CCSO Critical Care Services Ontario

Critical Care Workforce Profile: Recruitment & Retention Survey

2020 Provincial Report and 2021 Vacancy Rate Addendum

Critical Care Workforce Profile: Recruitment & Retention Survey 2020 Provincial Report and 2021 Vacancy Rate Addendum

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Public Information

About Critical Care Services Ontario

Established in 2005, Critical Care Services Ontario (CCSO) led the implementation of Ontario's first Critical Care Strategy and now centrally coordinates and develops integrated system solutions for critical care (Adult, Paediatric and Neonatal) and specialty programs aligned with critical care (Neurosurgery, Trauma and Burns, and the Life or Limb Policy). CCSO's work is the result of an ongoing collaboration between critical care providers, hospital administrators, partners from the Ministry of Health and other health system leaders.

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Foreword

Critical Care Services Ontario (CCSO) is proud to release the 2020 Recruitment & Retention Provincial Survey. The Report captures data from January 1, 2020 to August 31, 2020. This includes a period of COVID pandemic response through wave 1 from March to August 2020.

The Recruitment and Retention survey collected information from all Adult, Pediatric and Neonatal critical care units to better understand the strain on the workforce and the impacts of COVID-19 on Health Human Resource (HHR) planning.

Understanding the critical care workforce through comprehensive data increases forecasting accuracy, informs effective staffing practices, and can enhance retention and recruitment strategies to ensure resilient critical care Health Human Resources for the province to meet current and future system needs.

On behalf of CCSO, we extend sincere thanks and gratitude to all those who continue to participate year after year, without which such robust intelligence could not be produced in return. We hope our system collaborators will continue to find value in the analysis and presentation of information to help inform an adaptive and resilient critical care system. Critical Care Services Ontario (CCSO) is proud to release the 7th edition of survey results in the 2019 Critical Care Workforce Profile Report based on data from the 2017-18 fiscal year. Health Human Resource (HHR) planning is an integral part of CCSO's People Strength goal in its 2018-2021 Strategic Plan. Understanding the critical care workforce through comprehensive data increases forecasting accuracy, informs effective staffing practices, and can enhance retention and recruitment strategies to ensure resilient critical care Health Human Resources for the province to meet current and future system needs.

Sincerely,

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Executive Director
Critical Care Services Ontario

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1. Introduction

In 2020, as a result of the COVID-19 global pandemic Critical Care Services Ontario (CCSO) opted to defer the data collection of the Critical Care Workforce Profile in its entirety and instead focus its efforts on conducting a shorter and more focused survey on critical care recruitment and retention, to identify emerging challenges, practices and opportunities for system supports. The 2020 Recruitment & Retention Provincial Report focuses primarily on the impact of COVID-19 on the recruitment, retention, staffing practices, and supports to critical care nursing and allied health professionals in Ontario, across its 244 adult, paediatric and neonatal critical care units.

This report provides a summary of some key characteristics of the workforce in critical care, as an enabler to effective human resource planning and to capture any shifts in the composition of the workforce, which may present sustainability risks for the system.

1.1 Objectives and Scope of the 2020 Critical Care Workforce Profile

The 2020 Recruitment & Retention Provincial Report aims to provide critical care service providers, the Ministry of Health (MOH) and other critical care stakeholders insights into the availability, utilization and adequacy of critical care health human resources. Data is reported at a provincial level as well as by unit type (adult, paediatric and neonatal units), and some regional views.

Data collection occurred between September 11, 2020 until September 30, 2020 and gathered data for the period of January 1st 2020 to August 31st 2020 during wave 1 of the COVID-19 pandemic.

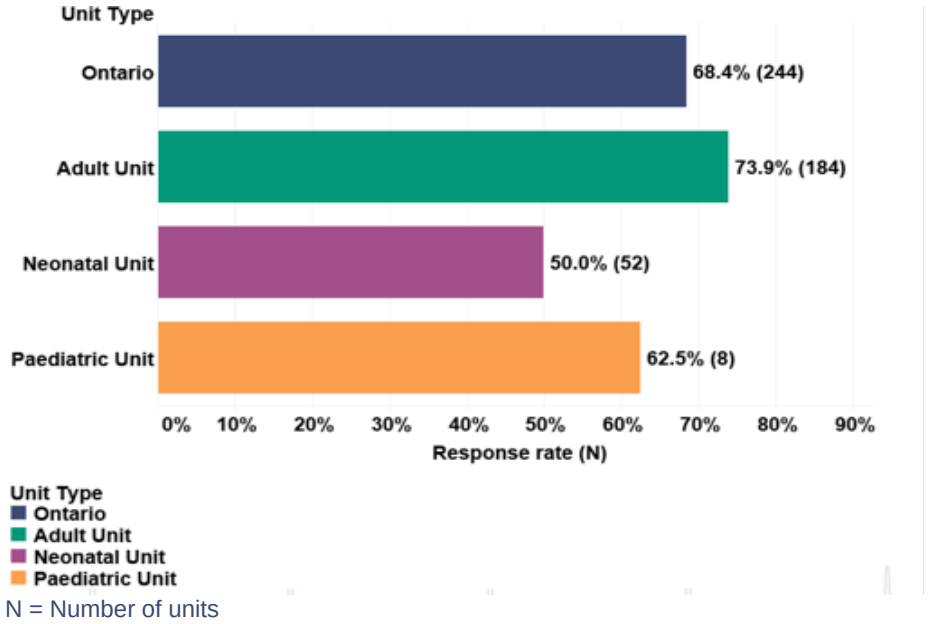
The 2020 Recruitment & Retention Report provides workforce profiling of critical care staff (i.e. nurses, allied health) including some trending analysis on nursing length of experience, turnover rate, and vacancy rate. The report also summarizes managerial feedback on use and perceived effectiveness of various recruitment and retention strategies.

While the provincial report highlights the results gathered from the recruitment and retention survey conducted in 2020, the addendum included on page 21, further illustrates vacancy rate results from data collected in November 2021 through the Critical Care Nurse Training Fund (CCNTF) ‘call for application’ process.

2. Survey Response Rate

CCSO has been tracking and profiling critical care workforce data since 2007, collecting data from the majority of Ontario's critical care units. Historically, this survey has reported good participation with a response rate of over 80% from critical care units across the province. The COVID-19 wave 1 may have presented challenges for survey completion, with an overall response rate of 68.4% as shown in **Figure 1.**

Figure 1: Overall Response Rate by Unit Type

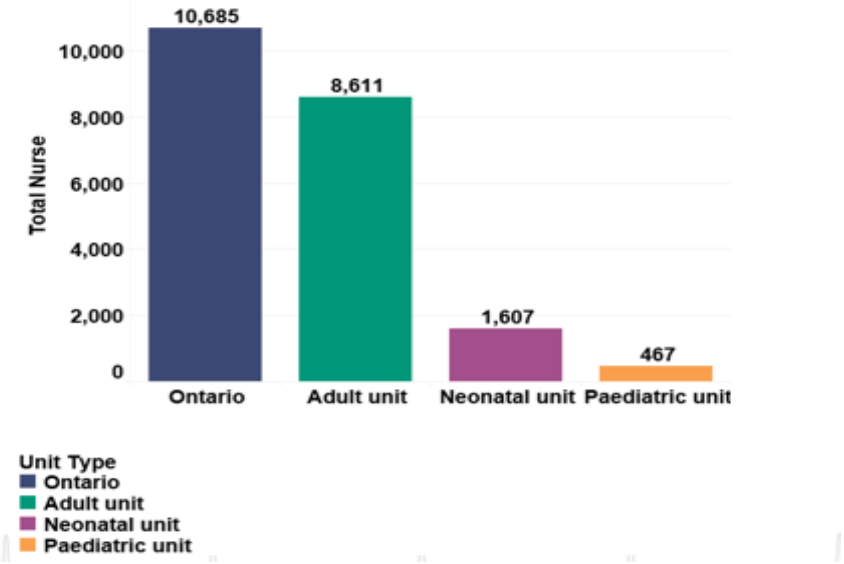


N = Number of units

3. Number of Nurses

The online survey responses were submitted by unit managers of 68.4% critical care units in Ontario representing 10,685 registered nurses working in critical care. There were a the total 123,515 Registered Nurses (RNs) in Ontario in 2020, which indicates the findings of the Recruitment & Retention survey represent about 8.7.% of all Registered Nurses employed in Ontario in 2020 (College of Nurses of Ontario, Annual Report 2020).

Figure 2: Critical Care Bedside Nurses by Unit Type



3.1 Nursing Experience

As shown in **Figure 3**, compared to the 2017-18 data, a 36% increase was noted in 2020 for the nurses within the novice category of less than 3 years of experience in critical care. A slight decline was noted for the nurses with 3-5 years, and 11-20 years, and a 25% decline in the over 20 year's category.

Figure 3: Length of Nurse Experience in Critical Care, Trend Over Time

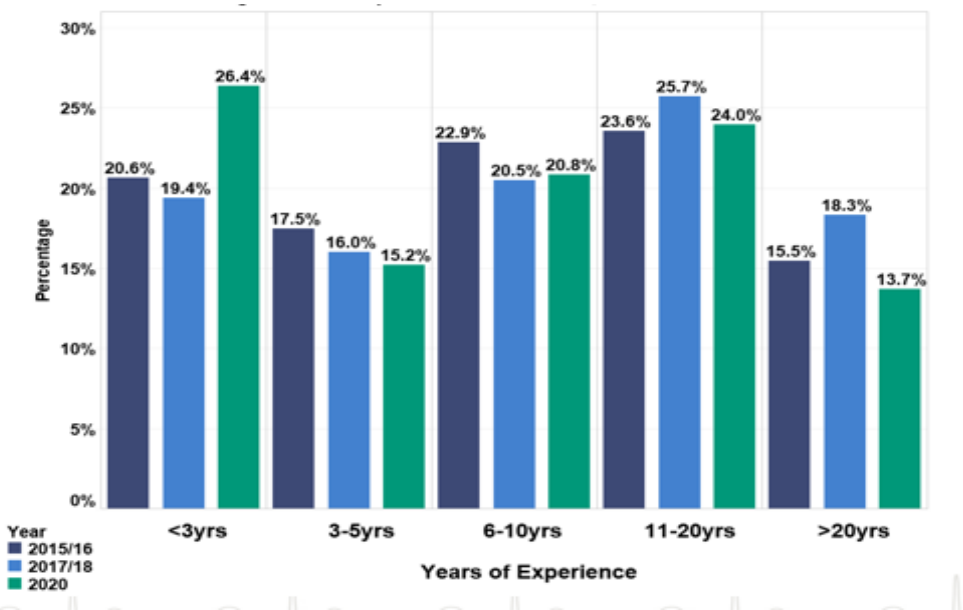
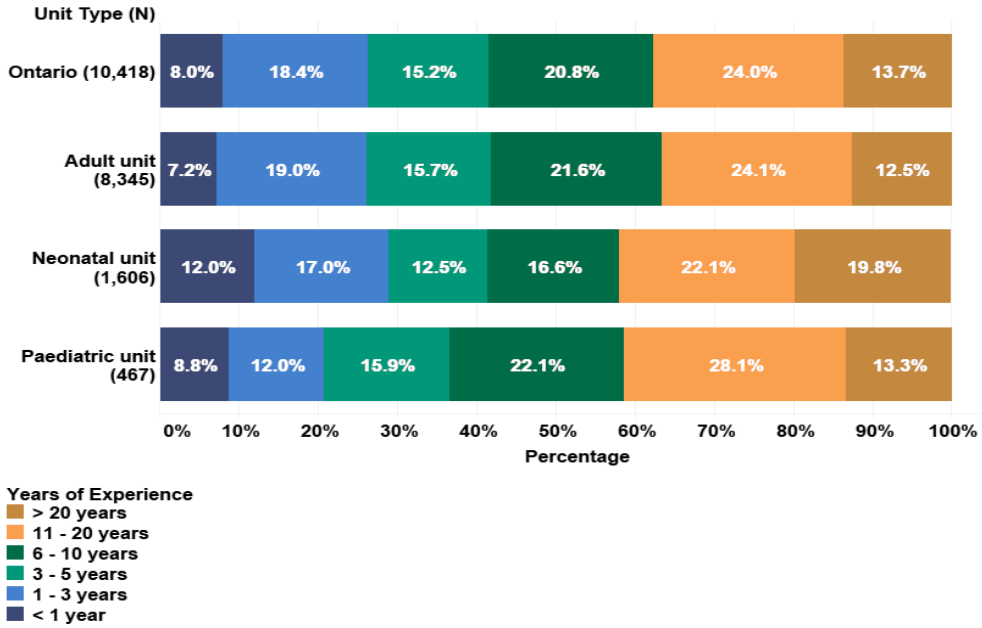


Figure 4, reports on the length of experience in critical care by patient population type. The number of novice nurses with < 1 year of experience is highest (12% vs provincial 8%) among the neonatal critical care units, compared to the provincial average. Similarly, neonatal units have the highest proportion (20% vs 14%) of RNs with >20 years of experience.

Figure 4: Length of Nurse Experience in Critical Care, by Unit Type



4. Nursing Turnover

As shown in **Figure 5**, the overall turnover rate for nurses leaving critical care units provincially is 8.1%, which is lower than the 9.8%, previously reported in 2017/18. The East and North Regions reported higher turnover rates compared to the provincial rate.

Figure 5: Turnover Rate for Critical Care Nurses, by Region

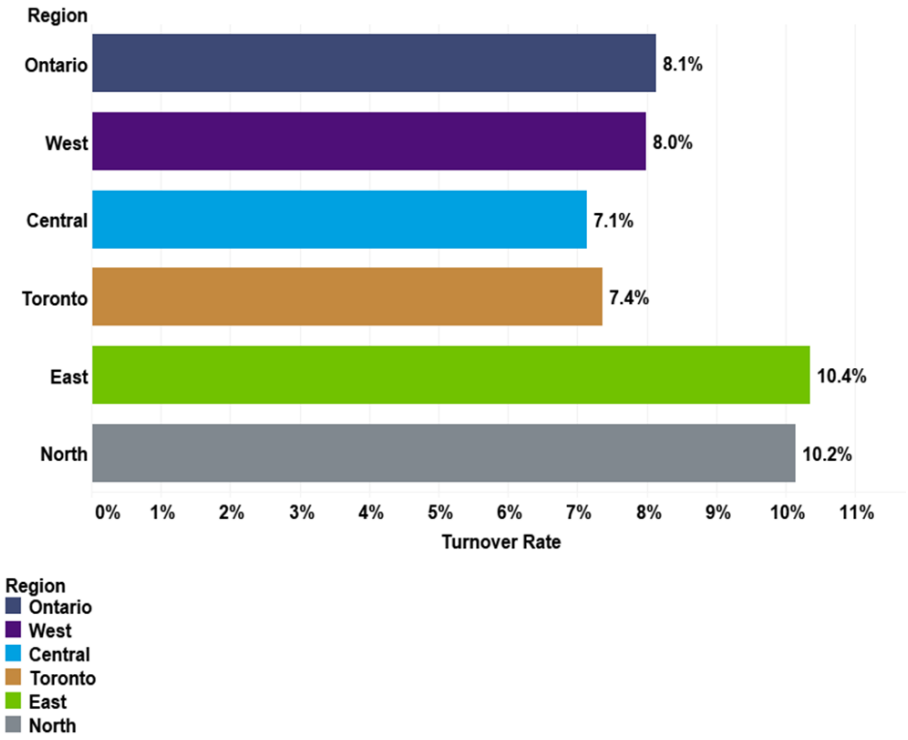
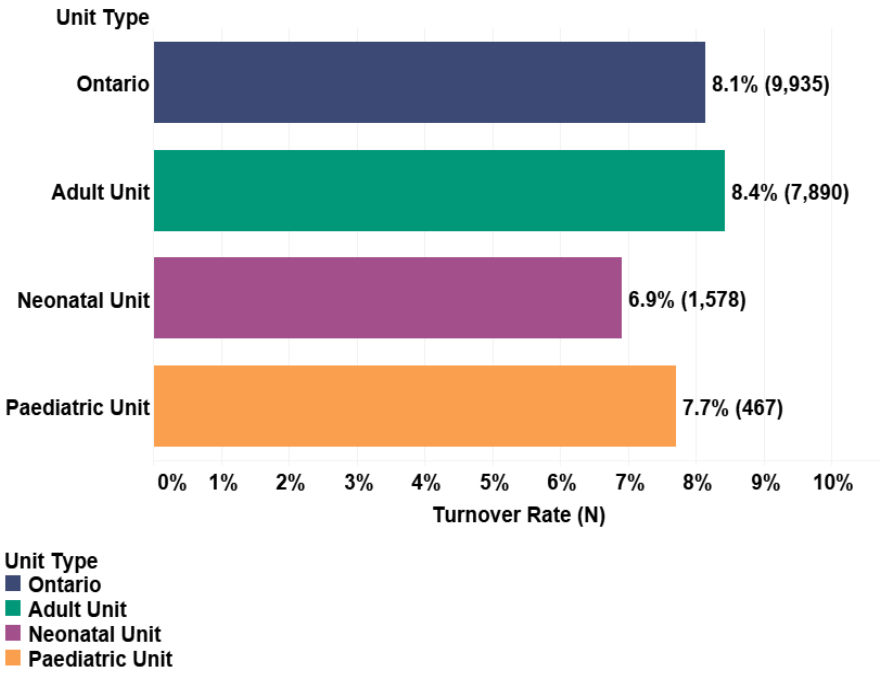


Figure 6, provides a summary of the nursing exits by unit type. Adults critical care units in the province reported a slightly higher turnover rate (8.4%) than the provincial average (8.1%).

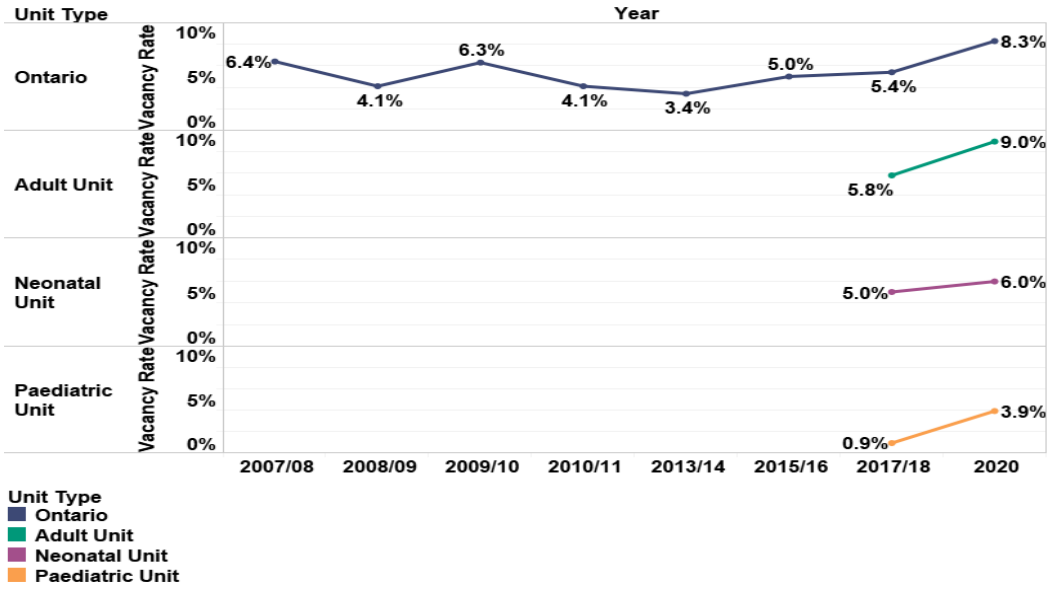
Figure 6: Critical Care Nurse Turnover from the Unit, by Unit Type



5. Vacancy Rate

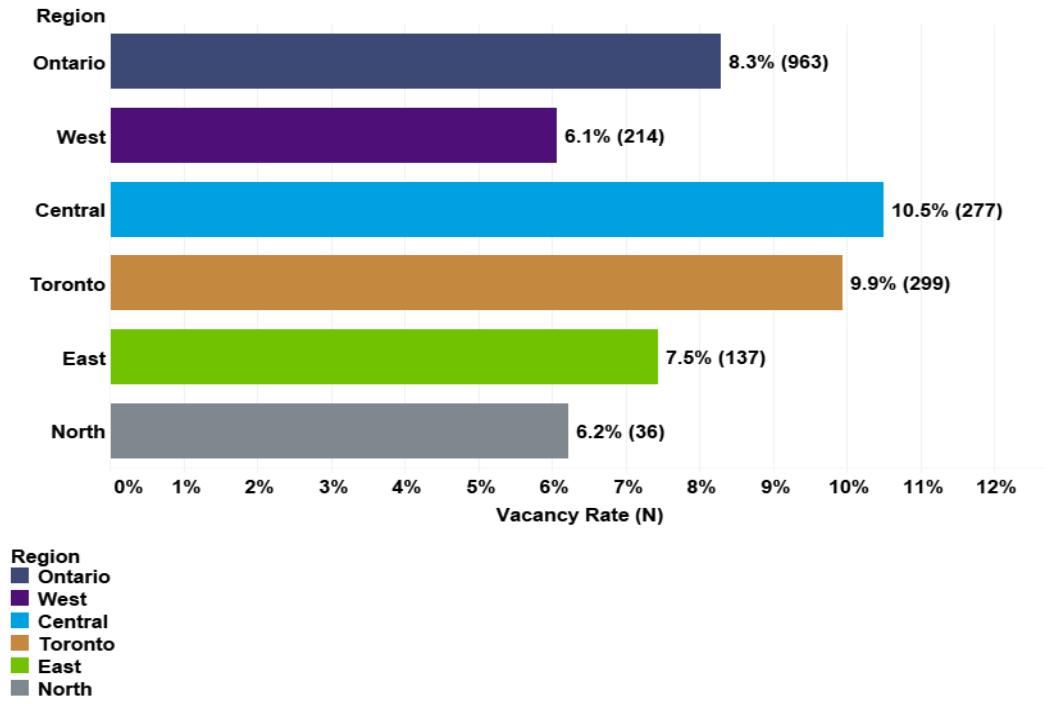
As shown in **Figure 7**, below, the vacancy rate for nurses in critical care units has been variable from year to year. All rates included in the figure are for full-time, part-time and casual vacant positions combined. As of August 31, 2020, the provincial vacancy rate for nurses in critical care units is 8.3%. This is the highest vacancy rate in recent years. These results speak to the HHR pressures, gaps and vacancy challenges as a result of the ongoing pandemic.

Figure 7: Vacancy Rate for Critical Care Units, Trend Over Time



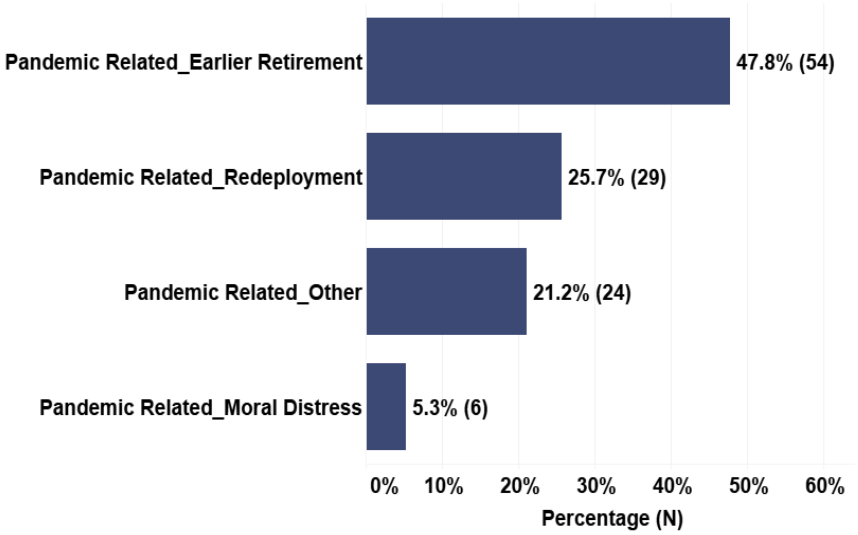
Across the province, the vacancy rate differs. As shown in **Figure 8**, the Central and Toronto Regions have the highest vacancy rate for critical care nurses at approximately 10.0%.

Figure 8: Vacancy Rate for Critical Care Nurses, by Region



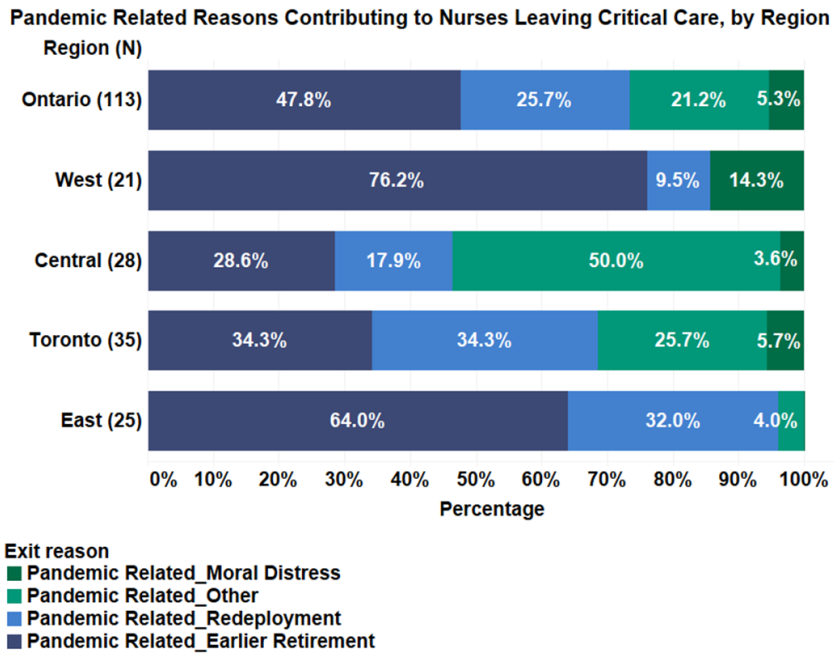
Information on pandemic related reasons for nursing exits was captured in the survey data collection. As shown in **Figure 9**, 47.8% of all pandemic related nursing exits were related to early retirement.

Figure 9: Pandemic Related Reasons Contributing to Nurses Leaving Critical Care, in Ontario



As illustrated in **Figure 10**, the West and East Regions reported significantly higher nursing exits due to early retirement as compared to the rest of the province. Please note, that there is no data reported for the North Region as there were < 5 data points for this region.

Figure 10: Pandemic Related Reasons Contributing to Nurses Leaving Critical Care, by Region

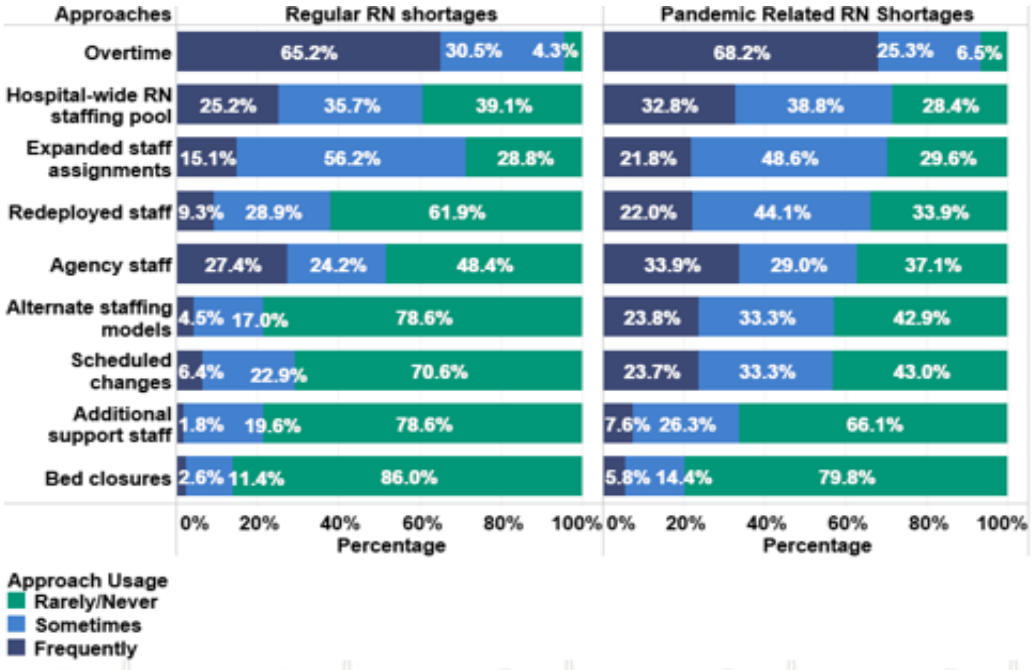


6. Nursing Recruitment and Retention

6.1 Managing Short Term Nursing Shortages

Survey respondents were asked to identify the frequency with which they used a number of different recruitment strategies, as well as the perceived effectiveness of each strategy. **Figure 11**, highlights the strategies used to manage regular and pandemic related nursing shortages. Overtime is the most frequently reported strategy utilized.

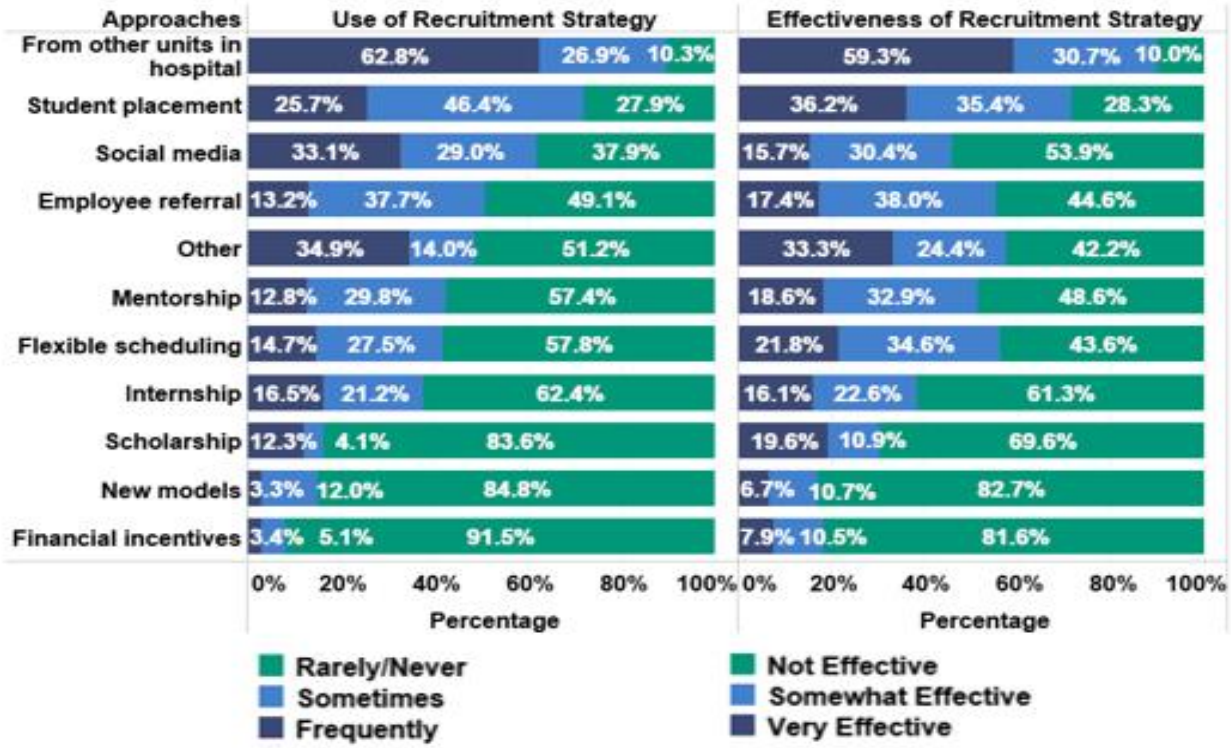
Figure 11: Approaches to Manage Regular and Pandemic Related RN Shortages



6.2 Recruitment Strategies

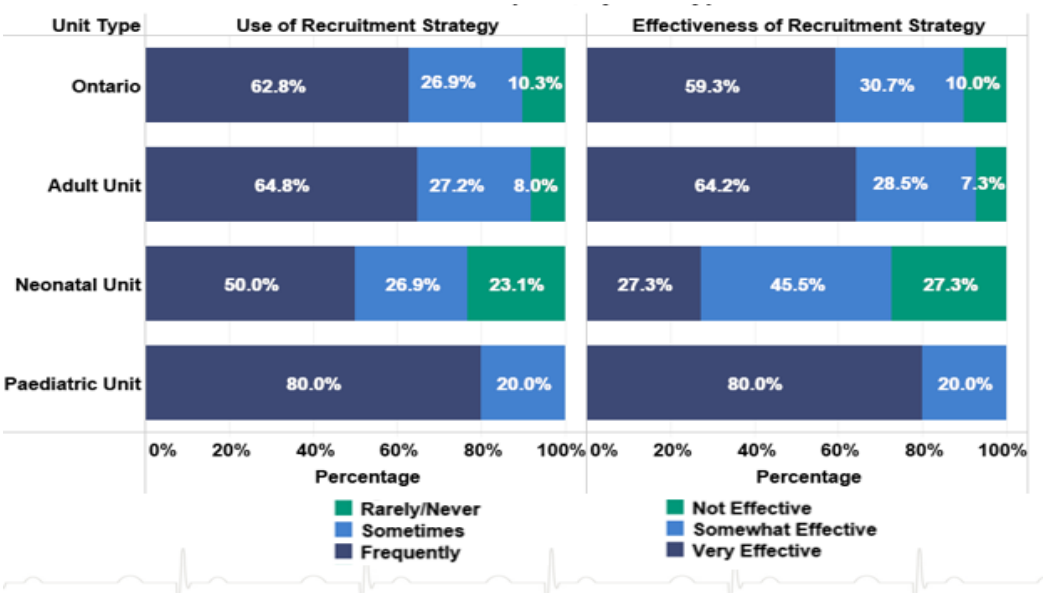
Survey respondents were asked to identify the frequency with which they used a number of different recruitment strategies, as well as the perceived effectiveness of each strategy. Figure 12, reports that the most commonly used recruitment strategy is to recruit candidates from other units within the hospital, also deemed most effective.

Figure 12: Use and Perceived Effectiveness of Recruitment Strategies, Provincial



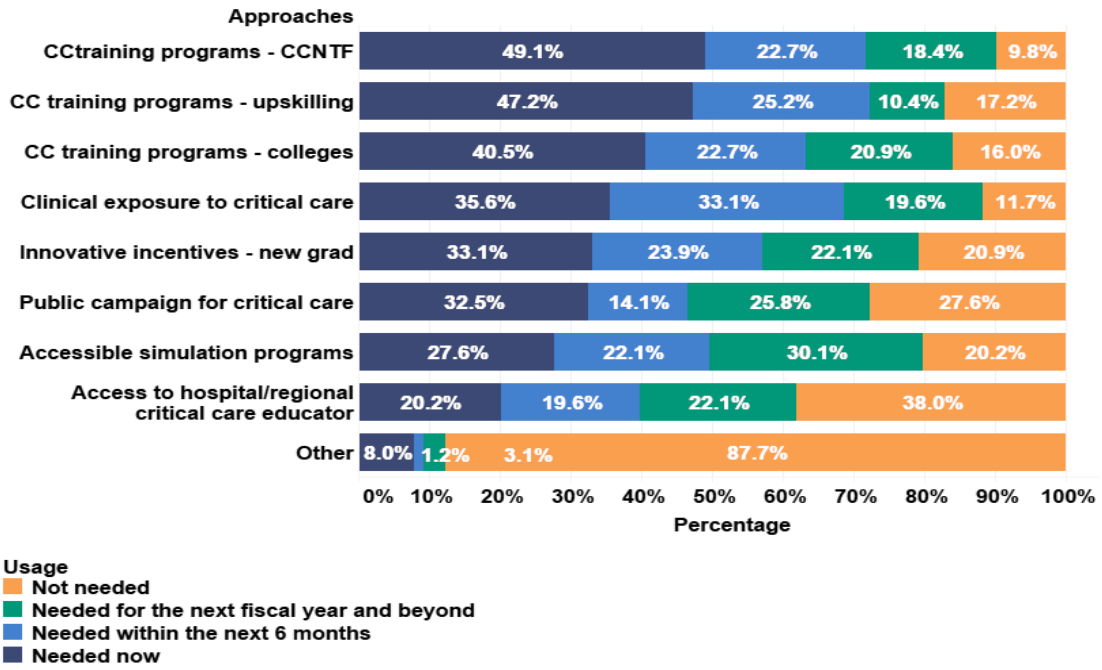
To further understand which critical care units are using “recruitment from other units in hospital” as a method of recruitment Figure 13, shows the use and effectiveness of this strategy by unit type. Recruitment from other units is most frequently reported to be used by paediatric critical care units, it is also reported as being very effective.

Figure 13: Use and Perceived Effectiveness of Recruitment Strategy "Recruiting Internally from Other Units in Hospital", by Unit Type.



Survey respondents were also asked to identify system supports that are seen as "needed" and beneficial to recruitment. As shown in **Figure 14,** almost half of critical care units cite the 'Critical Care Nurse Training Fund" (CCNTF)' and "critical care training programs – upskilling" as system supports that are "needed now" to assist with recruitment.

Figure 14: System Supports Beneficial to Recruitment, Provincial

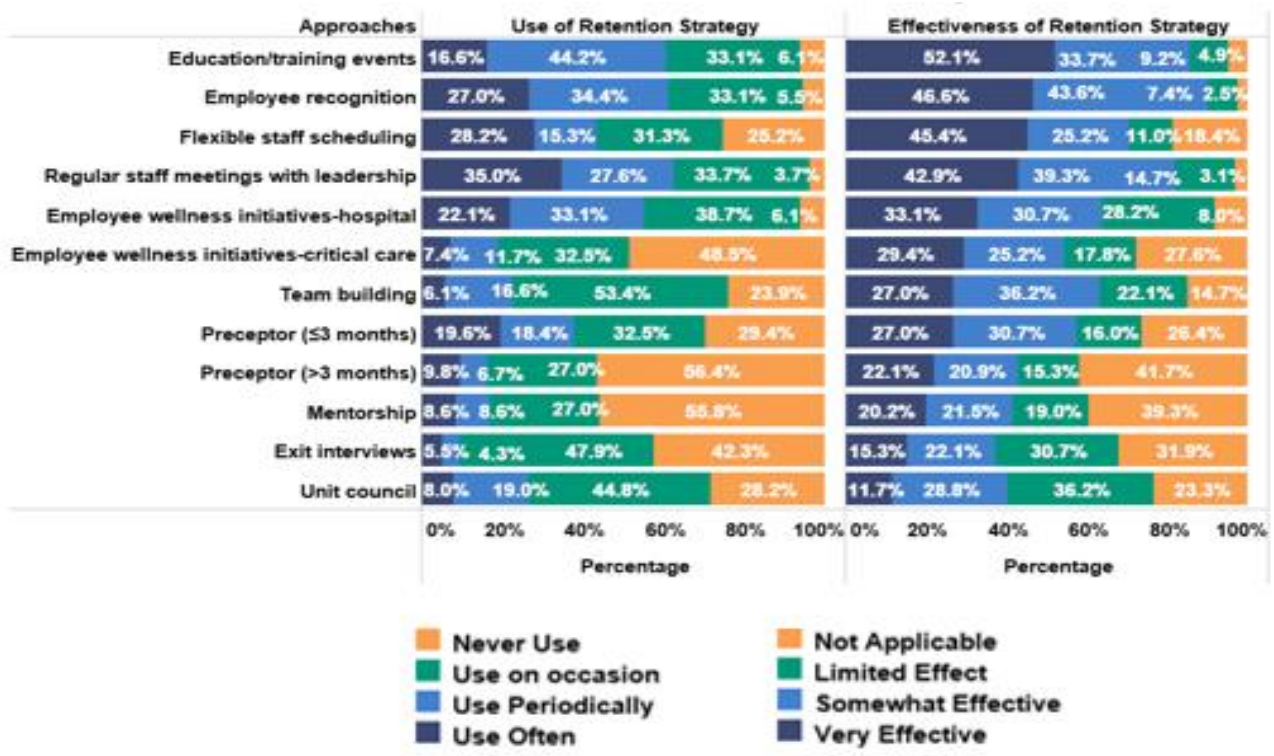


6.3 Retention Strategies

Survey respondents were asked to identify the frequency of use for a number of different retention strategies. As seen in **Figure 15**, critical care units cite, “regular staff meetings with leadership” and “flexible staff scheduling” as the most commonly used retention strategies.

According to the reported effectiveness of strategies, “education/training events” (52.1%) was reported as the top effective method, followed by “employee recognition” (46.6%) and flexible scheduling (45.4%). This suggests that “education/training events” may be underutilized.

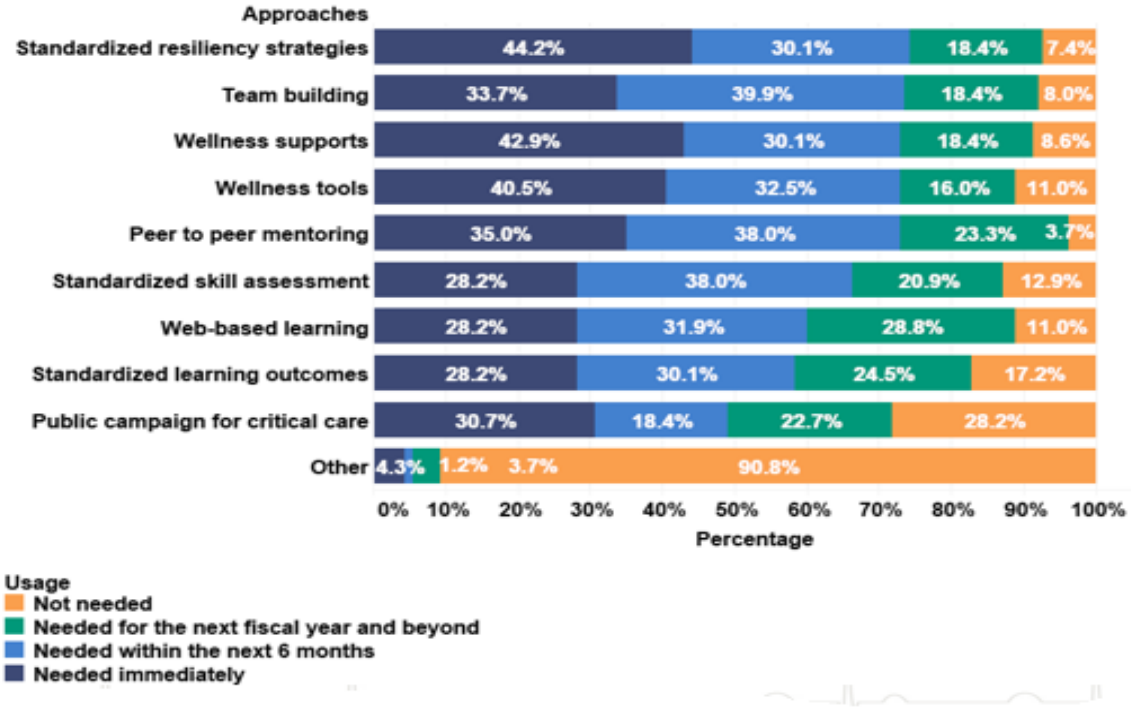
Figure 15: Use and Perceived Effectiveness of Retention Strategies, Provincial



6.4 System Supports Beneficial to Retention

The survey collected data on system supports provided that were seen as being beneficial to nursing retention. Respondents were asked to identify the urgency to which these supports were needed as well as which supports help most with nursing retention among critical care units. As shown in **Figure 16**, the immediate supports needed (within less than 6 months) are reported as 'standardized resiliency strategies' (74.3%), 'team building' (73.6%) and 'wellness supports' (73.0%).

Figure 16: System Supports Beneficial to Nursing Retention



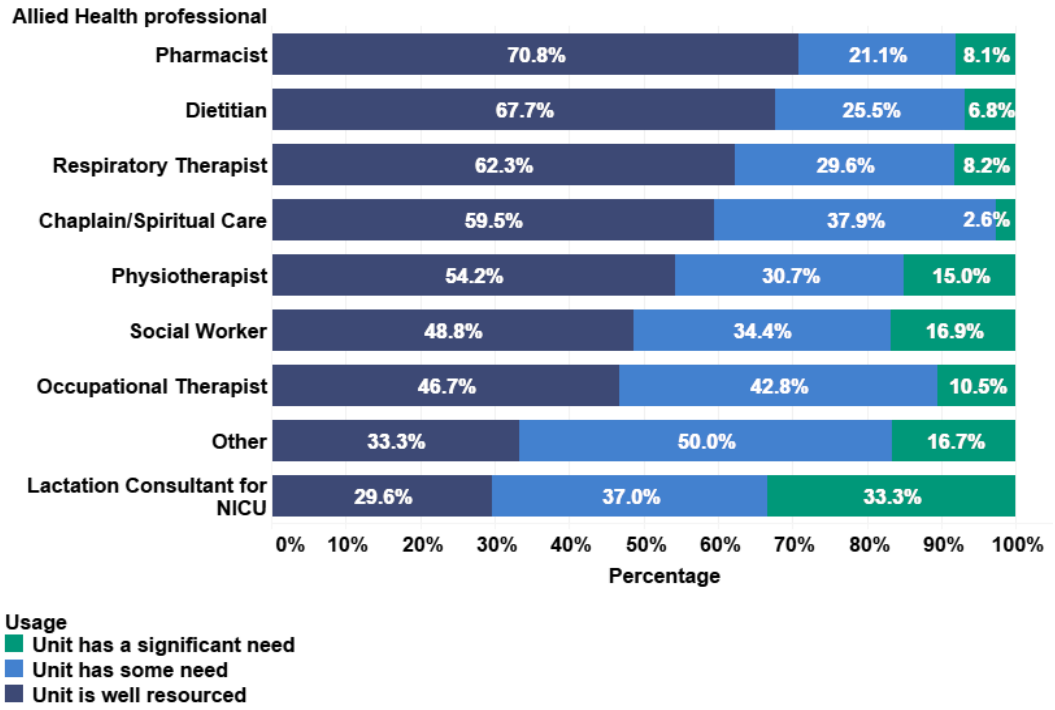
7. Allied Health Professionals in Critical Care

Allied health is considered one of the pillars of health care, optimizing patient outcomes across the continuum care, with a focus on improving patient centred outcomes such as reducing disability, increasing societal participation, and facilitating return to usual activities. Allied Health Professions can work across the continuum of care. As key members of the multidisciplinary ICU team, workforce planning and resource considerations for allied health are also crucial in any workforce planning to ensure comprehensive patient care (Ridley, Freeman-Sanderson, & Haines, 2020).

7.1 Allied Health Professionals Resources in Critical Care

Critical care unit managers were asked to identify which allied health disciplines were “well-resourced or needed” within their unit. As shown in **Figure 17** hospitals reported Pharmacists as the most “well resourced” allied health support in critical care units at 70.8%. Other supports that are also reported as “well resourced” include Dietitian (resourced at 67.7%) and Respiratory Therapists at 62.3%. Although no additional data is provided, it should be noted that Physiotherapists, and Social Workers were identified as being a significant need by the critical care units.

Figure 17: Resource Need of Allied Health Professionals in Critical Care Units, Provincial

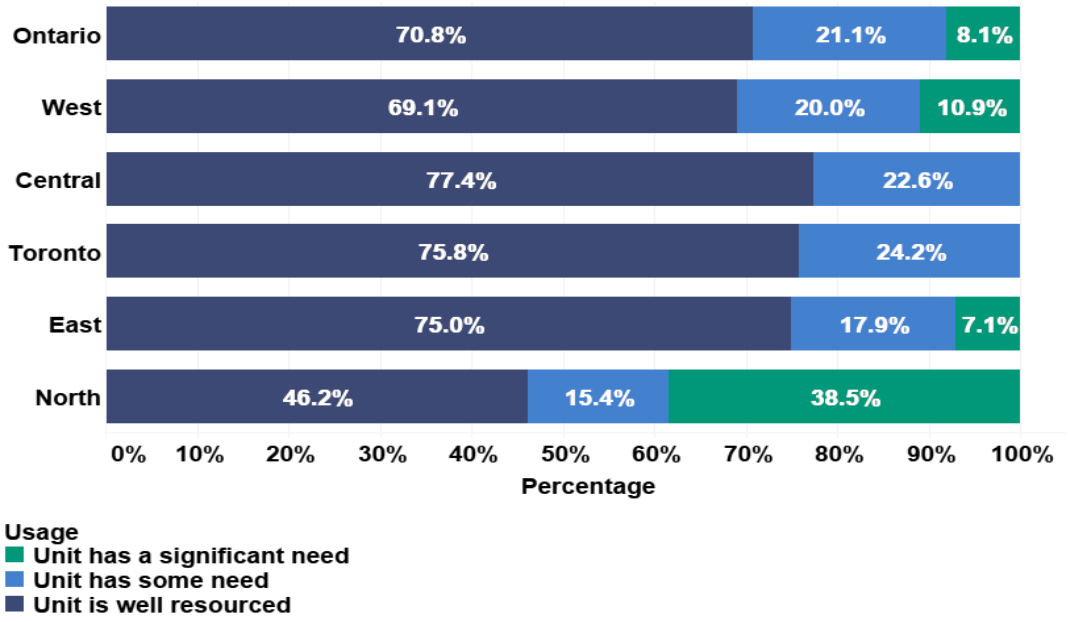


7.2 Pharmacists

Pharmacy services in critical care are recognized as an essential component of multidisciplinary care for critically ill patients. Clinical pharmacists assume responsibility and accountability for managing medication therapy in direct patient care settings, whether practicing independently or in consultation or collaboration with other health care professionals (Bauman, 2020).

Figure 18, reports the resource needs for Pharmacists in critical care units by Region. The North Region reported a “significant need” for pharmacists at 38.5%. This need is well above the provincial average of 8.1%.

Figure 18: Resource Need for Allied Health Professionals in Critical Care Units – Pharmacists, by Region



7.3 Registered Dietitians

Nutritional support is an essential component of the care and treatment of a critically ill patient (Bailey, 2012). The provision of timely and adequate nutritional support has been shown to be beneficial in improving the outcomes of critically ill patients. (Bailey, Clark, Nordlund, Shelton, & Farver, 2012).

Figure 19, highlights that all regions appear to be well resourced for Registered Dietitians. Central region reported being well resourced, but also reported the highest 'significant need' of dieticians, above the provincial average.

Figure 19: Resource Need for Allied Health Professionals in Critical Care Units – Dietician, by Region

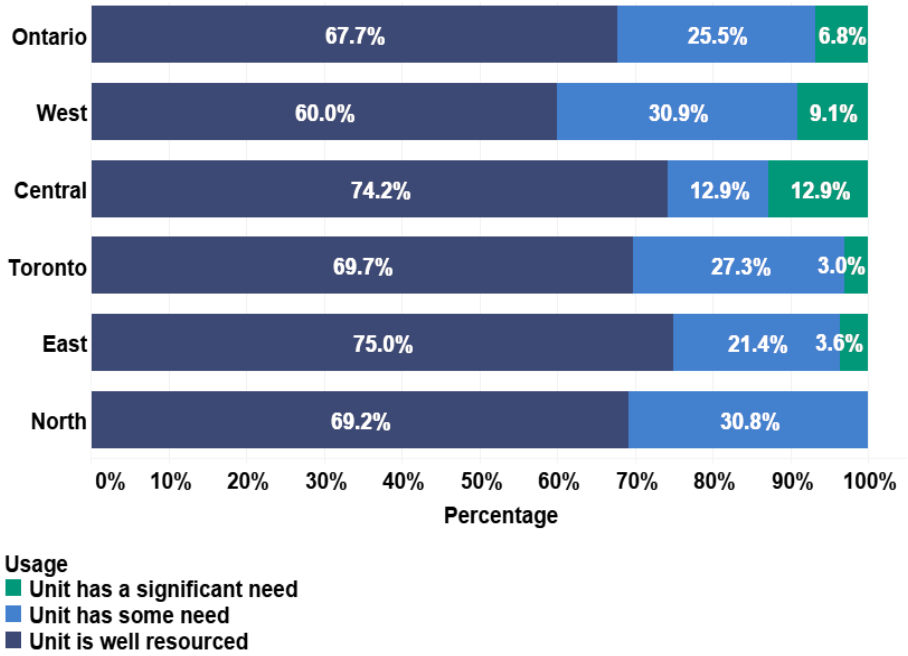
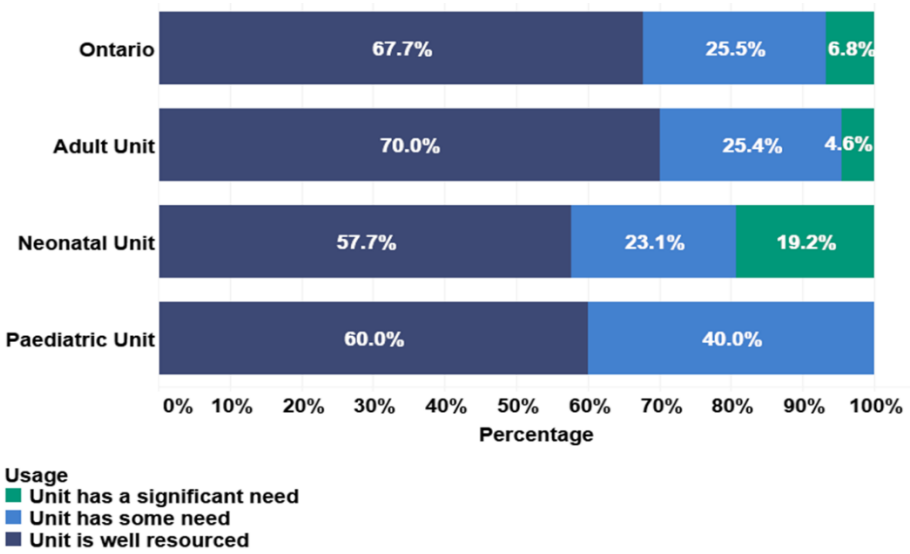


Figure 20, illustrates the resource needs for Dieticians unit type. Neonatal intensive care units reported significant need (19.2%) for dietician support.

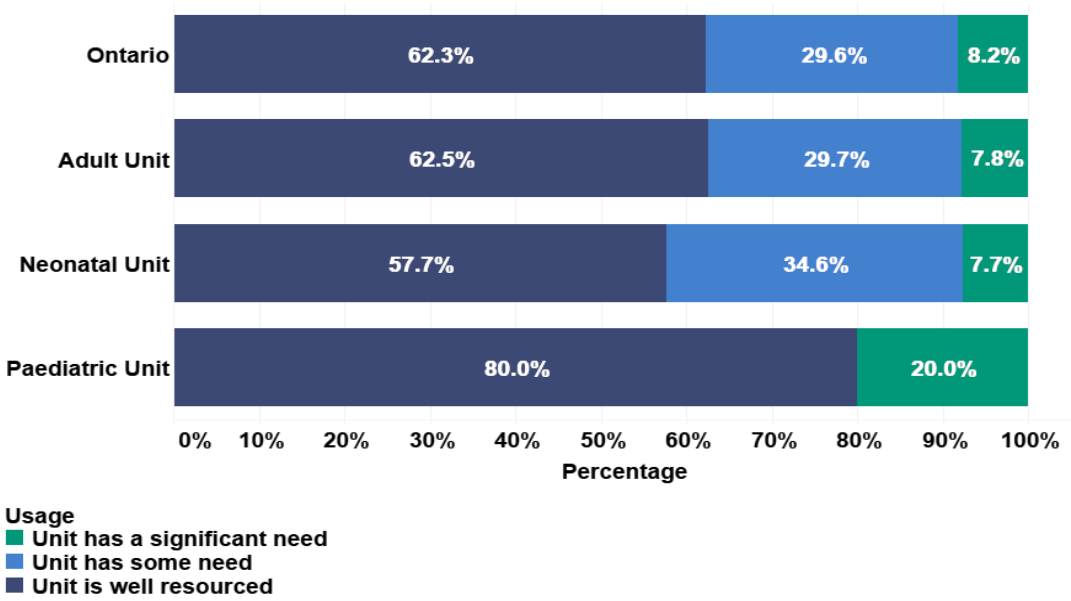
Figure 20: Resoucre Need for Allied Health Professionals in Critical Care Units, Dieitican, by Unit Type



7.4 Respiratory Therapists

Respiratory Therapists (RTs) have historically played a vital role in critical care in identifying, managing and monitoring critical care patients by providing cardiopulmonary expertise. **Figure 21**, reports Respiratory Therapists as being well resourced (62.3%) in Ontario's critical care units, although paediatric critical care units note a significant need in this area (20% of units).

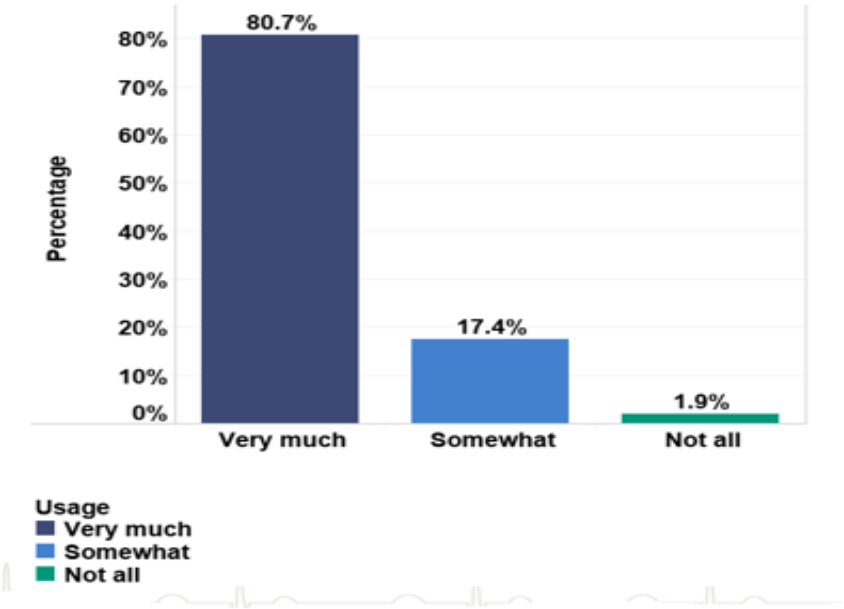
Figure 21: Resource Need for Allied Health Professionals in Critical Care Units – Respiratory Therapist, by Unit Type



7.5 Impact of Allied Health Professionals on Nurse Recruitment and Retention

Unit managers were asked to identify the perceived impact of allied health professional support on nurse retention and recruitment within the critical care unit. **Figure 22**, reports the overall impact of having allied health professional support on critical care units and its correlation to nurse recruitment and retention. Unit managers in 80% of survey responses reported that having allied health professional support 'very much' impacts the recruitment and retention of critical care nurses.

Figure 22: Impact of Allied Health Professionals on Nurse Recruitment and Retention



Conclusion

This report was undertaken in an effort to understand staffing practices in adult, paediatric and neonatal critical care units across the province and what effect the first wave of the COVID-19 pandemic has had on the workforce. This report highlights areas of change since the last iteration of the Critical Care Workforce Profile;

- From 2017/18 to 2020 the proportion of novice nurses has gone from 19% to 26% of the critical care workforce. Reinforcing the ongoing need for training, education and consideration of clinical demands impact.
- Vacancy rates have steadily increased since 2013. The shift has been most pronounced between 2018 and 2020.
- The East and North Region reported a higher turnover rate, compared the provincial rate.
- Top 3 retention strategies identified were (a) education/training event, (b) employee recognition and (c) flexible scheduling.
- The system support identified as being the most beneficial to recruitment is the Ontario Critical Care Nurse Training Fund.
- Results highlighted that having allied health professional support on critical care units has a positive impact on nursing recruitment and retention.

The intention of highlighting these results is to allow stakeholder groups and individual hospital/units to better understand where variations exist and to possibly address areas that may be of concern. At a provincial level, these insights can be used to more effectively inform recruitment and retention strategies,

potential investments in education, and to enhance further career development opportunities. Such efforts, at the unit, regional and provincial levels, will foster a more robust workforce.

Understanding the critical care workforce through ongoing data collection provides the ability to make relevant decisions to inform future planning and to ensure effective HHR initiatives are measured to address retention and recruitment challenges. CCSO will be conducting an annual Critical Care Workforce Profile again focusing on the recruitment and retention aspects of the survey in summer 2022.

ADDENDUM: 2021 Critical Care Length of Experience and Vacancy Data

In addition to the Recruitment and Retention Survey, CCSO utilized the 2022/23 Critical Care Nurse Training Fund (CCNTF) application process to gain a point in time understanding of the current state of the Health Human Resources in Ontario's critical care units. A limited number of questions related to the critical care nursing workforce, such as vacancy, and length of experience were included with application submissions in November 2021. The overall response rate of the data collected from the 2022/23 CCNTF application process was 90.6%.

The CCNTF data collected builds on the 2020 Recruitment and Retention Provincial report. It is important to note the following limitations to the data collection:

- A limited number of staffing questions (4) were asked in the CCNTF application process at a specified point in time.
- Staffing questions were only reflective of Registered Nurses. Allied Health Supports were not part of this data collection.
- Data collected through the CCNTF application process was submitted at the hospital/site level while data collected through the Retention and Recruitment Survey is reported at the unit level.

Results

Figure 1a, highlights that in November 2021 approximately 50% of critical care nurses had ≤ 5 years experience in critical care. This represents a 10-16% increase in the proportion of less experienced novice critical care RNs.

Figure 1a: Critical Care Nursing: Length of Experience, Trend Over Time

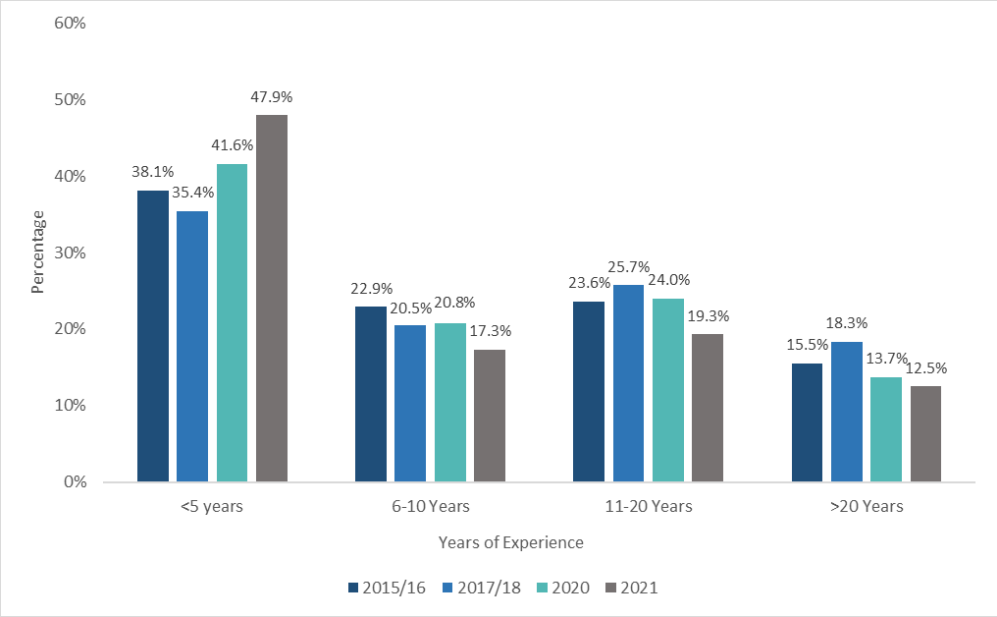


Figure 2a indicates the adult units reported having a higher proportion of novice nurses with < 3 years' of experience. In contrast, NICU units has a higher proportion of RNs with > 11 years of experience.

Figure 2a: Critical Care Nursing: Length of Experience by Population Type

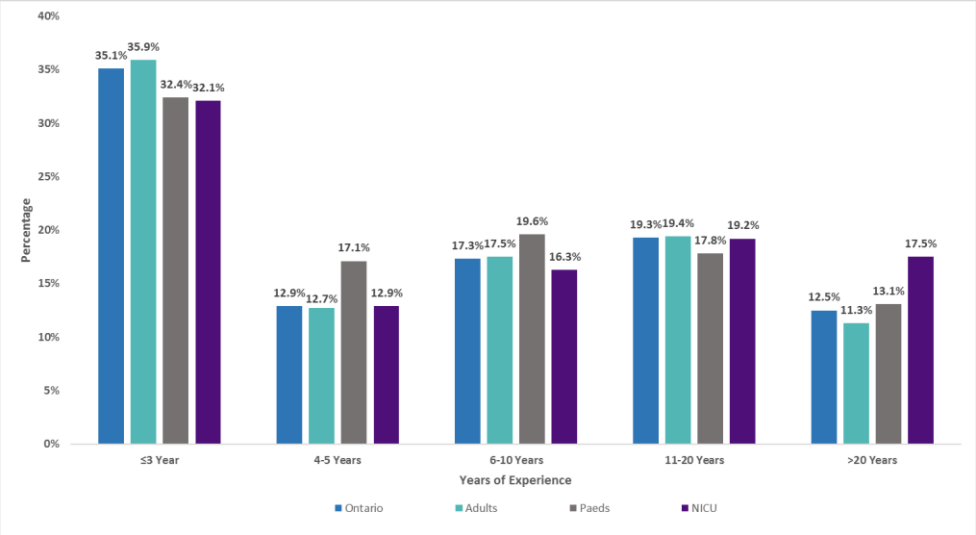


Figure 3a shows over the last decade there has been an increasing vacancy rate provincially in critical care. Since 2018, vacancy rates in adult critical care units have nearly tripled from 5.8% to 16.1%. The adult critical care sector is experiencing higher vacancy rates comparted to the provincial rate. This overall increasing trend is consistent among paediatric and neonatal unit types as well.

Figure 3a: Critical Care Nursing Vacancy Rates: 2011 – 2021

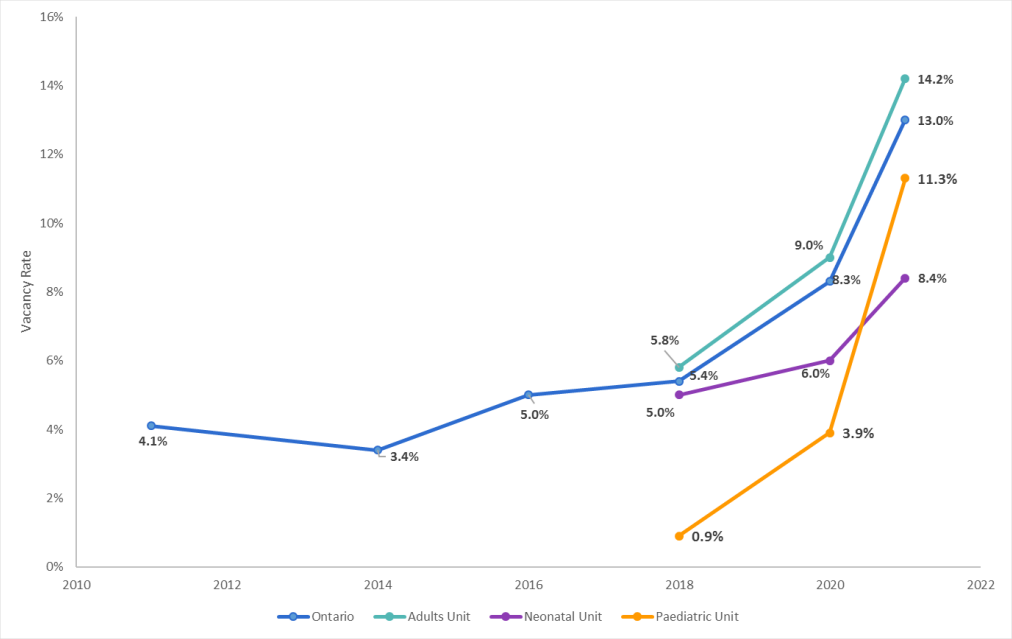
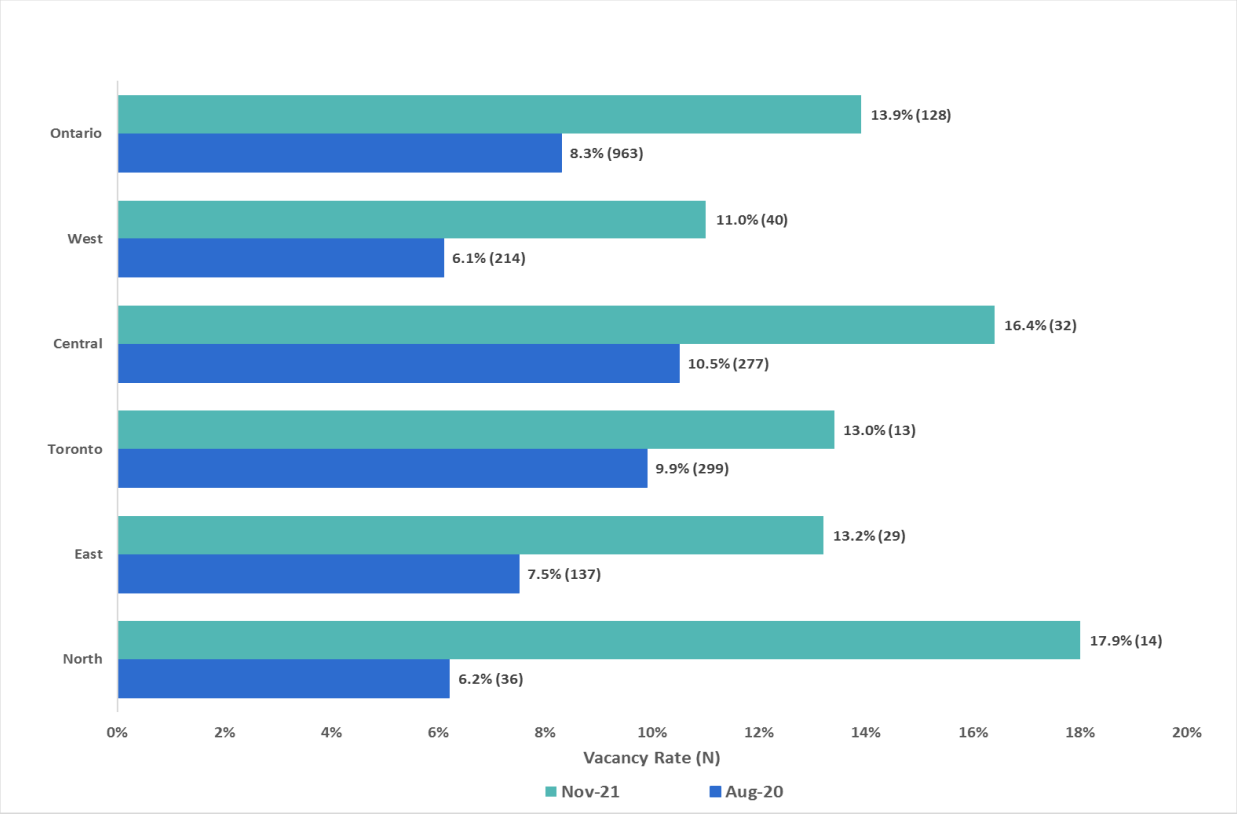


Figure 4a, demonstrates the breakdown of vacancy rates by region. Vacancy rates have increased significantly across all regions, with the highest proportional increase in the North, followed by the Central Region.

Figure 4a: Critical Care Nursing Vacancy Rates, By Region



Acknowledgments

Critical Care Services Ontario (CCSO) would like to thank all critical care partners who were instrumental in contributing data to complete the recruitment and retention focused 2020 survey and vacancy rate information in 2021. These contributions from critical care stakeholders are vital to understanding the current state for health disciplines providing critical care to patients.

The 2020 Recruitment & Retention Report reflects data reported from January 1st, 2020, to August 31st, 2020. This includes a period of COVID pandemic response through wave 1 from March to August 2020. The 2021 vacancy rate data collection occurred during the Critical Care Nurse Funding Application process and is reflective of the information that was reported as of November 1st, 2021.

This survey and report also informs CCSO's efforts in working with providers and health system leaders on health human resource planning as well as work in identifying emerging challenges for the critical care workforce.

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