# The Effects of the COVID-19 Pandemic on

pandemics from 2003 to 2020. They found there was a need to adapt nursing education during pandemics, which included presenting information about the pandemic and knowledge and concern about risk and preventative behavior. The researchers reported that nursing programs provided alternative teaching strategies for educating students because of the frequent need to suspend clinical placements. The review examined the willing ness of students to work or volunteer during a pandemic and ex plored the factors that made them more or less willing. Another theme in this review was the emotional effect of a pandemic on the students, and the authors suggested some strategies to support students. Ethical dilemmas with the care of patients

GXULQJ D SDQGHPLF DOVR ZHUH- LGHQWL¹HG DV WKHPHV LQ WKLV V\V tematic review. For example, they explored attitudes with duty to care, resource allocation, and decisions regarding which pa tients should be admitted to critical care units. Many of these same themes also occurred in the U.S. during the COVID-19 pandemic (Emory et al., 2021; Feeg et al., 2021; Michel et al., 2021).

International nursing programs experienced similar -chal lenges during the pandemic. One cross-sectional multicenter international study examined the COVID-19 nursing education experience with 30 nurse educators working in the 60 highest-ranked nursing schools in the world (based on the 2020 QS World University Ranking list) and found that 48% of faculty HQFRXQWHUHG LQWHUQHW UHODWHG SUREOHPV in adapting the curriculum to distance education, and 65% had issues providing examinations to students (Kalanlar, 2022). In a Canadian qualitative study, nursing faculty described their experiences in the pandemic as being overwhelming and exhaust ing from working extra hours to support students and adapting to remote teaching (VanLeeuwen et al., 2021).

Similarly, nursing students reported unpreparedness re lated to the sudden new normality. In a cross-sectional survey study conducted in Belgium, almost half of the surveyed stu dents (t=301) could not continue their clinical placement as planned, and they perceived there were little to no opportunities for practicing nursing skills (Ulenaers et al., 2021). This can be aligned with U.S. nursing students' worries about passing the NCLEX and being prepared to practice competently (Feeg et al., 2021; Michel et al., 2021). Although Ulenaers et al. (2021)

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the nursing schools, students in another study by Michel et al.

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participating BONs for distribution to their prelicensure nursing programs. Nursing programs were provided a minimum of 30 days to complete the survey. Some BONs allowed their nursing programs an extended deadline depending on their board's rules. At the end of the survey completion deadline, NCSBN sent the BONs a list of nursing programs that submitted an annual report IRU WKH %21V WR FRQ1UP WKDW DOO RI WKHLU SUHOLFHQVXUH SURJUDPV KDG FRPSOHWHG WKH VXUYH\ \$IWHU FRQ1UPDWLRQ ZDV UHFHLYHG IURP the BONs that all prelicensure programs had submitted, NCSBN UHYLHZHG FOHDQHG DOG YHUL¹HG DOO GDWD 1&6%1 WKHQ VHQW WKH %21V WKHLU 1QDO UHSRUW DQG DW WKH HQG RI WKH \HDU DQ DJJUHJDWH report of all participating BONs was created and distributed to all participating BONs and posted on NCSBN's website (Spector et al., 2022).

# Data Analysis

A total of 798 nursing programs in 2020 and 929 nursing programs in 2021 participated in the survey. Nursing programs were asked how seriously their programs were affected by COVID-19. In 2020, almost half (47.9%) of the programs stated COVID-19 caused a major disruption. By 2021, only 22.4% re



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percentage decreased to 63.7%. Faculty likely were able to de crease contagion in the simulation and skills laboratory more easily compared with actual clinical experiences and lectures.

In 2020, three-fourths (78.2%) of the programs reported converting to 100% online; the remaining programs reported using hybrid classes. However, 100% online teaching decreased to 33% in 2021, with many more programs converting to hybrid classes. The 2021 decrease in 100% online teaching likely ben H ¹ W W H G V R P H V W X G H Q W V D Q G I D F X O line education during the pandemic (Kalanlar, 2022; Michel et al., 2021). Another alternative strategy was that some programs reported decreasing their class size because of the pandemic (22.9% in 2020 versus 36.4% in 2021). There was a greater decrease in class size in 2021, which again might be attributed to a better understanding of alternative teaching methods.

Alternative strategies for clinical experiences included pro grams using either simulation in person (19.2% in 2020 versus 45% in 2021) or with mandated social distancing (34.6% in 2020 versus 57.9% in 2021). Research supports replacing up to 50% of in-person clinical experiences with simulation (Hayden et al., 2014). Another strategy for providing clinical experiences was that in 2020 most programs (96.1%) used virtual simula tion, although this decreased to 73.5% in 2021. To date, the re search has not supported virtual simulation as a replacement for clinical experiences (Foronda et al., 2020). Some schools de creased the number of clinical hours that were required for stu dents to graduate (22.9% in 2020 and 8.4% in 2021), whereas other schools changed their grading criteria (19% in 2020 and 9% in 2021). This lowering of requirements is concerning as it could affect the quality of the nurses who graduate; this should be explored further for future crisis situations.

In 2020, of the nursing students who cared for patients in health care facilities, 10.2% had contact with COVID-19 pa

(86.6%) faculty reported simulation was adversely affected tients; in 2021, this increased to 37.6% of nursing students. because of the pandemic; in 2021, this percentage droppedHowever, only 29.7% of the health care facilities provided PPE to 59.2% of the faculty. Similarly, in 2020, approximately to students in 2020 and 36.8% in 2021. Generally, the nurs three quarters (83.8%) of the faculty reported that skills ing program or the students themselves provided the PPE. The laboratories were affected by the pandemic; in 2021, this nursing community might want to collaborate with practice

facilities and public health agencies about how to prevent this from happening in any future pandemics.

Decisions to close programs and cease face-to-face-educa tion were made most frequently in nursing schools by governor proclamation and school administration. Faculty, according to WKH ¹QGLQJVRIWKLVVXUYH\ KDGOLWWOHLQSXWLQFORVLQJSURJUDPV to face-to-face contact (20.3% in 2020 versus 18.3% in 2021).

Particularly in nursing, when administrators make decisions about whether to close programs during a pandemic or a di saster, they should listen intently to nursing faculty because

A major challenge for nursing education during the-pan demic was that many health care facilities closed their doors to students. This not only prevented students from caring for DFWXDO SDWLHQWV DQG GHFUHDVHG WKHLU FRQ¹GHQFH DQG H[SHUL ence, it also prevented health care facilities from obtaining care that nursing students provide to patients, thus relieving their overwhelmed staff. This lack of clinical experiences is one possible reason that nursing students' licensure pass rates declined during the pandemic (NCSBN, 2022).

Besides developing alternative strategies for students' clinical experiences, a national nursing education forum could call for practice and education to collaborate much more closely than they do now. Some programs did collaborate with practice during the pandemic (Spector et al., 2021); in such cases, nursing students were able to access health care facili ties and provide care to patients. The COVID-19 pandemic has indicated the need for the nursing profession to take steps to prevent the chaos that ensued during the pandemic from ever happening again during any future crisis or pandemic.

# **LIMITATIONS**

Although much of the data collected were quantitative, such as the percentage of clinical experiences that were can celled, some data represent participants' opinions (e.g., "What is the quality of education now compared with before the pan demic?"). Data from opinions are subjective and therefore may not be reliable. Additionally, the participants had to recall previous situations and may not have accurately remembered what occurred during the pandemic.

#### CONCLUSION

This survey found nursing education suffered immensely during the pandemic. Oftentimes, students were not able to care for patients directly, and their didactic classes were 100% remote. When students were able to have clinical experiences in health care settings, the students or their nursing program often had to provide PPE. Faculty and students reported dif

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