




Critical Care in Critical Times of COVID-19 in Argentina: A Viewpoint

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- *The world is experiencing an unparalleled COVID-19 pandemic which highlighted the important role and contribution of critical care nurses worldwide.*
- *Argentinean health authorities and critical care organizations have delivered country wide education and support strategies to upskill the critical care nursing workforce.*
- *The challenges include to tailor a pandemic response in a context of a weak and fragmented health system and shortage of critical care nurses.*
- *Argentina needs to invest in expanding specialty education, enhancing critical care nursing leadership, and improving working conditions of critical care nurses.*

Keywords: *Argentina, COVID-19, critical care nursing, pandemic*

INTRODUCTION

The world is experiencing an unprecedented pandemic of Coronavirus Disease 2019 (COVID-19) caused by the novel Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2). The highly infectious SARS-COV-2 achieved global presence in a few months and did challenge governments and healthcare systems worldwide. Nurses are in the frontline of pandemic response, with intensive care nurses being responsible for looking after the most vulnerable COVID-19 patients within the health systems. In this article we provide a perspective on the challenges criticalcare

nurses are experiencing to face COVID-19 in Argentina and we offer a future direction.

The global crisis unleashed by COVID-19 exposed the structural weaknesses of the health systems and made noticeable the role of nurses and its specialized practice in critical care than never before. By the end of December 2020, more than 80 million people acquired COVID-19, and more than a million and a half died globally (Dong et al., 2020). The initial outbreak in Wuhan, China resulted in more than 95 thousand affected and almost five thousand deaths (Dong et al., 2020). While there

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is a great proportion of patients with mild disease among those infected, 6%–14% of infected patients required critical care (Phua et al., 2020). Nurses comprise 60% of the global health workforce (World Health Organization [WHO], 2020b) and therefore, they are unique, essential responders to the COVID-19 pandemic. The media showed how critical resources, were fast mobilized to the city of the initial outbreak. However, this was not without a cost for the health personnel, who suffered symptoms of depression, anxiety, insomnia, and distress (Lai et al., 2020). The challenges were replicated globally.

THE SITUATION IN ARGENTINA

In Argentina, 1,583,297 cases of COVID-19 were documented by the end of December 2020 (see Table 1), 42,650 (2.7%) of them died; 3,313 patients were in critical condition, and critically ill COVID-19 patients and those of other conditions occupied 52.6% of intensive care unit (ICU) beds countrywide (Ministerio De Salud, 2020b). There were, however, some northern Argentine provinces which had their local healthcare system collapsed (Girón, 2020; Perfil, 2020). In this context, representatives of the Argentine Society of Intensive Care alerted the problem was not the lack of equipment but the shortage of intensive care professionals (Telam, 2020). Low wages and inadequate working conditions have contributed to this perennial problem (Alberto et al., 2005) which is compromising the outbreak response.

Efforts were made by public health authorities—and the population living the largest lockdown in the world!—to strengthen the health system and improve ICU bed capacity from 8,521 to 11,668 (Ministerio De Salud, 2020a). To support critical care staff, including critical care nurses, contracts of resident health professionals in hospital training programs were extended nationwide (Ministerio De Salud, 2020c). In addition, a large district such as Buenos Aires City which concentrates the highest population density and financial resources, recruited retired personnel and temporary staff (GCBA, 2020). Other provinces

TABLE 1. COVID-19 Cases per Argentine Province

| Province | Confirmed cases |
|---------------------------------|------------------|
| Buenos Aires | 667,990 |
| Santa Fe | 171,770 |
| Ciudad Autónoma de Buenos Aires | 170,327 |
| Córdoba | 125,093 |
| Tucumán | 70,407 |
| Mendoza | 59,609 |
| Neuquén | 39,365 |
| Río Negro | 37,277 |
| Chubut | 29,881 |
| Entre Ríos | 28,078 |
| Chaco | 23,847 |
| Salta | 22,239 |
| Santa Cruz | 22,208 |
| Tierra del Fuego | 18,739 |
| Jujuy | 18,506 |
| Santiago del Estero | 17,071 |
| San Luis | 16,032 |
| Corrientes | 11,383 |
| San Juan | 10,900 |
| La Pampa | 9,706 |
| La Rioja | 9,068 |
| Catamarca | 2,576 |
| Misiones | 1,011 |
| Formosa | 214 |
| Total | 1,583,297 |

Source: Ministry of Health, epidemiological information, 27/12/2020.

and districts also hired available temporary nursing professionals. Additional national health policies included recruiting, mobilizing, and relocating critical care nursing workforce from large provinces to small provinces and districts where critical care nurses were urgently needed.

Despite significant logistic measures, intensive care professionals remain scarce. The Argentine Society of Intensive Care recommended nursing teams should have emergency, cardiology or medical surgical nurses, and they were expected to perform in teams lead by expert critical care nurses. However, most recruited staff were

new graduates, or with limited professional experience, hampering the expected team composition. Experts stressed that intensive care specialty training takes an average of 4 years, and to obtain adequate workforce in such a short timeline may not be achievable (Telam, 2020). Additionally, 63,837 health professionals (4.3% of total infections) including nurses were infected, and amongst them 397 were unfortunately lost according to the December report on the status of healthcare workforce (Ministerio De Salud, 2020d). The problem worsened. Because it is common nurses holding multiple jobs (Aspiazu, 2017), a nurse on sick leave also affected other hospital where he/she was employed. Public health strategies were hampered by underlying unattended problems.

In early 2020, a National Nursing Directorship (NND) was created under the National Direction of Human Capital of the Argentine Ministry of Health. This NND is the highest nursing authority in the country, and it was instrumental to mobilize online educational resources and support to upskill the available nursing workforce (Dirección Nacional De Capital Humano, 2020). The online training, led by the Critical Nursing Chapter of the Argentine Society of Intensive Care, an organization member of the World Federation of Critical Care Nurses, and the Argentine Federation of Nursing reached nurses from all provinces. Topics included clinical management of COVID-19 patients, organization of intensive care services, cohort models of care and team skill mix. In addition, critical care experts provided additional in-site support to those districts where the health system was overwhelmed (Czubaj, 2020). Despite the supporting strategies, providing every critically ill patient a competent nursing care (Bloomer et al., 2019; Williams et al., 2006) was a difficult task, and may not be possible given an unparalleled global health concern. Nevertheless, the value, vocation, courage, and commitment of nurses performing in Argentine ICUs is remarkable.

The COVID-19 pandemic in Argentina has highlighted lasting underlying issues such as an expensive and inefficient health system and poor working conditions of nurses. It is unfortunate the health system is fragmented, with subsystems working in silos and poor coordination, lack of systems to collect reliable information and poor infrastructure (Rubinstein et al., 2018). These characteristics resulted in a costly, inefficient, and unequal health system (Rubinstein et al., 2018). It is obvious nurses can't have better conditions than the health system where they perform. Nurses' lack of social recognition, meager salaries, inadequate union representation, and multiple employment (Aspiazu, 2017) made nursing an unattractive profession. Despite the lack of updated and reliable information on the number of nurses and their qualifications at national level, the shortage is evident (Observatorio Federal De Recursos Humanos En Salud, 2018). Argentina was unable to provide information on working conditions, regulation, management, and leadership of the nursing profession to the Global report on the State of Nursing in the World (WHO, 2020b). The Argentine healthcare system and the nursing profession have long been neglected; it is time for a change.

Despite the challenges Argentinean critical care nurses face the future is promising. National regulation of the Ministry of Health states ICU staffing must consist of critical care nurses with specialized education if such resource is available (Resolución 748 / 2014, 2014). A specialty university qualification is obtained after a bachelor of nursing degree. However, a regional workforce report showed Argentina had the lowest proportion (11%) of bachelor nurses in the Americas with the remaining being technicians and aids (Cassiani et al., 2018). Having such a small proportion of bachelor nurses (Cassiani et al., 2018), it is not surprising an important number of ICUs are understaffed (Torre et al., 2019). On the other hand, the modest expansion of postgraduate degrees in critical care nursing

witnessed in the last decade is promising with four universities providing an accredited specialty degree (Coneau, 2020). Despite this, obtaining the specialty degree does not make a difference in the benefits of intensive care work, probably because of the small number of specialized nurses. Other advancement includes the development of professional organizations, which became stronger and gained international recognition (Federación Latinoamericana De Enfermería En Cuidado Intensivo, 2020). Today's scenario of critical care nursing in Argentina is better than years ago (Alberto et al., 2005), still there is much to be done.

The workload of critical care nurses in Argentina is much higher than the recommended standards, and there are challenges to meet COVID-19 patients' needs. The World Federation of Critical Care Nurses recommends a nurse-patient ratio of 1:1 for ventilated or unconscious patients (Bloomer et al., 2019; Williams et al., 2006), and the national standard recommends increasing the nurse-patient ratio according to need (Resolución 748 / 2014, 2014). These ratios, either national or international, are very difficult to achieve. In a survey of critical care nurses from the public and private health sectors in Argentina, 71% of surveyed reported a nurse-patient ratio of 1:3 or greater and this ratio was significantly associated with burnout syndrome (Torre et al., 2019). Previous staffing problems worsened because of the COVID-19 pandemic. The novel coronavirus affected health professionals, which represent 4.3% of all infections by December 2020 (Ministerio De Salud, 2020d) further weakening the health workforce. Furthermore, there were media claims of shortage of personal protective equipment (PPE; Delfino, 2020) and colleagues reporting PPE available had poor quality, with some practitioners buying their own PPE. The combination of shortage of qualified staff, staff stress, and interruptions in the provision of PPE likely could have led to critical care nurses being infected resulting in challenges to meet recommended standards of care.

FUTURE DIRECTION

The situation described in this article is not unique to Argentina, but a global concern. To call for action to support the nursing profession globally in commemoration of 200 years of Florence Nightingale's birth, the WHO has declared 2020 "the year of nursing" (The Lancet, 2019). Thus, WHO urges countries to invest in education, adequate working conditions, and training of nurse leaders (WHO, 2020b). In line with these recommendations, the "Nursing Now" campaign aims to raise the status of nursing to improve global health (The Lancet, 2019). Global leaders are calling to meet the momentum for all to have access to timely, competent, and essential health services (WHO, 2020a).

The pandemic is an unprecedented tragedy and an opportunity to change the future of Argentine critical care nurses. As never before the society recognized the value, courage, and commitment of critical care nurses who are performing at risk of their own lives. The society, policy makers, health authorities, and the media have praised and applauded critical care nurses. It is the time for these stakeholders to move from praise and applause to demand government actions to provide sustainable conditions for critical care nurses to develop their craft at university level, to perform to the full extent of their skills and at the high standard Argentina deserves.

There is a relationship between elevated standards for nursing and patient outcomes. The higher the proportion of bachelor nurses, the lower the risk of hospital death (Aiken et al., 2014). High standards in critical care nursing, such as specialist training and adequate nurse-patient ratios result in lower adverse outcomes (Chamberlain et al., 2018). Similarly, specialized critical care nursing leadership in charge of the ICU decreases patient mortality as does the frequency of mechanical ventilation (Fukuda et al., 2020). Investing in education, supporting leadership, and providing adequate working conditions for critical care nurses must become a priority.

CONCLUSION

Every critically ill patient has the right to receive compassionate, competent and safe care. Despite the surge of public health strategies deployed for strengthening the Argentinean health system, meeting this right in the context of the COVID-19 pandemic, may not be achievable for every Argentinean in need. It is up to us to find a sustainable solution for each Argentinean to access a high standard of critical care nursing he/she has the right for.

REFERENCES

- Aiken, L. H., Sloane, D. M., Bruyneel, L., Van Den Heede, K., Griffiths, P., Busse, R., Diomidous, M., Kinnunen, J., Kózka, M., Lesaffre, E., Mchugh, M. D., Moreno-Casbas, M. T., Rafferty, A. M., Schwendimann, R., Scott, P. A., Tishelman, C., Van Achterberg, T., & Sermeus, W. (2014). Nurse staffing and education and hospital mortality in nine European countries: A retrospective observational study. *Lancet*, *383*(9931), 1824–1830. [https://doi.org/10.1016/S0140-6736\(13\)62631-8](https://doi.org/10.1016/S0140-6736(13)62631-8)
- Alberto, L., Martinez, M. C., & Camio, A. V. (2005). Critical care in Argentina. *CONNECT: The World of Critical Care Nursing*, *4*(2), 36. <https://doi.org/10.1891/1748-6254.4.2.36>
- Aspiazu, E. (2017). Las condiciones laborales de las y los enfermeros en Argentina: Entre la profesionalización y la precariedad del cuidado en la salud. *Trabajo y Sociedad*, *28*, 11–35.
- Bloomer, M. J., Fulbrook, P., Goldsworthy, S., Livesay, S. L., Mitchell, M. L., Williams, G., & Friganovic, A. (2019). World federation of critical care nurses 2019 position statement: Provision of a critical care nursing workforce. *CONNECT: The World of Critical Care Nursing*, *13*(1). <https://doi.org/10.1891/1748-6254.13.1.3> <https://connect.springerpub.com/content/sgrowth/13/1/3>
- Cassiani, S. H. B., Hoyos, M. C., Barreto, M. F. C., Sives, K., & Da Silva, F. A. M. (2018). Distribution of the nursing workforce in the Region of the Americas [Distribuição de pessoal de enfermagem na Região das Américas]. *Revista panamericana de salud pública*, *42*, e72.
- Chamberlain, D., Pollock, W., Fulbrook, P., & ACCCN Workforce Standards Development Group. (2018). ACCCN Workforce Standards for Intensive Care Nursing: Systematic and evidence review, development, and appraisal. *Australian Critical Care*, *31*(5), 292–302. <https://doi.org/10.1016/j.aucc.2017.08.007>
- Coneau. (2020). Posgrados acreditados de la República Argentina. August 23, 2020, https://www.coneau.gob.ar/archivos/publicaciones/CatalogoPosgrados_2020.pdf
- Czubaj, F. (2020). Coronavirus en la Argentina. Llegan más médicos y enfermeros a Jujuy para reforzar las terapias intensivas. *La Nación*. August 21, 2020, <https://www.lanacion.com.ar/sociedad/coronavirus-argentina-llegan-mas-medicos-enfermeros-jujuy-nid2425845>
- Delfino, E. (2020). *Denuncian la falta de equipos de protección en hospitales*. Perfil.
- Dirección Nacional De Capital Humano. (2020). *Capacitación Situada y Permanente para Equipos que Atienden Pacientes Críticos COVID-19*. Ciudad de Buenos Aires. August 12, 2020, <https://www.argentina.gob.ar/normativa/nacional/resoluci%C3%B3n-723-2020-336193/texto>
- Dong, E., Du, H., & Gardner, L. (2020). An interactive web-based dashboard to track COVID-19 in real time. *Lancet Infectious Disease*, *20*(5), 533–534. [https://doi.org/10.1016/S1473-3099\(20\)30120-1](https://doi.org/10.1016/S1473-3099(20)30120-1)
- Federación Latinoamericana De Enfermería En Cuidado Intensivo. (2020). *FLECI*. August 21, 2020, <http://www.fleci.org/>
- Fukuda, T., Sakurai, H., & Kashiwagi, M. (2020). Impact of having a certified nurse specialist in critical care nursing as head nurse on ICU patient outcomes. *PLoS One*, *15*(2), e0228458. <https://doi.org/10.1371/journal.pone.0228458>
- GCBA. (2020). *Decreto 138/2020 y sus modificatorias*. August 20, 2020, <https://boletinooficial.buenosaires.gob.ar/normativa/norma/511404>

- Girón, N. (2020). Alarma en Chaco por el riesgo de colapso del sistema sanitario. *CNN Radio*. August 23, 2020, <https://cnnespanol.cnn.com/radio/2020/06/15/chaco-advierten-que-hay-riesgo-de-colapso-del-sistema-sanitario/>
- Lai, J., Ma, S., Wang, Y., Cai, Z., Hu, J., Wei, N., Wu, J., Du, H., Chen, T., Li, R., Tan, H., Kang, L., Yao, L., Huang, M., Wang, H., Wang, G., Liu, Z., & Hu, S. (2020). Factors associated with mental health outcomes among health care workers exposed to coronavirus disease 2019. *JAMA Network Open*, 3(3), e203976. <https://doi.org/10.1001/jamanetworkopen.2020.3976>
- The Lancet. ((2019). 2020). Unleashing the full potential of nursing. *Lancet*, 394(10212), 1879. [https://doi.org/10.1016/S0140-6736\(19\)32794-1](https://doi.org/10.1016/S0140-6736(19)32794-1)
- Ministerio De Salud. (2020a). *El país aumentó en un 37% la cantidad de camas de terapia intensiva durante el aislamiento social*. August 22, 2020, <https://www.argentina.gob.ar/noticias/el-pais-aumento-en-un-37-la-cantidad-de-camas-de-terapia-intensiva-durante-el-aislamiento>
- Ministerio De Salud. (2020b). Reporte diario desde el Ministerio de Salud - Nuevo coronavirus COVID-19. December 28, 2020, <https://www.argentina.gob.ar/informes-diarios/agosto-de-2020>
- Ministerio De Salud. (2020c). Resolución 718/2020. August 22, 2020, <https://www.boletinoficial.gob.ar/detalleAviso/primera/227597/20200407>
- Ministerio De Salud. (2020d). *Sala de Situación COVID 2019, información disponible al 12/08 SE 33. Trabajadores de la salud*. Presidencia de la Nación. December 28, 2020, <https://www.argentina.gob.ar/coronavirus/informes-diarios/sala-de-situacion/agosto-2020>
- Observatorio Federal De Recursos Humanos En Salud. *Fuerza de trabajo en el sector salud en Argentina*. Ministerio de Salud, Presidencia de la Nación Argentina.
- Perfil. (2020). *Gerardo Morales: “Necesitamos ayuda, parte del sistema de Jujuy está colapsado*. August 23, 2020, <https://www.perfil.com/noticias/salud/pandemia-coronavirus-gerardo-morales-necesitamos-ayuda-jujuy-colapsado.phtml>
- Phua, J., Weng, L., Ling, L., Egi, M., Lim, C. M., Divatia, J. V., Shrestha, B. R., Arabi, Y. M., Ng, J., Gomersall, C. D., Nishimura, M., Koh, Y., Du, B., & Asian Critical Care Clinical Trials G. (2020). Intensive care management of coronavirus disease 2019 (COVID-19): Challenges and recommendations. *Lancet Respiratory Medicine*, 8(5), 506–517. [https://doi.org/10.1016/S2213-2600\(20\)30161-2](https://doi.org/10.1016/S2213-2600(20)30161-2)
- Resolución 748 / 2014. (2014). *Directrices de Organización y Funcionamiento de Unidades de Cuidados Intensivos*. August 12, 2020, <https://www.argentina.gob.ar/normativa/nacional/resoluci%C3%B3n-748-2014-230534/texto>
- Rubinstein, A., Zerbino, M. C., Cejas, C., & Lopez, A. (2018). Making universal health care effective in Argentina: A blueprint for reform. *Health Systems & Reform*, 4(3), 203–213. <https://doi.org/10.1080/23288604.2018.1477537>
- Telam. (2020). *Alertan que el riesgo de colapso no es por falta de respiradores ni camas en terapia, sino de personal*. August 21, 2020, <https://www.telam.com.ar/notas/202008/502368-alertan-riesgo-colapso-por-falta-personal.html>
- Torre, M., Popper, Santos., C, M., & Bergesio, A. (2019). Burnout prevalence in intensive care nurses in Argentina. *Enfermería Intensiva*, 30(3), 108–115. <https://doi.org/10.1016/j.enfi.2018.04.005>
- Williams, G., Schmollgruber, S., & Alberto, L. (2006). Consensus forum: Worldwide guidelines on the critical care nursing workforce and education standards. *Critical Care Clinics*, 22(3), 393–406, vii. <https://doi.org/10.1016/j.ccc.2006.03.010>

World Health Organization. (2020a). *2020 the triad statement*. August 13, 2020, https://www.who.int/docs/default-source/health-workforce/triad-statement-2020.pdf?sfvrsn=1223b7ce_4&download=true

World Health Organization. (2020b). *State of the world's nursing 2020: Investing in education, jobs and leadership*. Author.

Disclosure. The authors have no relevant financial interest or affiliations with any commercial interests related to the subjects discussed within this article.

Funding. The author(s) received no specific grant or financial support for the authorship, and/or publication of this article.