noninvasive ventilation with face mask, CPAP by Boussignac system)

COVID-19 - lessons learned in Italy



- Privilege the use of the helmet as an interface for oxygen therapy or CPAP, placing a
 HEPA (high efficiency particulate air) filter on the expiratory line
- Place a HEPA filter on the expiratory valves of the ventilators, on the side where the exhaled gas escapes into the atmosphere.
- o Place a HEPA filter on manual ventilation devices
- Prefer the use of single-use fibroscopes
- In case of MET activation for CPR maneuvers, inside hospitals, operators must consider the
 unknown patient as potentially infected, and use the PPE provided for Covid patients
 (equip emergency backpacks with complete dressing kits for at least 2 operators)
- Immediate notification of any disruption of barriers caused by individual PPE or accidental exposure conditions
- Prudential and temporary limitation of access to patient visits in all areas of the hospital, with absolute prohibition of entry to people with respiratory symptoms. Provide alternative strategies of communication with the patients' families (Skype, video calls, email, etc.)
- The nurse, towards the awake patient, maintains himself as an interface with the outside
 world with respect to the condition of isolation. This condition is not new, especially to
 those who assist patients in protective isolation by immunosuppression (eg.
 Transplantation, malignant haematological pathologies in bone marrow aplasia ...), and the
 measures of therapeutic relationship are presumably maintained in a way comparable to
 those mentioned above

It is essential to keep in mind that the rapid evolution of infection clusters can set up an emergency situation in a very short time, without any time to implement appropriate containment measures. This is why anticipation and planning becomes the key to deal with this epidemic.

Genova 08/03/2020

For the ANIARTI Board

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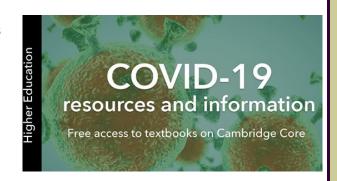
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COVID-19 Resources and Information

Cambridge University Press is making higher education textbooks in HTML format free to access online during the coronavirus outbreak.

Over 700 textbooks, published and currently available, on Cambridge Core are available regardless of whether textbooks were previously purchased.

Free access is available until the end of May 2020. <u>Link to Cambridge University</u>



New Guideline Nutritional Support in Critically Ill Children

Nutritional support for children during critical illness: European Society of Paediatric and Neonatal Intensive Care (ESPNIC) metabolism, endocrine and nutrition section position statement and clinical recommendations.

There is a lack of high-quality evidence to guide nutrition in paediatric critical illness.

This position statement and clinical recommendations summarise the existing evidence around 15 of the most important clinical questions, and where no evidence is available, suggest good clinical practice. *Link to article*

Surviving SEPSIS Campaign

Watch the session from #CCC49 on the <u>Surviving Sepsis Campaign</u>'s Children's Sepsis Guidelines. SCCM



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We know that time is precious and everyone has busy lives. Our Quick Concepts video collection is full of short videos that provide detailed insight into a subject in a timely manner.

Link to OPEN Pediatrics



European Society Pediatric and Neonatal Intensive Care (ESPNIC) celebrates the International year of the nurse and the midwife 2020

The WHO has designated the 2020 as the international year of the nurse and the midwife, in honor of the 200th anniversary of Florence Nightingale's birth. This year will be the opportunity to celebrate and showcase nursing in it's different roles and scope of practice all over the world.

Nurses are the bridge of healthcare, paving roads and creating special connections between people in the community and healthcare, said Dr. Ghebreyesus, Director-General of the World Health Organization (WHO). For this reason nurses are key to achieve the WHO aim of bringing universal healthcare to everyone.

Over 50% healthcare workers in the world are nurses, but 50% of WHO member states report to have less than 3 nurses and midwifes per 1000 population. A WHO report on the state of the nursing workforce around the world will be soon published in April 2020 to highlight areas for policy development.

The International Year of the Nurse and midwife will be the opportunity to celebrate the essential contribution of nurses and show support for increased nursing leadership, involvement in policy making, higher education and more staffing. Pediatric Intensive Care Unit (PICU) nurses care for complex patients requiring many advanced skills, such as the ability to manage advanced monitoring and interventions. Some of those skills range from physical examination, interpretation of hemodynamic monitoring and laboratory tests, management of vasoactive and other high-risk drugs, mechanical ventilation, invasive catheters and tubes, early mobilization and providing effective communication with families and the healthcare team. Pediatric intensive care nurses with clinical, academic or researcher's roles apply strong leadership skills and the ability to work in complex interdisciplinary teams to achieve significant patient outcomes.

The European Society of Pediatric and Neonatal Intensive Care (ESPNIC) has decided to celebrate PICU and Neonatal Intensive Care Unit (NICU) nursing through a variety of projects aiming at showcasing the contribution of nurses to the health of critically ill neonates and children in Europe. Testimonials of PICU/NICU nurses, allied health professionals, doctors, parents and PICU survivors from Europe will be collected and posted on the ESPNIC website. The aim is to show the scope, broadness, challenges, innovation ability and also the diversity of the PICU/NICU nursing practice in Europe. Short statements from healthcare providers will be aimed at communicating their perception of the value of the PICU/NICU nursing role, in its variety of expressions and manifestations.



Year of the Nurse and Midwife 2020

Join ESPNIC in our campaign to highlight their contribution together



European Society Pediatric and Neonatal Intensive Care (ESPNIC) celebrates the International year of the nurse and the midwife 2020

The ESPNIC Nursing Science section is planning a communication campaign through the publication of editorials and research studies in scientific journals, to highlight the relevance of the contribution of PICU/NICU European nurses to clinical research and evidence based practice.

The ESPNIC Nursing section has set a working group of members from different European countries to deliver PICU standards for nursing education in Europe, to support nurses in standardizing competencies and advancing quality of care in Europe. Educational requirements for PICU/NICU nursing clinical practice vary greatly between European countries determining differences in the way nursing care is delivered. An online PICU nursing course, created thanks to the contribution of ESPNIC members, will be launched this fall at the EAPS-ESPNIC conference in Barcelona. The course will cover basic clinical and research topics to support and advance PICU nursing competencies.

This year 2020 ESPNIC nurses will have the advantage of having the possibility of joining the ESPNIC community through Unit memberships. Nurse members are entitled to join the vibrant Nursing Science and Nursing sections, where important networking for sharing and developing research or quality improvement projects usually takes place. Also mentoring between more expert and junior nurses, on their way to their Masters or Doctoral academic degrees is a valuable asset. Nursing membership also entitles nurses to apply for travel grants, nursing fellowships and other research funding.

This year will be the opportunity to collectively reflect on the professional development and organizational challenges PICU/NICU nurses face in their clinical, research and academic practice. ESPNIC supports the development of PICU/NICU nurses by creating an environment where advancing evidence based practice, research, mentoring and networking is possible and strongly encouraged among all healthcare professions, including allied health professionals.

A video award will be shortly launched to elicit a broader communication of the PICU/NICU contribution to patient care by means of short 2-3 minute videos. Through their own videos healthcare providers will be able to portray specific projects, testimonies, contributions, roles, leadership abilities and impact on patient care of PICU/NICU nursing practice.

Creativity and the ability to capture significant dialogues and images portraying PICU/NICU nursing practice will the main assets expected for this award. The best videos will be selected by an award Committee to be posted on the ESPNIC website for public view.

Orsola Gawronski ESPNIC Nursing President

2020 - International Year of the Nurse and Midwife



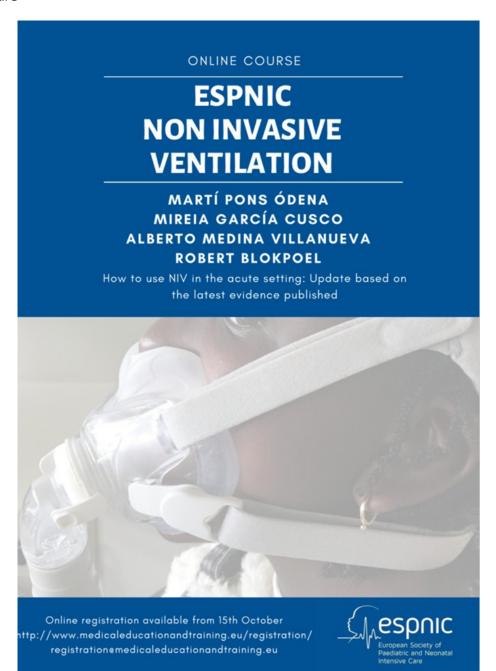
Nurses and midwives play a vital role in providing health services. These are the people who devote their lives to caring for mothers and children; giving lifesaving immunizations and health advice; looking after older people and generally meeting everyday essential health needs. They are often, the first and only point of care in their communities. The world needs 9 million more nurses and midwives if it is to achieve universal health coverage by 2030.

That's why the World Health Assembly has designated 2020 the International Year of the Nurse and the Midwife.

Read more about the campaign

How to use NIV in the Acute Setting

An educational online course endorsed by the European Society of Paediatric and Neonatal Intensive Care



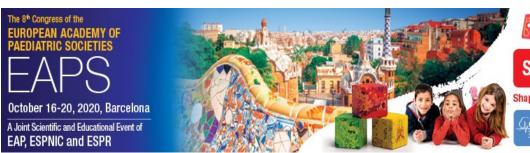
With the COVID-19 outbreak, Mechanical Ventilation can be a huge challenge for professionals who don't face it in their daily routine. <u>European Society of Paediatric and Neonatal Intensive Care (ESPNIC)</u> Chair of Professional Development Alberto Medina Villanueva and Secretary – Mireia Garcia Cusco – have prepared series of practical tutorials called "Mechanical Ventilation for Dummies". <u>Link to Courses</u>

Upcoming Congresses (click on the picture to get linked)



Update from the Conference Organizers

Due to the latest COVID-19 developments, we have taken the decision to postpone WFPICCS 2020. We are currently looking into options and availability for future dates in Mexico City later this year and will provide an update as soon as possible.





Shaping the Future of Child Health







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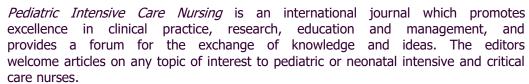
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Format

Manuscripts must be written in English; either American or British spelling may be used but must be consistent throughout. Manuscripts should be typed double-spaced, using Arial or Times New Roman font in at least 11-point, with margins of at least 2 cm or 1 inch. Number pages consecutively beginning with the title page. The preferred length for research, clinical and review papers is 1000-2500 words, excluding references. Submissions to Spotlight on PICU should not exceed 1500 words. The sections of the manuscript should be in the following order.

Title page

- Title should be concise and informative, and typed in bold capitals.
- Names (first name, initial(s) and family names) of authors in the order in which they are to appear.
- Include a maximum of 4 qualifications for each author
- Institutional affiliation(s) of each author
- Address, telephone and fax numbers and email address of corresponding author

Abstract

An abstract not exceeding 250 words is required for all submissions except those for Spotlight on PICU. For research studies, the abstract should be structured under the following headings: Background, Methodology, Results (or Findings), Conclusions.

Body of text

Use headings to structure the paper. The type of paper will determine the headings, e.g. for research papers the main headings will be Introduction, Background, Methodology/Methods, Results/Findings, Discussion, Conclusion. Up to 2 levels of headings may be used. Papers reporting research conducted in humans or animals should include a statement that the study was approved by the relevant body or bodies.

References

The list of references should only include works that are cited in the text and that have been published or accepted for publication. References such as "personal communications" or "unpublished data" cannot be included in the reference list, but can be mentioned in the text in parentheses.