

COVID-19's Impact on New Graduate Nurses

WESTERN MASSACHUSETTS NURSING COLLABORATIVE

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Did the COVID 19 pandemic affect the quality of the nursing graduate, as seen through the eyes of schools of nursing and healthcare organizations?

Abstract

The pandemic brought significant challenges to all the members of the WMNC, both in practice and education. During the early months of the pandemic, WMNC meetings increased and were transitioned online to support the continuation of students' learning and stabilize the incumbent nursing workforce. Discussions of the pandemic's effect on the education quality of RN students and orientation of new graduate nurses for the 2020-2021 academic year was a reoccurring theme. Both groups had significant concerns about the quality of the education delivered to the new graduates. The group was able to support the members through frequent meetings to discuss and problem solve new challenges. This work inspired the discussion and subsequent survey, "Evaluating 2021 New Graduate Nurses' Readiness for Practice" to explore the challenge the COVID-19 pandemic brought to bear on the graduating class of 2021 in their transition to practice.

Introduction

The Western Massachusetts Nursing Collaborative (WMNC) is a coalition of nurse leaders from academic institutions, healthcare organizations, and local nursing organizations focused on the critical role the nursing workforce plays in the delivery of quality care. The WMNC members work to ensure the region has an adequate supply of high quality, diverse nurses to meet the healthcare needs of our community. Since its founding in 2006, the WMNC has been active and responsive to the region's changing needs. Through the strength of collaboration, the WMNC is able to impact nursing practice, education and workforce development.

The pandemic brought significant challenges to all the members of the WMNC, both in practice and education. During the early months of the pandemic, WMNC meetings increased and were transitioned online to support the continuation of students' learning and stabilize the incumbent nursing workforce. The members met to exchange ideas, restructure and create new clinical experiences provided students with the tools they needed to continue their education. Discussions of the pandemic's effect on the education quality of RN students and orientation of new graduate nurses for the 2020-2021 academic year was a reoccurring theme. Both groups had significant concerns about the quality of the education delivered to the new graduates. The group was able to support the members through frequent meetings to discuss and problem solve new challenges. This work inspired the discussion and subsequent survey, "Evaluating 2021 New Graduate Nurses' Readiness for Practice" to explore the challenge the COVID-19 pandemic brought to bear on the graduating class of 2021 in their transition to practice.

Background

The COVID pandemic caused disruption in the education of nursing students and challenges for hiring of new graduates by employers. The pandemic closed Schools of Nursing (SONs) for short periods of time and limited clinical rotations for students in all areas of specialty experiences. These challenges required SONs to redesign clinical rotations and experiences to provide students with the Massachusetts Board of Registration in Nursing (MA

BORN) required clinical experience hours. In addition, graduates struggled to receive timely National Council Licensure Examination (NCLEX) testing due to testing sites limiting access.

Healthcare organizations were confronted with both the volume of patients admitted during the COVID-19 pandemic, and staffing challenges. Long-term care facilities were additionally challenged with isolation and care of these sick patients. Safety was a concern for patients, residents and staff. In order to maintain patient safety and quality of care, some HCOs restricted or ended clinical experiences as they redesigned clinical units to best care for COVID-19 and non-COVID patients.

Schools of Nursing revised clinical education to include case studies (self-created or evidence-based), and lab packets with virtual labs at home. Some programs transitioned to virtual simulations slower than others because the equipment and technology was not readily available. However, they eventually transferred to virtual simulations using Assessment Technologies Institute® (ATI), iHuman® by Kaplan, among others, to integrate into the curriculum.

Methods

The WMNC designated an ad hoc group of five members, which consisted of academic and service partners. Their charge was to design a questionnaire for deans and directors of nursing at the SONs, and nurse educators within the healthcare organizations. Two separate but similar, eight-question surveys were developed and administered through the SurveyMonkey® online tool. The surveys explored the perspectives of the deans and directors' general evaluation of their new 2021 graduates, and the nurse educators' general evaluation of the newly hired 2021 graduate nurses. The surveys were disseminated to each member of the collaborative. The questions were guided by the Massachusetts Competencies for Nurses, Massachusetts Board of Registration in Nursing (MA BORN) and program accreditation information from the National League for Nursing (NLN) and the Commission on Collegiate Nursing Education (CCNE).

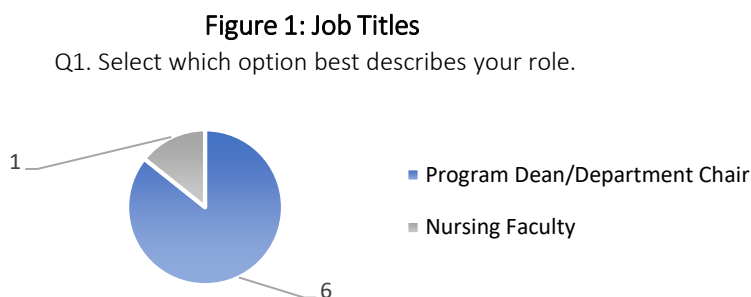
Survey Results

Each member institution has multiple representatives serving on the collaborative. All representatives were given the opportunity to respond to the surveys. Sixty-one percent of the deans and directors and 43 percent of educators in healthcare service organizations completed the questionnaire. The response rates are based on the total number of representatives, and are not representative of each member institution. The respondents from the schools of nursing represented traditional undergraduate programs: three (3) Associate Degree and four (4) Bachelors of Science in nursing. Data was also collected from one (1) online RN to BSN program where appropriate. All respondents from the healthcare organizations respondents represented acute care institutions. The results were collated by the chair of the committee, reviewed by the committee, and presented to the WMNC membership.

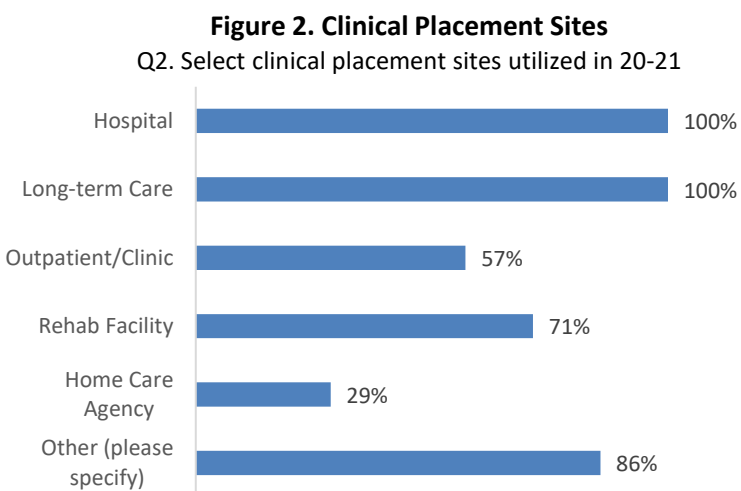
Schools of Nursing

Traditional Clinical Experiences

Each respondent identified their role (Figure 1) as a faculty member, dean and or a department chair



Schools of Nursing



Prior to the pandemic, nursing programs utilized a variety of settings (Figure 2), such as long-term care (LTC), home health care, outpatient clinics, rehabilitation hospitals and acute care hospitals. Other settings were described as: K-12 schools and community settings for their clinical placements. At the onset of the pandemic, most of the traditional clinical sites were forced to temporarily restrict access to clinical students. This impacted clinical experiences for

all nursing students.

All respondents reported their model of clinical education changed due the pandemic. They used more simulations and case studies. HCOs decreased the number of students in clinical groups to manage transmission of the COVID-19 virus. The frequency of clinical rotations decreased, from weekly to bi-weekly for each student. Access to clinical placements in all specialty areas were also impacted. The biggest changes were in pediatrics, obstetrics and fundamentals of nursing. As a result, students had less clinical hours in HCOs, on specialty units and less interactions with patients than was expected.

Teaching Methods

Figure 3. Alternative Clinical Experiences

Q3. Which clinical experiences were utilized during the pandemic?

■ Virtual Simulation ■ Hands on Simulation
■ Case Studies

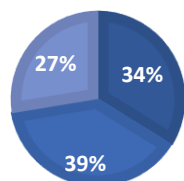
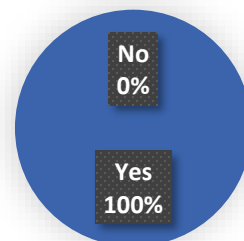


Figure 4: Change in Teaching Methods

Q4. Did your method of clinical instruction change?



All respondents reported (Figure 3) the use of virtual clinical experiences, high-fidelity simulations, hands-on simulations, case studies. Other experiences were described as flu and COVID-19 vaccination clinics to replace the traditional clinical experiences. There were opportunities to continue assessment activities, however there were restrictions to students to perform some skills due to the COVID environment.

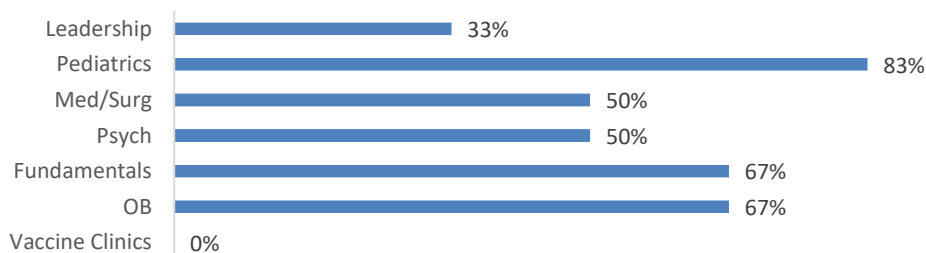
All respondents stated (Figure 4) that their methods of teaching changed. Changes reported include: introducing high fidelity simulation for all or some experiences, hybrid traditional clinical experiences with high fidelity simulation due to reduction in available clinical experiences, a reduction in numbers of students allowed on a clinical unit, and segmented clinical experiences due to limited unit availability.

Specialty Clinical Experiences

Nearly all specialty experiences (Figure 5) were impacted. Eighty-three percent of the deans and directors reported that pediatrics was affected, 67 percent that fundamentals and obstetrics were affected, 50 percent reported that psychiatric and medical-surgical units were affected. None of the respondents reported that vaccine clinics were affected. Specifically noted was the long reentry process to participate in the long-term care setting.

Figure 5: Specialties Impacted by Clinical Changes

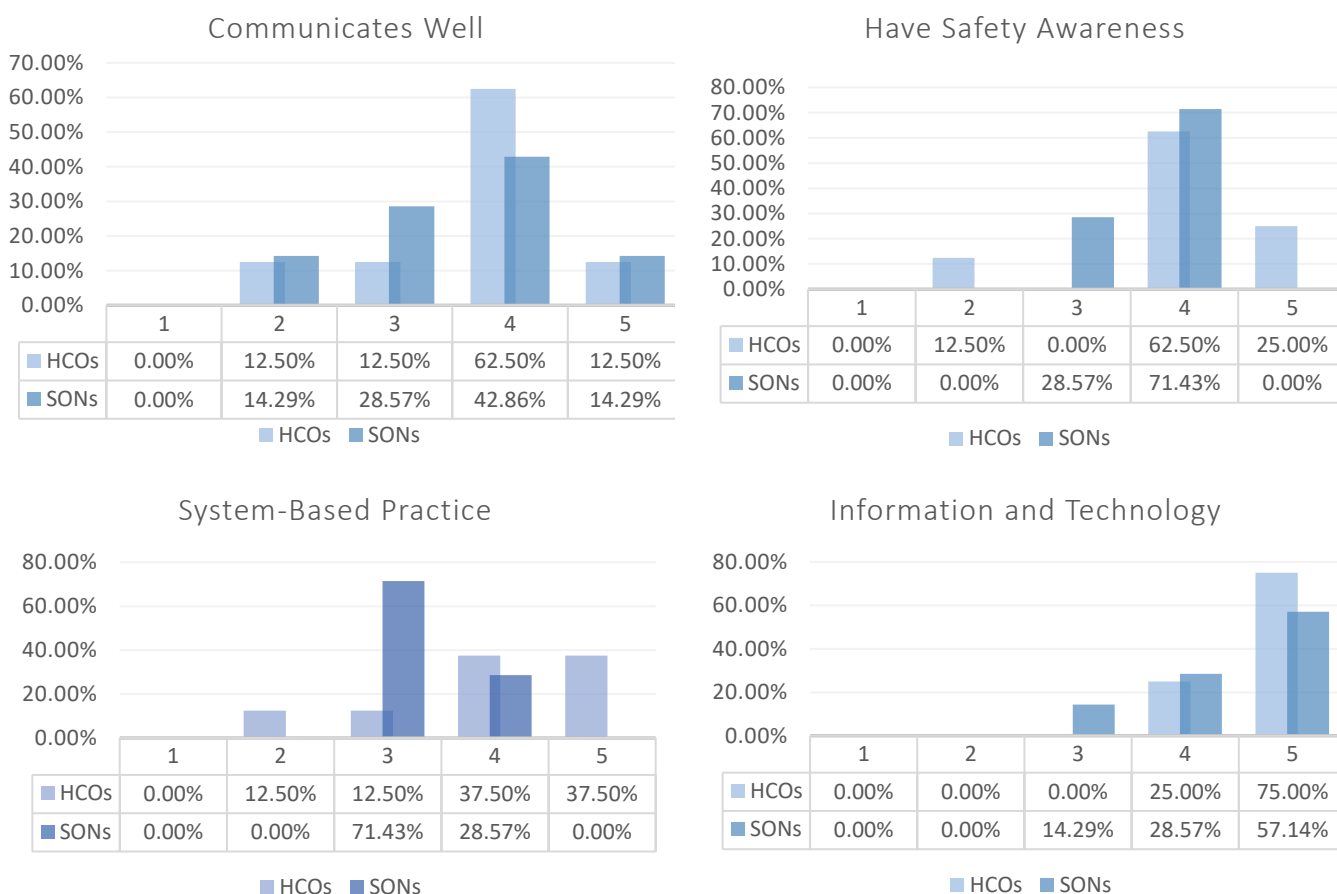
Q5. Which specialties were impacted?



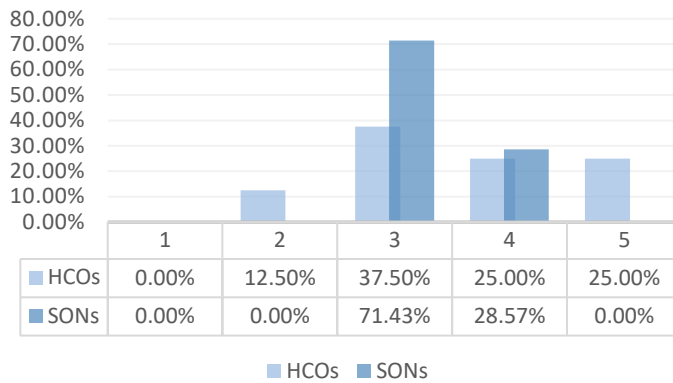
Readiness for Practice

SONs were asked to rate their graduating class for their overall readiness to practice (Figure 6) following graduation. These questions were based on the current Massachusetts Nurse Competencies. These criteria are: team player, communication, safety awareness, systems knowledge, informatics/technology, professionalism, quality improvement, evidence-based practice, leadership, clinical resonating and time management. The SONs rated the 2021 graduates higher than previous graduates in: team players, communication, safety awareness, systems' practice and leadership skills. The 2021 graduates were rated lower in professionalism and time management compared to the ratings given by the healthcare agencies. The highest (5) ratings identified was, informatics/technology (62% of DONs) and lowest (2) for communicates well (12.5%). Students were described as very skilled in the use of technology, electronic medical records, and IV pumps, this is possibly related to the use of technology often in their personal lives. Additionally students use various methods to contact and communicate with the interdisciplinary team throughout nursing school.

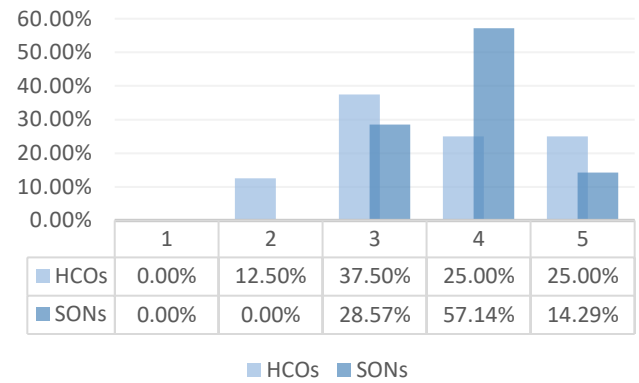
Figure 6



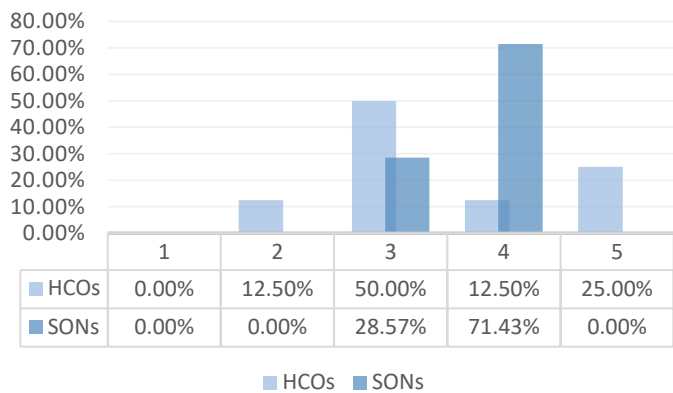
Leadership Skills



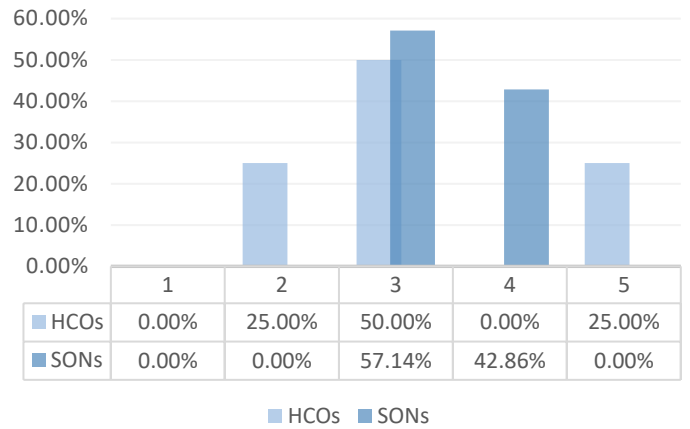
Critical Thinking



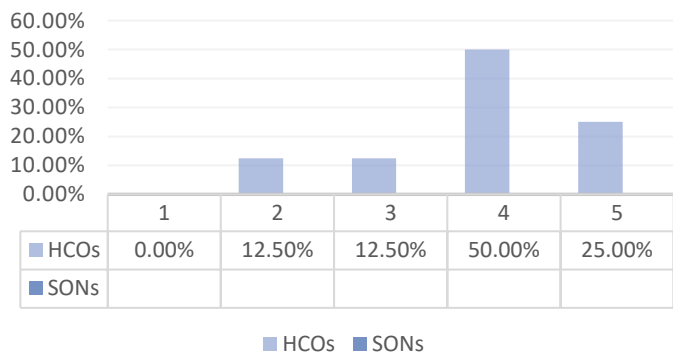
Clinical Reasoning



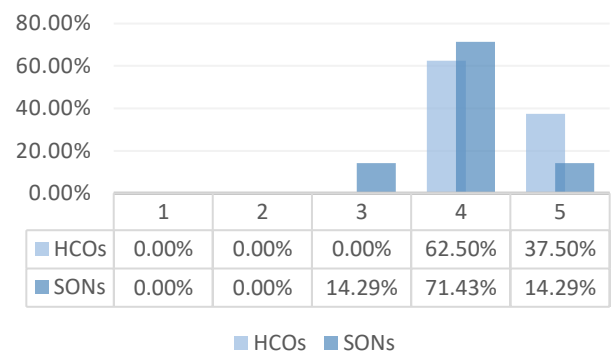
Time Management



Patient-Centered Care



Evidence-Based Practice

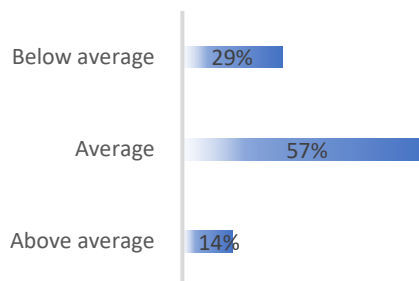


Skills Set and Clinical Competence

Eighteen percent of educators reported the new graduate's ability to perform clinical skills competently (Figure 7) was above average. Fifty-two percent of educators reported new graduates' ability as average and 29 percent of educators reported their ability was below average.

Figure 7: Skills set and overall competency

Skills set and overall competency of the 2021 graduate



NCLEX Testing

NCLEX testing sites were closed for an extended period of time. This impacted new graduates ability to obtain their licenses. All nursing faculty and department chairs – in some instances multiple people representing a single school of nursing - were asked to share the percentages of new graduates who sat for their licensing exam in the first four months following graduation. The table below shows their responses:

Table 1: NCLEX testing timeline

	0-25%	26-50%	51-75%	76-100%
June	3	1	0	0
July	2	2	1	0
August	4	1	0	0
September	4	0	1	0
Longer-	3	0	0	1

Three respondents reported that 0-25 percent of graduates sat for NCLEX testing in June. Two reported that 0-25 percent of graduates sat for NCLEX testing in July. Four reported that 0-25 percent of graduates sat for NCLEX testing in August. Four reported that 0-25 percent of graduates sat for their NCLEX testing in September. Three reported that 0-25percent of graduates sat for their NCLEX after September.

One respondent reported that 26-50 percent of graduates sat for NCLEX testing in June. Two respondents reported that 26-50 percent of graduates sat for NCLEX testing in July. One respondent reported that 26-50 percent of graduates sat for NCLEX testing in August. One respondent reported that 51-75 percent of graduates sat for NCLEX testing in July and September. One respondent reported that 76-100 percent of graduates sat for their NCLEX testing after September.

Respondents also shared the following comments:

- *There are still 4 to test in November. This has never occurred in previous cohorts.*
- *Three have not tested to date. Three have not passed on their first attempt.*
- *Very worried that the delay of students getting their ATTs this year will affect the first time pass rates and not be a true reflection of the changes that were implemented. (Not comparing apples to apples (2021 testing timeline extended beyond the testing timeline in previous years). Still have 12 students that didn't take the NCLEX.... very unusual!*

Triumphs and Challenges

The SONs reported the following triumphs:

- i. Smooth transition to virtual learning. Most of the faculty were very experienced on-line educators. We also spent CARES Act money wisely to promote learning.

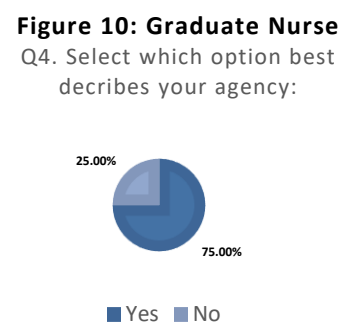
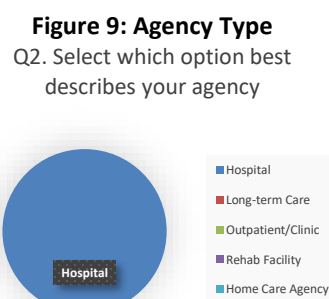
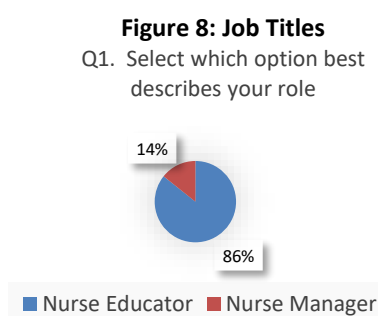
- ii. Lots of creative thinking: using Pioneer Valley Interprofessional Education Collaborative (PV-IPEC¹) opportunities, vaccine clinics, purchasing innovative electronic virtual clinical platforms. Bring the active learning of lab and clinical into the theory portion of our courses.
- iii. All students had 50 percent or more (patient) direct care each semester. Were able to meet some program goals 2-3 years earlier due to COVID such as incorporation of virtual simulation and integration of testing via student devices. Still have good admission numbers- no change.
- iv. Colleges of Nursing have made it through so far. Some of the new grads are going to be really good. We incorporated virtual products and moved to simulations that we had thought about, but hadn't done until the pandemic forced us to. Longstanding nursing problems in the health care system, nursing education, and the Board of Registration in Nursing are no longer being hidden- they have really been brought to light.
- v. Increased utilization of technology via virtual simulation.

The SONs reported the following challenges:

- i. Many (students) went into workforce after graduation and did not focus on NCLEX. We predict an overall decrease on scores.
- ii. Concerns about attrition rates. Increased attrition. Student are not managing the rigors of the program along with home life and increased workloads.
- iii. Reduced amount (number) of students on the units, increased the need to hire more instructors to meet the BORN requirements for direct patient care hours.
- iv. Reduced number of days/hours allowed student in direct care.

Health Care Organizations

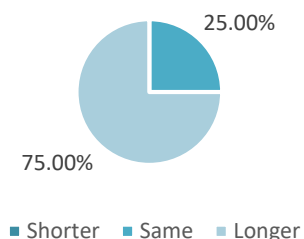
Sixty-eight percent respondents identified their roles (Figure 8) as nurse educators; 14 percent identified their roles as a nurse managers. One hundred percent of respondents represent hospitals (Figure 9). 75 percent of respondents reported their institutions hired unlicensed graduate nurses, 25 percent did not (Figure 10).



Orientation

Seventy-five percent of respondents reported longer orientation time (Figure 11) for unlicensed nurses because new graduates lacked direct clinical experience due to increase virtual simulation time (no hands on skills). The temporary executive order² allowed HCOs to hire new graduate nurses without a license, required that graduates needed to be directly observed and thus, they were not able to work independently until they were licensed. Reduced direct care clinical experience limited students' contact with patients, families and providers, which impacted their communication and interaction skills. As a result, most HCOs revised and extended their new nurses orientations. Twenty-five percent of institution's orientation time remained did not increase.

Figure 11: Orientation Time
Q3. Did orientation time increase?



New RN Retention at 6 weeks, 3 months, 6 months, and 9 months

Table 2: New nurse's retention

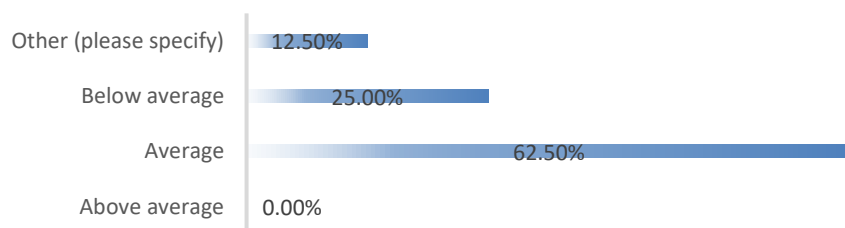
	0-25%	26-50%	51-75%	76-100%
At 6 weeks	0	0	1	6
3 months	0	0	1	6
6 months	0	0	2	5
9 months	0	0	3	4

Retention rates (Table 2) were identified at 6 weeks, 3 months, 6 months and 9 months. One organization reported a 51-75% retention rate at 6 weeks, another reported a 51-75% retention rate at 3 months. Two reported 51-75% retention rate at 6 months. Three reported 51-75% retention rate at 9 months. Six respondents reported 76-100% retention rates at 6 weeks. Six respondents reported 76-100% retention rates at 3 months. Five respondents reported 76-100% retention rates at 6 months. Four respondents reported 76-100% retention rates at 9 months. One organization provided additional details, reporting actual retention rates instead of ranges. Retention rates reported were 98% at 3 months, 91% at 6 month, 91% at 12 months, post June 2020.

Skill Set/Clinical Competence

Figure 12: Skill Set/Clinical Competence

Q7. Skill set and overall competency of the 20-21 graduate



All respondents rated the skills sets of the new graduates at average or below: 62.5 percent respondents rated their skills as average, 25 percent rated their skills below average and

12.5 percent respondent noted their skills as other, noting new graduates were not seeing the ‘big picture’, and were very task oriented.

Triumphs and Challenges

The HCOs reported the following triumphs:

Triumphs

- i. Keeping the students in clinical placements. Enhanced communication and collaboration with nursing programs i.e., successful COVID monitoring, optimizing centralized clinical placement (CCP³) rosters.
- ii. Decreasing student group sizes was beneficial to learning environment as reported by unit leadership, instructors and students.
- iii. Senior nursing students graduated (on time).
- iv. GN has helped us get them in sooner to spend as much time as possible learning at the bedside, with positive effect!
- v. Robust transition to practice program.
- vi. Very willing and enthusiastic to take advantage of clinical experiences and challenges. (Better) critical thinking (skills) have impacted competence and progression.

Challenges

- i. Have been related to short staffing and having adequate preceptors for the new grads.
- ii. Reduction in clinical hours per BORN guidelines to get all students at least 50% clinical hours in order to graduate. Students had less clinical time to gain experience and confidence. The orientation lengthened due to hiring them as graduate nurses. However, this also gave us the ability to give them different experiences in the clinical setting than we would not have done with a normal 12-week new graduate RN.
- iii. Increased orientation time due to lack of hands-on practical skills during school.
- iv. Longer orientations overall for new grads, harder time adjusting to more than one patient assignments, time management is a challenge and prioritization is challenging, have experienced less during clinical (less clinical hours) so less experience to draw on.
- v. Longer orientations overall for new grads.

Discussion

This short survey provided the WMNC with data to clarify concerns about new graduates for the 2021 graduating class and the resulting effectiveness of interventions undertaken by the group members to support education and service during the challenging early portion of the COVID pandemic. Both SONs and HCOs were surprised to find the data suggested an overall better graduate and new nurse in this graduating cohort.

All of the nursing programs reported that their model of clinical education changed with an increase in simulation activities and case studies. Students’ clinical rotations changed from weekly to bi-weekly, with smaller clinical groups as requested by the clinical agencies.

The SONs rated the following Massachusetts Nursing Competencies as higher than that of previous graduates: *team players, communication, safety awareness, and system practice and leadership skills*. Whereas the HCOS rated the following competencies higher than previous years: *informatics/technology, professionalism, quality improvement, safety awareness, and evidenced based practice*.

The SONs rated their graduates lower in *professionalism and time management* compared to the ratings given by the healthcare agencies; whereas the HCOs only rated *time management* lower.

Twenty-five percent of schools rated themselves at a four or greater on a scale of 1 to 5 in terms of producing a better graduate, compared to 50-75% of the HCOs believing that they hired a better graduate. The graduates were described as having greater capacity to critically think.

It took longer for the graduates to take the NCLEX than in previous years. In past years, most new spring graduates test before September. Additionally, in Massachusetts many graduate nurses were hired into jobs before passing their NCLEX and obtaining licensure. SONs and HCOs were concerned the delayed testing for the NCLEX would negatively affect the pass rates and accreditation. The 2020 graduating class testing timeline extended beyond the traditional reporting timeframe. Due to the delay, these students are less likely to pass on the first attempt. As the literature has reported, the longer the time between graduation and testing will often produce a lower pass rate. Students who test after the fourth quarter following graduation are included in the next years reporting timeline. The irregularity in the testing timeline may also affect the reported pass rates of SONs which may in turn affect accreditation and BORN requirements.

HCOs' retention rates improved compared to previous years, possibly be due to HCOs employing pre-licensed graduate nurses (GNs). GNs were supported more intensely by HCOs as they were unable to practice independently. Most HCOs reported the graduates' orientation was longer. Some graduates hired by HCOs as GNs could not be counted in staffing numbers. The respondents suggested the new graduates had missed opportunities to learn social cues and how to behave professionally in a learning and working environment from lack of extended exposure in the clinical setting, and directly observe faculty in the clinical setting.

One organization identified a yearly retention rate from March 2020 to June 2022 (this data was reported during the survey review and discussions) of 82%, due to their particular agency's data reporting process. They were unable to provide the exact number for the period requested.

There were concerns about the percentages of respondents to the survey. The survey was sent to members of the WMNC with many of the members apart of a singular organization. It is suggested if another survey is conducted, the survey should be sent to a singular reporter for each organization.

The survey results and conclusions suggest the WMNC, as a result of their collaborative process and immediate attention to the concerns of their nursing community, had successfully supported the graduation of competent new nurses in the Class of 2021. The results are not meant to be transferable to other graduates of other programs and communities.

Conclusion

In conclusion Health Care Organizations (HCO) limited access to clinical placements due to COVID restrictions. Schools of Nursing (SON) changed their model of education by increasing simulation as a means of study for practical clinical experience during the COVID 19 Pandemic. Health Care Organizations (HCO) reported that the length of orientation period for the newly hired graduate nurses was longer compared to previous new graduates hired before the pandemic. However it is not known if this was due to the graduate nurses' lack of direct care clinical experiences during the pandemic or because the HCOs were allowed to hire them pre-licensure as GNs. It does appear that the increased simulation as a substitute for direct in person clinical experience in HCOs may have produced a better quality graduate nurse as perceived by both SONs and HCOs.

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Appendix I

Glossary of Terms

1. Pioneer Valley Interprofessional Education Collaborative – PV IPEC leads, develops and facilitates interprofessional healthcare education and practice amongst members of all health professions through the diversity of programs and disciplines that constitutes the healthcare institutions in the Pioneer Valley.
2. Executive Order – Section 25 of chapter 20 of the Acts of 2020 provides the authorization of nursing practice by graduates and students in their last semester of nursing education programs in accordance with guidance from the Massachusetts Board of Registration in Nursing (BORN) until April 1, 2022.
3. Centralized Clinical Placement - The Massachusetts Centralized Nursing Clinical Placement System (MCNCPS) is a collaborative project of the Board of Higher Education (BHE) and the Massachusetts Center for Nursing (MCN). The MCNCPS software, developed by the Massachusetts Board of Higher Education, is a stand-alone Internet-based software tool designed to facilitate the display, scheduling, and management of clinical nursing education placements between health care organizations and nursing education programs.

Appendix II

Survey I: SONs Evaluating 2021 New Graduate Nurses Readiness for Practice

1. Select which options best describes your role.
2. Select all agencies that were utilized for clinical placements in 2020-2021:
3. Which of the following did you utilize for clinical experiences?
4. Did your model of clinical instruction change for 2020-2021?
5. Which specialties were most impacted clinical changes?
6. Please rate the 2021 graduate nurses and new RNs on the following competencies: Team Player, Communicates Well, Have Safety Awareness, System-Based Practice,

Informatics and Technology, Professionalism, Quality Improvement, Evidence-Based Practice, Patient-Centered Care, Leadership Skills, Critical Thinking, Time Management, Clinical Reasoning (1-5; 1 is low and 5 is high):

7. Do you think the skill set/overall clinical competence of the 2020-2021 graduates are? Above average, average, below average, other, please specify
8. How long after graduation did your 2021 graduates take the NCLEX exam?
9. Please describe your triumphs and challenges with clinical placements and making the necessary changes in clinical education as result of COVID.

Appendix III

Survey II: HCOs Evaluating 2021 New Graduate Nurses Readiness for Practice

1. Select which options best describes your role:
2. Select which option best describes your agency:
3. Was the orientation time for 2021 graduates compared to 2020?
4. Did you hire graduate nurses?
5. What is the percentage of new hire graduate nurses are still employed at (6 weeks, 3 months, 6 months, 9 months)?
6. Please rate the 2021 graduate nurses and new RNs on the following competencies: Team Player, Communicates Well, Have Safety Awareness, System-Based Practice, Informatics and Technology, Professionalism, Quality Improvement, Evidence-Based Practice, Patient-Centered Care, Leadership Skills, Critical Thinking, Time Management, Clinical Reasoning (1-5; 1 is low and 5 is high):
7. Do you think the skill set/overall clinical competence of the 2020-2021 graduates are? Above average, average, below average, other, please specify
8. Please describe your triumphs and challenges with clinical placements and making the necessary changes in clinical education as result of COVID.

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