ACADEMIC YEAR

2020-2021

HAWAI'I STATE NURSE EDUCATION CAPACITY REPORT

HAWAI'I STATE CENTER FOR NURSING

Connecting Nurses.
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AUGUST 2022

Hawai‘i State Nurse Education Capacity Report

Academic Year 2020-2021

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The Hawai‘i State Center for Nursing monitors the state of the nursing workforce in Hawai‘i through the collection and reporting of workforce supply, education capacity, and employer demand data. These three research activities assist entities in the public and private sectors with the development and implementation of initiatives intended to develop a robust nursing workforce that meets the needs of Hawai‘i’s residents now and in the future.

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National Forum of State Nursing Workforce Centers

Contents

List of Tables

List of Abbreviations

Abbreviation	Definition
AACN	American Association of Colleges of Nursing
ACS	American Community Survey Program of the U.S. Census Bureau
ADN	associate degree program in nursing
AGPCNP	adult-gerontology primary care nurse practitioner
APRN	advanced practice registered nurse
AY	academic year
AY 17-18	academic year 2017-2018
AY 18-19	academic year 2018-2019
AY 19-20	academic year 2019-2020
BLS	U.S. Bureau of Labor Statistics
BSN	baccalaureate degree program in nursing
CNM	certified nurse midwife
CNS	clinical nurse specialist
CRNA	certified registered nurse anesthetist
DLIR	Hawai‘i Department of Labor and Industrial Relations
DNP	Doctor of Nursing Practice
FNP	family nurse practitioner
GEPN	graduate entry program in nursing
HAH	Healthcare Association of Hawai‘i
HBON	Hawai‘i Board of Nursing
HSCN or The Center	Hawai‘i State Center for Nursing
HWI	Healthcare Workforce Initiative
IOM	Institute of Medicine
LPN	licensed practical nurse
MSN	master's degree program in nursing
NAM	National Academy of Medicine
NCLEX-PN	National Council Licensure Examination for Practical Nurses
NCLEX-RN	National Council Licensure Examination for Registered Nurses
NCSBN	National Council of State Boards of Nursing
NP	nurse practitioner
PCNP	primary care nurse practitioner
PNP	pediatric primary care nurse practitioner
RN	registered nurse
The Forum	National Forum of State Nursing Workforce Centers

Introduction

Purpose of the Report

The annual Hawai'i State Nurse Education Capacity Report summarizes data about the extent to which local schools of nursing have the capacity to prepare a nursing workforce that meets in-state employment demand for nurses at all levels of practice.

This report provides information about schools' capacity to enroll new students, the number of graduates their programs contribute to the nursing workforce, and factors that adversely impact their programs. Because academic programs are the beginning of the workforce pipeline, schools' reduced enrollment capacity and inability to retain students through graduation will result in a decrease in the number of new nurses entering the workforce. In turn, employers will have trouble filling vacant or new positions. A persistent inability for employers to fill open nursing positions could adversely impact both the population's access to nursing care and the safety and quality of the care the workforce is able to provide.

By producing this report annually, the Hawai'i State Center for Nursing can make schools, employers, and workforce planners aware of changes in the demand for nurse education, schools' enrollment caps or graduates, and the availability of academic programs that support the stability of the statewide nursing workforce.

Theme of This Year's Report

This year's report focuses on the health of Hawai'i's nurse education programs using NCSBN's Pre-License Nursing Education Approval Guidelines (Guidelines). The guidelines provide a framework that state boards of nursing can use to evaluate the quality of the nurse education programs they approve. The Guidelines list more than 20 evidence-based program quality indicators nearly half of which are related to nursing program faculty (National Council of State Boards of Nursing, 2020).

We have written in our last two Education Capacity reports about the faculty shortage currently affecting most of the schools in the state. A shortage of qualified faculty limits schools' capacity to admit and graduate enough students to meet employment demand. This is an especially distressing problem during a statewide nursing shortage (Hawai'i State Center for Nursing, 2021c).

Though this year's data indicate that the faculty shortage continues to be a problem, we also wanted to acknowledge that the number of faculty positions a school has only one of several faculty-related criteria that affects educational quality. The Guidelines highlight that faculty members' highest level of education, clinical experience, preparation for the teaching role, mentorship, and professional development all influence the quality of nurse education. To that end, we devote the first section of this report to an examination of the extent to which Hawai'i's nurse education programs meet the criteria for program quality outlined in the Guidelines.

Important Notes about the Nurse Education Capacity Survey and this Report

Regarding Institutions Included in this Report

All institutions whose data are included in this report (1) have a physical campus in Hawai‘i, (2) offered at least one nurse education program at their physical campus during AY 20-21, and (3) are recognized by the Hawai‘i Board of Nursing as qualified to provide nursing education. In total, eight schools met these criteria.

Regarding the Terms "School of Nursing" and "Nursing Program"

All academic institutions included in this report are referred to as "schools of nursing" regardless of their formal designation (e.g., school, college, department, or program). The terms "school of nursing" and "school" are used interchangeably throughout the report.

The term "nursing program" refers to an academic program or track offered by a school of nursing that provides preparation for a specific type of nursing practice (e.g., LPN, FNP, etc.). The term "program" and "school" are not used interchangeably.

Regarding the Age of Data in this Report

The data in this report represent the in-state nurse education environment as it existed two academic years ago. To obtain accurate information especially about graduates from in-state nursing schools, the Center cannot begin data collection until after the completion of an academic year. Data collection for any given academic year begins near the start of the spring semester of the subsequent academic year and continues until all schools have responded. Data in this year's report were collected between February and May of 2021.

Significant Disruptions to the Historical Data Series

The Center has conducted the Education Capacity Survey since academic year 2004-2005. Despite the long history of the Education Capacity Survey, it is the most challenging workforce data collection we conduct. As a result, the Center suspended the survey for three academic years between 2013 and 2016. The Center has worked with the schools over the last five years to make improvements to several aspects of the survey that would improve the ease with which schools are able to submit their data and to ensure that Center correctly interprets those data. Until this year, these changes have not had a substantial impact on the comparability of data from one academic year to the next. This year, however, the Center made two adjustments to the survey that affect how LPN and GEPN students are counted. These changes improved the accuracy of the data but also made the new data incompatible with previous data, thereby disrupting the historical time series. While we recognize that an undisrupted historical time series is important, we made the decision to prioritize accuracy over continuity because a data series that is complete but inaccurate has no practical value. We believe that the changes we have made will establish the beginning of a time series that is both accurate and complete.

For LPN programs, we provided clarification about whether and how ADN students in the first year of their program should be

counted as LPN students. There are four community colleges in the state that offer nurse education. All four of them offer ADN programs and they all confer LPN certificates of achievement. Though students may earn an LPN certificate at all four schools, only two of them have what are commonly referred to as "standalone" LPN programs – one-year programs that cover only LPN content and no RN content. For the schools that have standalone programs, reporting LPN program capacity is unambiguous. Schools without standalone LPN programs, however, often (although inconsistently) describe students in the first year of the ADN program as being LPN students. This is because the first year of the ADN curriculum is functionally equivalent to the curriculum in an LPN program and provides students with the competencies necessary to pass the NCLEX-PN. Because the first year of ADN programs function as de facto LPN programs at schools without standalone programs, schools think of and report first year ADN students as belonging to LPN programs that, technically, do not exist. Over time this resulted in a muddled picture of actual statewide LPN capacity or our ability to monitor actual changes in that capacity over time.

To resolve this problem, this year's Education Capacity survey provided clear instructions about how schools should report LPN data. Specifically, schools were advised that they should report capacity, application, admission, enrollment, and census data in an LPN program if they have a standalone LPN program *or* if they *require* some subset of ADN students to stop out of the ADN program for a minimum length of time to work as LPNs before continuing to the second year of the ADN program. In the second case, only those students who are required to become LPNs as a condition of completing the ADN program were counted in the LPN data.

In addition to clarifying LPN student data, we also changed the instructions for the reporting of GEPN student data. The change stems from the acknowledgement that the GEPN program is only partially a pre-license program. The eligible applicant pool for a GEPN program includes individuals who hold a baccalaureate degree in a non-nursing field but who wish to pursue a graduate degree in nursing. Students must indicate what graduate degree and program track they intend to complete when they apply to the program. Once they are admitted, GEPN students complete one year of intensive RN education and then must pass the NCLEX-RN and apply for their RN license prior to being permitted to matriculate to their intended graduate program. The moment that GEPN students complete the RN curriculum and become licensed, they cease to be enrolled in a pre-license program. Rather, they are graduate nursing students and should be counted as such.

Historically, the Education Capacity survey instructed schools to report GEPN students who had progressed to their graduate programs as part of the total GEPN student census rather than as part of the appropriate graduate programs' census. This year, we corrected those instructions by asking the one school in the state with a GEPN program to count only those students in the first year of the GEPN program as part of the GEPN

student census. Students who were admitted as GEPNs but have since continued to their graduate studies were reported in the appropriate graduate program census. This change reallocates some of the GEPN students to the graduate programs' census counts which, notwithstanding any actual changes in program census, will give the appearance that GEPN program enrollment decreased while graduate program enrollment increased.

Regarding Inclusion and Accessibility

Throughout this report, the term "Filipinx" refers to persons of any gender who have ethnic ancestry originating in the Philippine Islands. The term "Latinx" refers to persons of any gender with ethnic ancestry originating in Latin America. We have chosen these terms with the recognition that there is not unanimous support for their use within the Filipinx and Latinx communities. We have opted, however, to err on the side of inclusivity.

The Center has made a concerted effort to make this document compliant with guidelines for producing accessible electronic documents as provided by the US Department of Health and Human Services. There may, however, be tables in the report that are difficult to interpret using screen readers or other assistive technology. If you have difficulty accessing any of the content of this report, please contact the Hawai'i State Center for Nursing at hscndata@hawaii.edu to request the content of this report in an alternate format.

NCSBN's Guidelines for Pre-License Nursing Program Approval

Quality Indicators for Nurse Education Programs

A recurring theme in our prior Education Capacity reports has been the state's nursing faculty shortage. Schools have reported increasing full-time faculty vacancy rates in each of the last three surveys (Hawai'i State Center for Nursing, 2019, 2020, 2021a). While the addressing the faculty shortage and its underlying causes (e.g., no in-state education programs for nurse faculty, low compensation compared to clinical roles, and prohibitive cost of living especially for out-of-state candidates) is vitally important for increasing nurse education capacity in Hawai'i, we must also ensure that existing faculty have the resources they need to provide their students with the best education possible.

In 2020, NCSBN released its most recent revision of their Guidelines for state boards' use when approving pre-license nurse education programs. The Guidelines contain 23 evidence-based quality indicators which are classified into seven categories: administrative needs, program director, faculty, students, curriculum and clinical experiences, and teaching and learning resources. Of the 23 indicators, 10 (43%) are classified in the faculty category. That faculty-related criteria account for largest number of indicators reflects the considerable influence that faculty have on the quality of nurse education programs.

On this year's Education Capacity survey, we asked schools to provide information related to their performance on the Guidelines' faculty-related quality indicators. The HBON and not the Center regulates nurse education programs. Therefore, the Center is not concerned with schools' performance on the indicators from a regulatory standpoint. Rather, our goal for collecting the data was to identify areas in which we can help support schools experiencing challenges in meeting one or more of the quality indicators. The Center's legislative mandates include supporting quality outcomes and workforce retention. By collecting these data, the Center now has information about how we might coordinate statewide efforts to help all of our schools improve their achievement of the criteria for quality programs as described in the Guidelines.

In the following sections, we provide a discussion of each faculty-related quality indicator and the proportion of schools that reported meeting each indicator. We end the discussion by providing an overall summary of how schools performed on the indicators and implications for failing to make crucial improvements.

Table 1. Faculty-Related NCSBN Pre-License Program Approval Guidelines

Faculty-Related Program Quality Indicators	% Schools Meeting Criterion
Proportion of Full-Time Faculty	
At least 35% of all faculty are full-time hires.*	88%
Education and Experience Required for Faculty Role**	
Clinical faculty have direct patient care experience within the last five years.	100%
Simulation faculty are certified.	13%
Faculty are required to have had some formal training in teaching, curriculum design, assessments, teaching in multiple platforms, classroom management, etc.	63%
Transition-to-Role Support	
New clinical faculty members are provided formal orientation to their role.	88%
New faculty members are formally mentored by an experienced faculty member in your department.	100%
Professional Development & Lifelong Learning	
Faculty members are required or expected to complete continuing education or other professional development related to nursing education and adult learner pedagogy.	63%
Your department/institution hosts workshops/presentations/etc. to support your faculty members' professional development.	63%

Note. *Schools reported the total number of filled faculty lines by FTE status (part-time vs. full-time). Based on those data we determined whether a school met the 35% full-time faculty quality indicator. **The Guidelines include two additional criteria related to the minimum education for faculty by the type of program in which they teach. We did not ask schools to classify their faculty by program so we could not calculate the percentage of schools meeting each criterion.

Percent of Full-Time Faculty

The Guidelines indicate that a minimum of 35% of a program's total faculty should be employed in full-time positions. Citing a variety of sources, NCSBN contends that when part-time faculty comprise more than 35% of a program's total faculty, educational quality may decline. Monitoring the proportion of part-time faculty and changes in instructional quality is crucial given the trend among post-secondary educational institutions to decrease their hiring of full-time faculty in favor of hiring a greater number of less expensive part-time or adjunct faculty (Jones, 2019).

On average, schools reported that 61% of their faculty were full-time hires. Only one school reported that their part-time faculty exceeded 35% of their total faculty. Community colleges reported an average of 71% full-time faculty whereas BSN-granting institutions reported having an average of 51% full-time faculty. The lower rate of part-time faculty among community colleges as compared to BSN-granting institutions is partly due to BSN programs having more students than community colleges. As a result, BSN programs need more part-time clinical faculty to comply with limits on student-to-faculty ratios established by HBON and individual clinical facility policies.

Education and Experience Required for the Faculty Role

Minimum Education

Faculty are expected to hold a nursing degree that is higher than the level of the program in which they teach. The Guidelines indicate that faculty who teach in programs that prepare students for practice as LPNs should have completed a BSN or higher. Faculty who teach in programs that prepare students for RN practice should hold at least a graduate degree, though the

guidelines do not specify that the graduate degree must be in nursing.

The Guidelines' expectations for faculty members' minimum education differ somewhat from those established in Hawai'i's nursing regulation. According to HAR 16-89-45 (Department of Commerce and Consumer Affairs, 2013), the preferred minimum level of education for all nursing faculty in all programs is a master's degree in nursing. However, faculty who teach in LPN and RN programs may hold a BSN if they have a minimum of three years of relevant clinical experience.

Across the eight schools of nursing in Hawai'i, the minimum education completed by any faculty member is a BSN. Faculty whose highest education is a BSN account for 10% of all faculty, most of whom (87%) are part-time and very likely clinical faculty. The remaining 90% of faculty hold a graduate degree. For full-time faculty, more than 60% hold a doctoral degree whereas the MSN is the most common graduate degree held by part-time faculty. These data demonstrate that Hawai'i's schools of nursing surpass the Guidelines' expectations for faculty minimum education.

Clinical Expertise

In addition to their academic education, instructors must possess clinical expertise relevant to the courses they teach. The Guidelines list two program quality indicators related to faculty members' clinical expertise. The first is that clinical faculty should have provided direct patient care within the past five years. Having recent patient care experience ensures that faculty are aware of and able to teach the current best, evidence-based practices. All eight schools of nursing indicate that they require their clinical faculty to have provided direct patient care within the last five years.

The second quality indicator related to clinical expertise is that simulation faculty should be certified. The simulation educator certification demonstrates a clinical instructor's competence in using simulation to teach and assess foundational nursing competencies. Simulation is an important supplement to live clinical experiences. They provide students with clinical situations that they are unlikely to encounter during their clinical rotations and they create low-stakes environments in which students can practice – and fail at – challenging clinical skills. The pandemic caused many schools to increase the amount of clinical instruction they provided by simulation. As a result, faculty were able to discover new, innovative ways to incorporate simulation into their instruction. Though it is a powerful instructional tool, simulations can be very difficult to write, validate, and implement without proper training. Despite the need for and challenges associated with the effective use of simulation, only 13% of local schools report that their simulation faculty are certified.

Preparation for the Teaching Role

To be effective in their instructional roles, nurse faculty must possess a mastery of nursing theory, concepts, and skills, as well as knowledge of how to effectively teach adult learners. The Guidelines indicate that one of the quality indicators for a pre-license program is that faculty

should be formally prepared for their instructional roles by having received training in curriculum design, assessment, classroom management, and other teaching competencies. Five (63%) of Hawai'i's nursing schools reported that their faculty are required to have formal training related to instruction.

Transition-to-Role Support

In the same way that nurses in clinical settings benefit from formal transition-to-practice support such as new graduate or new specialty residency programs, new faculty also require support to successfully transition into their roles. The Guidelines include two quality indicators related to new faculty support. The first indicator is that new clinical faculty are provided a formal orientation to their role. While it is common for full-time or tenure-leading faculty to be given formal orientation to their instructional roles, it may be less common for clinical faculty. Orientations are crucial to helping faculty understand the expectations of the faculty role which, in many respects, are different than expectations of nurses working in clinical settings. All but one school reported that they provide new clinical faculty with a formal orientation upon being hired.

The second quality indicator related to faculty transition support is that schools should pair new faculty with experienced faculty in formal mentoring relationships. Mentorship helps new faculty develop a nuanced understanding of their role, identify areas within the academic unit where they can make a unique or novel contributions, and obtain guidance for dealing with challenging or unexpected workplace situations. Mentorship, then, can be a vital tool for supporting new faculty members' engagement with and intention to remain in their roles. Every school reported that they support their new faculty by pairing them with mentors.

Professional Development & Lifelong Learning

Nurses' ongoing competence is influenced by their engagement in professional development activities. While nurses working in direct patient care roles may pursue professional development related to evidence-based practices within their specialty area, nurse faculty must pursue professional development related to both nursing and teaching competencies.

The Hawai'i Administrative Rules (Department of Commerce and Consumer Affairs, 2013) indicate that the approval of a new nursing program in Hawai'i is contingent in part, on a school's demonstration that faculty members' teaching load will be limited to ensure that they have adequate opportunity to perform other activities such as scholarship, student advising, and professional development. Similarly, the Guidelines include two quality indicators related to professional development. The first is that faculty are required to complete continuing education or other professional development related to nursing education and adult learner pedagogy. The second indicator is that the school host activities designed to support the faculty's professional development. Five out of eight schools (63%) reported that required their faculty to engage in professional development related to

nursing education and adult learner pedagogy. The same five schools also reported that the department or academic institution hosts professional development opportunities for their faculty. The remaining three schools reported doing neither of these professional development-related activities.

Summary

Of Hawai'i's eight in-state schools of nursing, 50% reported meeting seven or more of the eight quality indicators. One-quarter of schools reported meeting between five and six criteria and the remaining 25% of schools met four criteria or fewer. These data suggest that, on the whole, the faculty at Hawai'i's schools of nursing meet most of the faculty-related criteria that NCSBN has identified as defining a quality pre-license nurse education program.

All eight schools reported that their faculty meet or exceed the minimum academic degree for their roles, that clinical faculty have recent patient care experience, and that new faculty are paired with experienced mentors. Only one school reported that part-time faculty accounted for more than 35% of their total faculty positions which is notable given a general trend toward increased part-time hiring in academia.

There was more variation, however, in the extent to which schools reported that their faculty have formal training in being instructors and whether they require or provide opportunities for professional development related to teaching. The role of faculty is a challenging one and contributes to schools' persistent difficulty recruiting full-time faculty and compensating them at a rate that is commensurate with the difficulty of the work (see Table 13). Examining the NCSBN Guidelines suggests that many schools may also be affected by having faculty or faculty candidates who are not well-prepared for their teaching role. These data allow us to consider a new area of faculty development that we have not previously addressed. By focusing on how we can help schools address the need for teaching-focused professional development, we may also forge a new path toward addressing the ongoing challenge of faculty recruitment and retention.

Overview of Nurse Education Programs Offered in Hawai‘i

Accreditation, Board Approval, & Tax Classification of Schools of Nursing

There have been no changes in the number of schools of nursing in the state, their accreditation status, or their federal tax classifications as compared to AY 19-20 (Hawai‘i State Center for Nursing, 2021a). All eight of Hawai‘i’s schools of nursing are accredited by either the Accreditation Commission for Education in Nursing or the Commission on Collegiate Nursing Education. There are no for-profit nursing schools with a physical campus in Hawai‘i.

Table 2. Accreditation Status and Federal Tax Classification of Hawai‘i Schools of Nursing

School Name	Accreditation		Federal Tax Classification		
	ACEN	CCNE	Public	Not for Profit	For Profit
Number of Schools (State)	**5**	**4**	**6**	**2**	**0**
City & County of Honolulu					
Chaminade University		✓		✓	
Hawai‘i Pacific University		✓		✓	
Kapi‘olani Community College	✓		✓		
University of Hawai‘i at Mānoa		✓	✓		
County of Hawai‘i					
Hawai‘i Community College	✓		✓		
University of Hawai‘i at Hilo	✓	✓	✓		
County of Maui					
University of Hawai‘i Maui College	✓		✓		
County of Kaua‘i					
Kaua‘i Community College	✓		✓		

Note. University of Hawai‘i at Hilo’s BSN program is accredited by ACEN and their DNP program is accredited by CCNE.

Types of Nursing Programs Available in Hawai‘i

There has been no change between AY 19-20 and AY 20-21 in the number of schools offering each type of nursing degree in the state. Schools located in the City & County of Honolulu (referred to as Honolulu County or Honolulu throughout this report for brevity) collectively offer every type of nursing program from the LPN to the PhD, though it was not the case that all programs admitted new students in AY 20-21. Hawai‘i County schools offer all nursing degrees except the MSN and PhD. In contrast, residents of Maui and Kaua‘i Counties still only have access to LPN and ADN programs while relying predominantly on distance education to advance their education beyond the ADN.

Table 3. Academic Awards in Nursing Offered by Institution

School Name	LPN. Cert.	ADN	BSN	MSN	DNP	PhD
Number of Schools (State)	**2**	**4**	**4**	**2**	**3**	**1**
City & County of Honolulu						
Chaminade University			✓			
Hawai'i Pacific University			✓	✓	✓	
Kapi'olani Community College	✓	✓				
University of Hawai'i at Mānoa			✓	✓	✓	✓
County of Hawai'i						
Hawai'i Community College	✓	✓				
University of Hawai'i at Hilo			✓		✓	
County of Maui						
University of Hawai'i Maui College		✓				
County of Kaua'i						
Kaua'i Community College		✓				

Note. In AY 2020-2021, only Kapi'olani and Hawai'i Community Colleges had "standalone" LPN programs. Kaua'i Community and UH Maui Colleges offered LPN Certificates to students enrolled in their ADN programs following the completion of the first year of the RN curriculum.

Graduate nursing programs are available in Honolulu and Hawai'i Counties. Students who wish to become APRNs may enroll in master's degree programs for family or adult-gerontology acute care nurse practitioners in Honolulu. Alternatively, they may enroll in DNP programs for family or adult-gerontology primary care nurse practitioners at schools in Honolulu or on Hawai'i Island.

Individuals may also choose to pursue graduate education that does not provide preparation for an APRN role. Nurses may complete a master's degree in advanced population health nursing or post-master's DNP programs. All non-APRN graduate programs are available only in Honolulu.

Table 4. Graduate Nurse Education Programs Offered by Institution

	Hawai'i Pacific University	University of Hawai'i at Hilo	University of Hawai'i at Mānoa
Master's Degree Programs			
Specialty RN			
Advanced Population Health Nursing			✓
APRN			
Adult-Gerontology Acute Care NP	✓		
Family NP	✓		
Doctor of Nursing Practice Programs			
General DNP			
Post-Master's DNP	✓		✓
APRN			
Adult-Gerontology Primary Care NP			✓
Family NP		✓	✓

Capacity, Enrollment Demand, and Graduates in Pre-License Programs

Enrollment Capacity and Demand

AY 20-21 was the first academic year in which the pandemic would have affected schools' capacity to enroll new students. Though we expected substantial decreases in enrollment capacity and thus, new admissions in all pre-license programs, most programs' enrollment capacity was equal to or slightly greater than in AY 19-20. Across all pre-license programs, schools reported having openings for 564 new students. This was an increase of 2% as compared to AY 19-20. ADN and BSN programs both reported a total increase in enrollment capacity of 5% and 6% respectively while GEPN enrollment capacity remained unchanged as compared to AY 19-20.

While enrollment capacity increased or remained flat in RN and GEPN programs, LPN programs suffered substantial losses in seats for new students. Both community colleges that offer standalone LPN programs suspended enrollment as a result of capacity constraints stemming from faculty shortages. As a result, the state lost 35% of its seats for new LPN students in AY 20-21 as compared to the previous academic year. This loss is especially worrisome because of the heavy reliance that many non-acute facilities place on LPNs and the fact that the LPN workforce in the state has been shrinking for several years despite consistent capacity in LPN programs prior to the pandemic.

Enrollment demand (i.e., the number of applications programs received from prospective students) decreased in AY 20-21 for all types of pre-license programs except the BSN. As compared to AY 19-20, the number of applications received by LPN, ADN, and GEPN programs decreased in AY 20-21 by 26%, 10%, and 36% respectively. In sharp contrast to decreased enrollment demand in most pre-license programs, BSN programs reported receiving 51% more applications in AY 20-21 than in the previous academic year

Table 5. Pre-License Programs: Openings, Applicants, Admissions & New Enrollments

	LPN	ADN	BSN	GEPN
Available Openings	31	147	336	50
Qualified Applications	109	495	821	96
Applications Received per Available Opening (Qualified Applications Received / Available Openings)	3.5	3.4	2.4	1.9
Admissions Offered	31	154	457	54
Acceptance Rate (Admissions Offered /Qualified Applications Received)	28%	31%	56%	56%
New Students Enrolled	30	145	316	43

Admissions, New Enrollments, and Total Student Census

Consistent with the decrease in total enrollment capacity and applications in AY 20-21, LPN programs admitted 35% fewer prospective students than in AY 19-20. The admission of fewer students contributed to a 38% decrease in new student enrollments. Because LPN programs are generally started and completed in the same academic year, new students comprise the entire student census. As such, the census in LPN programs decreased by the same amount (38%) as new enrollments between AY 19-20 and AY 20-21. The decreases in capacity, applications, admissions, and enrollments are attributable partly to our change in data collection methodology for LPN programs (see the introduction of this report). It is also the case, however, that we know that the two standalone LPN programs in the state suspended enrollments for part of AY 20-21. The declines, then, reflect actual constrictions in LPN program capacity.

Likely stemming from an increase in enrollment capacity, ADN programs admitted 12% more students in AY 20-21 than in AY 19-20. The increase in total admissions corresponded with a 6% increase in new enrollments. New enrollments plus students who were continuing to the second year of their program combined to produce a 10% increase in the number of students enrolled in ADN programs statewide in AY 20-21.

BSN programs admitted 18% more students in AY 20-21 than they did in AY 19-20. Although admissions increased, actual enrollments decreased by 3% as compared to the prior year. This is an odd finding given that program capacity and applications to BSN programs both increased. It is not clear why actual enrollments to BSN programs decreased though admissions increased. It is clear, however, that the decrease in new enrollments was a contributing factor to the 30% decrease in the total number of students enrolled in BSN programs in the state in AY 20-21.

The state's only GEPN program admitted 14% fewer applicants in AY 20-21 than in AY 19-20. The number of admitted applicants who enrolled in the GEPN program decreased by 4% as compared to the previous academic year. As is the case of LPN programs, the pre-license RN portion of a GEPN program has a normal duration of one academic year. As such the total program census is equal to the new admissions if no new students withdraw. We are not comparing this year's GEPN census to last year's because of a change in data collection that we describe in the introduction to this report.

Graduates

A total of 564 students graduated from pre-license programs in AY 20-21. This represents a 2% increase as compared to AY 19-20. Of the 564 graduates, 483 (86%) completed ADN or BSN programs and represent likely additions to the RN workforce. Community colleges graduated 31 new LPNs. These graduates include those who completed standalone LPN programs or who received certificates of achievement after completing the first year of an ADN program.

Table 6. Pre-License Programs: Student Demographic Characteristics

Demographic Characteristic	LPN		ADN		BSN		GEPN	
	#	%	#	%	#	%	#	%
Gender Total	**30**	**100%**	**245**	**100%**	**756**	**100%**	**44**	**100%**
Female	24	80%	175	71%	632	84%	40	91%
Male	6	20%	70	29%	124	16%	2	5%
Other/Nonbinary	0	0%	0	0%	0	0%	0	0%
Unknown/Missing	0	0%	0	0%	0	0%	2	5%
Race/Ethnicity Total	**30**	**100%**	**245**	**100%**	**756**	**100%**	**44**	**100%**
Multiracial	7	23%	67	27%	132	17%	11	25%
White	0	0%	37	15%	61	8%	9	20%
Black/African American	0	0%	0	0%	5	1%	1	2%
American Indian/Alaska Native	0	0%	0	0%	2	0%	0	0%
Chinese	0	0%	4	2%	14	2%	2	5%
Filipinx	0	0%	47	19%	61	8%	8	18%
Japanese	0	0%	15	6%	13	2%	3	7%
Korean	0	0%	6	2%	4	1%	1	2%
Other Asian	0	0%	3	1%	190	25%	2	5%
Native Hawaiian	0	0%	22	9%	106	14%	5	11%
Samoan	0	0%	0	0%	0	0%	0	0%
Other Pacific Islander	0	0%	0	0%	0	0%	0	0%
Some Other Race/Ethnicity	0	0%	1	0%	10	1%	0	0%
Unknown/Missing	23	77%	43	18%	158	21%	2	5%
Hispanic/Latinx Origin	**30**	**100%**	**245**	**100%**	**756**	**100%**	**44**	**100%**
Hispanic/Latinx	0	0%	1	0%	44	6%	5	11%
Non-Hispanic/Latinx	7	23%	75	31%	697	92%	39	89%
Unknown/Missing	23	77%	169	69%	15	2%	0	0%
Age Total	**30**	**100%**	**245**	**100%**	**756**	**100%**	**44**	**100%**
20 Years or Younger	0	0%	8	3%	268	35%	0	0%
21 Years to 25 Years	4	13%	43	18%	320	42%	23	52%
26 Years to 30 Years	2	7%	69	28%	101	13%	15	34%
31 Years to 40 Years	0	0%	36	15%	57	8%	6	14%
41 Years to 50 Years	0	0%	8	3%	7	1%	0	0%
51 Years to 60 Years	1	3%	0	0%	3	0%	0	0%
61 Years and Older	0	0%	0	0%	0	0%	0	0%
Unknown/Missing	23	77%	81	33%	0	0%	0	0%

Table 7. Pre-License Programs: Graduates

	LPN	ADN	BSN	GEPN
Program Graduates	61	135	246	43
% Graduates from Neighbor Island Schools	59%	70%	11%	0%

Note. There are no GEPN programs on neighbor islands. See Table 1 for types of programs offered in each county.

Capacity, Enrollment Demand, and Graduates in Post-License Programs

Enrollment Capacity and Demand

Enrollment capacity and demand in all types of post-license programs decreased in AY 20-21 as compared to AY 19-20 to substantial degrees. We wish to note here that decreases in enrollment capacity and demand for graduate programs is not an artifact of the change to the way we collected data about GEPN programs. Graduate program capacity and demand data have always been reported separately from GEPN data, so these decreases represent actual declines in both capacity and demand.

Some schools do not set predetermined enrollment caps for their RN-to-BSN programs. Rather, they have variable enrollment capacity that expands commensurate with the number of qualified applications a school receives. For this reason, statewide RN-to-BSN capacity is driven, in large part, by enrollment demand. In AY 20-21, RN-to-BSN programs received 43% fewer applications than in AY 19-20 indicating a decline in enrollment demand. Lower enrollment demand contributed to a decrease in RN-to-BSN program capacity by 34%.

Graduate program capacity and enrollment demand also decreased in AY 20-21 as compared to AY 19-20. In MSN programs, enrollment capacity decreased by 56% and enrollment demand decreased by 61%. In DNP programs, capacity decreased by 23% and enrollment demand decreased by 10%.

Table 8. Post-License Programs: Openings, Applications, Admissions, and New Enrollments

	RN-to-BSN	MSN	DNP	PhD
Available Openings	74*	25	31	0
Qualified Applications	64	22	35	0
Applications Received per Available Opening (Qualified Applications Received / Available Openings)	--*	0.9**	1.1**	--
Admissions Offered	64	22	28^	0
Acceptance Rate (Admissions Offered /Qualified Applications Received)	100%	100%**	80%**	--
New Students Enrolled	60	21	21	0

Notes. *At least one institution reported that available seats for new students was variable depending on enrollment demand and availability of clinical faculty. In these cases, the number of qualified applications received substitutes for the number of openings for new students. The ratio of applications per opening is not reported because of this substitution. **At least one school was not able to report the number of seats, qualified applications received, or admissions offered for the MSN or DNP programs resulting in a higher overall acceptance rate and lower overall ratio of applications per opening than exists in reality. ^Fewer DNP students were admitted than schools reported capacity to admit because one school received fewer applications than they had seats to admit. While the statewide total number of applications exceeded statewide capacity, the fact that one school did not receive enough applications to admit to capacity, the statewide admissions total is less than statewide capacity.

The sharp decreases in demand for post-license education between AY 19-20 and AY 20-21 raise questions about why fewer nurses appear interested in advancing their education. While our data cannot inform the answer to this question, we can speculate that the COVID-19 pandemic and the ongoing nursing shortage are contributing factors.

It is important to remember that post-license programs have a different function in developing the workforce than do pre-license programs. Pre-license programs have the objective of preparing new nurses for entry into the profession. Pre-license programs, then, serve the function of expanding (or at least maintaining) the size of the workforce. In contrast, rather than affecting the number of nurses in the workforce, post-license programs provide opportunities for incumbent nurses to advance their education and develop their professional competencies.

Data collected from nurses in Hawai'i within the last 18 months indicate that nurses are experiencing high degrees of stress stemming in part from the pandemic and in part from high workloads attributable to staffing shortages (Fontenot et al., 2022; Hawai'i State Center for Nursing, 2021b). A common concern among nurses contemplating a return to school is how they will balance school with full-time work and responsibilities at home (National Education Progression in Nursing Collaborative, 2021). If nurses anticipate that enrolling in a degree-leading academic program would compound their already high levels of stress, post-license education would be unappealing. Moreover, some nurses report that their work-related stress is so severe or persistent that they have contemplated leaving their current jobs or the nursing profession. It is improbable that nurses would consider enrolling in academic programs that would exacerbate their existing stress levels or advance them in a career they are thinking of leaving.

As the pandemic wears on and the nursing shortage continues, it will be important for us to watch for a persistent trend of nurses declining to advance their education. We need to make a concerted effort to ensure that nurses who want to advance their education have the instrumental and emotional support they need to pursue their career goals.

Admissions, New Enrollments and Total Student Census

In RN-to-BSN programs, lower enrollment demand coincided with declines in admissions and new enrollments. As compared to AY 19-20, in AY 20-21, RN-to-BSN programs admitted 43% fewer students and new student enrollments decreased by 22%. Though admissions and enrollments both declined, RN-to-BSN programs reported a 6% increase in their total student census. The slight increase in the total program census is most likely attributable to the retention of students who enrolled in a previous academic term.

MSN programs reported decreases in admissions (48%), enrollments (52%) and total student census (39%) in AY 20-21 as compared to the previous year. DNP programs reported that they admitted 15% fewer students in AY 20-21 than in the previous year. However, because a higher proportion of admitted students enrolled in

classes, DNP programs' new enrollments increased by 5% and the total DNP student census increased by 24%.

Graduates

RN-to-BSN programs and DNP programs both reported an increase in the number of graduates who completed their programs in AY 20-21 as compared to the previous year. RN-to-BSN programs graduated 20% more students and the number of DNP graduates increased by 149%.

In contrast, the number of students who graduated from MSN programs decreased by 45%. The reduced number of graduates and lower enrollments may indicate that nurses' interest in graduate education is shifting away from the MSN toward the DNP.

Table 9. Post-License Programs: Student Demographic Characteristics

Demographic Characteristic	RN-to-BSN		MSN		DNP		PhD	
	#	%	#	%	#	%	#	%
Gender Total	**83**	**100%**	**64**	**100%**	**93**	**100%**	**6**	**100%**
Female	61	73%	56	88%	80	86%	6	100%
Male	22	27%	8	13%	11	12%	0	0%
Other/Nonbinary	0	0%	0	0%	0	0%	0	0%
Unknown/Missing	0	0%	0	0%	2	2%	0	0%
Race/Ethnicity Total	**83**	**100%**	**64**	**100%**	**93**	**100%**	**6**	**100%**
Multiracial	32	39%	5	8%	24	26%	1	17%
White	10	12%	8	13%	24	26%	4	67%
Black/African American	0	0%	0	0%	1	1%	0	0%
American Indian/Alaska Native	2	2%	0	0%	2	2%	0	0%
Chinese	3	4%	2	3%	5	5%	0	0%
Filipinx	17	20%	4	6%	11	12%	0	0%
Japanese	8	10%	4	6%	9	10%	0	0%
Korean	3	4%	0	0%	3	3%	0	0%
Other Asian	0	0%	0	0%	3	3%	0	0%
Native Hawaiian	6	7%	4	6%	4	4%	1	17%
Samoan	0	0%	0	0%	0	0%	0	0%
Other Pacific Islander	0	0%	0	0%	0	0%	0	0%
Some Other Race/Ethnicity	1	1%	2	3%	1	1%	0	0%
Unknown/Missing	1	1%	35	55%	6	6%	0	0%
Hispanic/Latinx Origin	**83**	**100%**	**64**	**100%**	**93**	**100%**	**6**	**100%**
Hispanic/Latinx	3	4%	2	3%	4	4%	0	0%
Non-Hispanic/Latinx	80	96%	62	97%	88	95%	6	100%
Unknown/Missing	0	0%	0	0%	1	1%	0	0%
Age Total	**83**	**100%**	**64**	**100%**	**93**	**100%**	**6**	**100%**
20 Years or Younger	0	0%	0	0%	0	0%	0	0%
21 Years to 25 Years	24	29%	6	9%	14	15%	0	0%
26 Years to 30 Years	28	34%	21	33%	21	23%	0	0%
31 Years to 40 Years	26	31%	30	47%	34	37%	2	33%
41 Years to 50 Years	5	6%	7	11%	19	20%	0	0%
51 Years to 60 Years	0	0%	0	0%	4	4%	1	17%
61 Years and Older	0	0%	0	0%	1	1%	3	50%
Unknown/Missing	0	0%	0	0%	0	0%	0	0%

Table 10. Post-License Programs: Graduates

	RN-to-BSN	MSN	DNP	PhD
Program Graduates	60	18	32	1
% Graduates from Neighbor Island Schools	35%	0%	25%	0%

Note. There are no MSN or PhD programs on neighbor islands. See Table 1 for types of programs offered in each county.

Nurse Faculty in Academic Year 2021-2021

Faculty Positions and Vacancies

Through data collection outside the scope of the Education Capacity Survey, we know that many schools of nursing had vacancies going into the pandemic. Because of a budget shortfall stemming from the rapid contraction of Hawai'i's tourism-reliant economy during the first year of the pandemic, the state instituted a hiring freeze. This prevented schools in the University of Hawai'i system (6 of the 8 schools in the state) from filling existing vacancies. Additionally, if faculty left their positions, UH System schools were often not given authorization to fill newly vacant positions despite their importance to program operation. As a result, Hawai'i's schools of nursing reported losing 45 (15%) of their funded faculty positions between AY 19-20 and AY 20-21.

The loss of funded faculty lines combined with schools' ongoing difficulty with recruiting and retaining viable applicants resulted in an increase in the statewide faculty vacancy rate for all positions from 8% in AY 19-20 to 11% in AY 20-21. The vacancy rate for full-time positions increased from 16% to 18%.

Losses of faculty lines and rising full-time faculty vacancy rates highlight one of the major barriers to increasing Hawai'i's capacity to educate nurses. When schools lack qualified faculty, they cannot admit enough students to meet employer demand, which results in a nursing shortage. Though we have mentioned this problem in nearly all of our recent reports, the fact that we now have data to tie nursing wellbeing to unmanageable workloads stemming from short staffing casts a new light on the importance and severity of the problem of Hawai'i's nursing faculty shortage.

Table 11. Nurse Faculty: Total Positions, Filled Positions, and Vacancies

Position Type	Full-Time		Part-Time		Total	
	#	%	#	%	#	%
Position Total	**131**	**100%**	**131**	**100%**	**262**	**100%**
Filled	107	82%	126	96%	233	89%
Vacant	24	18%	5	4%	29	11%

Table 12. Nurse Faculty: Demographic Characteristics

Demographic Characteristic	Full-Time		Part-Time		Total	
	%	#	%	#	%	#
Gender	**107**	**100%**	**126**	**100%**	**233**	**100%**
Female	98	92%	64	51%	162	70%
Male	9	8%	16	13%	25	11%
Other/Nonbinary	0	0%	0	0%	0	0%
Unknown/Missing	0	0%	46	37%	46	20%
Race/Ethnicity	**107**	**100%**	**126**	**100%**	**233**	**100%**
Multiracial	15	14%	22	17%	37	16%
White	57	53%	23	18%	80	34%
Black/African American	4	4%	1	1%	5	2%
American Indian/Alaska Native	0	0%	1	1%	1	0%
Chinese	1	1%	2	2%	3	1%
Filipinx	9	8%	13	10%	22	9%
Japanese	6	6%	8	6%	14	6%
Korean	1	1%	1	1%	2	1%
Other Asian	4	4%	1	1%	5	2%
Native Hawaiian	5	5%	7	6%	12	5%
Samoan	0	0%	0	0%	0	0%
Other Pacific Islander	0	0%	0	0%	0	0%
Some Other Race/Ethnicity	4	4%	1	1%	5	2%
Unknown/Missing	1	1%	46	37%	47	20%
Hispanic/Latinx Origin	**107**	**100%**	**126**	**100%**	**233**	**100%**
Hispanic/Latinx	4	4%	1	1%	5	2%
Non-Hispanic/Latinx	96	90%	63	50%	159	68%
Unknown/Missing	7	7%	62	49%	69	30%
Age	**107**	**100%**	**126**	**100%**	**233**	**100%**
30 Years or Younger	1	1%	3	2%	4	2%
31 Years to 40 Years	10	9%	22	17%	32	14%
41 Years to 50 Years	24	22%	18	14%	42	18%
51 Years to 55 Years	12	11%	9	7%	21	9%
56 Years to 60 Years	18	17%	7	6%	25	11%
61 Years to 65 Years	26	24%	3	2%	29	12%
66 Years to 70 Years	9	8%	1	1%	10	4%
71 Years and Older	6	6%	1	1%	7	3%
Unknown/Missing	1	1%	62	49%	63	27%
Highest Degree Earned	**107**	**100%**	**126**	**100%**	**233**	**100%**
ADN	0	0%	0	0%	0	0%
BSN	3	3%	20	16%	23	10%
Baccalaureate, Non-Nursing	0	0%	0	0%	0	0%
Master's Degree, Nursing	36	34%	37	29%	73	31%
Master's Degree, Non-Nursing	1	1%	1	1%	2	1%
DNP	28	26%	15	12%	43	18%
Doctoral Practice Degree, Non-Nursing	5	5%	1	1%	6	3%
PhD, Nursing	26	24%	3	2%	29	12%
PhD, Non-Nursing	8	7%	3	2%	11	5%
Unknown/Missing	0	0%	46	37%	46	20%

Challenges Facing Hawai'i's Nurse Education Programs

Top Challenges

For the third consecutive year, schools indicated that the challenges with the most significant impacts on their programs are faculty related. More than 60% of schools reported that the inability to recruit candidates for full-time positions or having insufficient funding for faculty compensation were the top challenges affecting their programs. The ongoing challenge of being unable to offer competitive compensation to nurses to entice them into faculty positions is especially poignant given the extraordinarily high full-time faculty vacancy reported by schools this year.

Schools had the option to write in challenges that affect their programs that were not listed on the survey. Nearly all write-in answers pertained to a shortage of faculty. Nearly 40% of schools reported that accelerated faculty retirements have created more vacancies than they anticipated. Schools identified slow and lengthy hiring processes, low numbers of qualified applicants, and faculty salaries significantly below clinical salaries as primary barriers to filling unanticipated vacancies.

One school also reported that reductions in the student-to-faculty ratios allowed by some clinical sites required them to increase their clinical faculty hires. Because of difficulty recruiting or limitations on hiring new faculty, some schools have recruited existing faculty to take on additional teaching responsibilities. Having an overloaded teaching schedule or dividing time between administrative and teaching responsibilities has increased the workload. This has contributed to increased stress and exhaustion, which over time, can devolve into burnout. Burnout may hasten retirements or provoke faculty to leave academic settings for more lucrative clinical positions, thereby exacerbating the faculty shortage.

Table 13. Factors that Adversely Affect Nurse Education Programs

Challenges Affecting Programs	#1 Challenge	Affects Existing Programs	Affects New Program Development
Difficulty filling full-time faculty positions	38%	88%	38%
Lack of funding for new faculty lines or raises	25%	75%	50%
Insufficient number of preceptors for clinical training experiences	13%	63%	38%
Insufficient number of clinical training sites	13%	50%	25%
Difficulty filling part-time faculty positions	0%	75%	38%
Insufficient funding, faculty, or other resources for program development	0%	63%	38%
Not affected by any challenge	0%	0%	50%

Note. The sum of percentages in "Affects Existing Programs" and "Affects New Program Development" columns exceed 100% due to multiple responses from some schools.

Schools also reported being negatively affected by a shortage of clinical training sites. Historically, clinical placement shortages were a concern reported primarily by schools in Honolulu because of the high concentration competing for a limited number of content-appropriate placements. In AY 20-21, however, 88% of schools reported being negatively affected by a clinical placement shortage and 13% of schools reported this to be their number one concern.

The emergence of clinical training site shortages as a statewide problem is likely due to the nearly total elimination of all face-to-face clinical education during the first year of the COVID-19 pandemic. Although the conditions that prohibited students from being in facilities for live clinical placements have largely subsided, many clinical sites have not restored their placement availability to pre-pandemic levels. Data from the next few years' education capacity surveys should cast light on whether clinical placements remain an ongoing statewide problem.

Responses to Challenges

In response to the challenges that adversely impact their programs, schools reported virtually the same set of mitigation tactics and responses as they reported in last year's report. Schools have adapted to challenges by reducing cohort sizes, seeking alternative funding sources, and increasing the proportion of clinical education they provide via simulation.

Some schools also reported that they made no specific changes to address challenges. Rather, the faculty increased their workloads by either teaching overloads or volunteering their time to ensure that students had a quality educational experience and were able to graduate on time.

Table 14. Tactics Used by Nurse Education Programs to Address Adverse Impacts

Responses to Challenges	**% Schools Reporting**
Reduced admissions cohort sizes	75%
Increased percentage of clinical hours provided by high-fidelity simulation	50%
Other response	25%
Pursuit of alternate/supplemental funding sources	13%
Delayed or terminated development of new degree programs or program tracks	13%
Decreased frequency of new student admissions	0%
Increased student tuition and/or fees	0%
Elimination of degree programs or program tracks	0%
Payments directly to preceptors	0%
Payments to clinical sites	0%

Note. The sum of the percentages exceeds 100% due to multiple responses from some schools.

Appendices

Appendix A – Glossary of Nurse Education Programs Offered in Hawai'i

Term	Definition
Pre-license Programs	**Nurse education programs that admit students with no prior education or experience in nursing.**
LPN Program	A program of instruction that requires at least one year of full-time equivalent coursework generally within a high school, vocational/technical school, or community/junior college setting, the completion of which results in a diploma or certificate of completion and eligibility to apply for licensure as an LPN (see also Hawai'i Administrative Rules §16-89-11 and §16-89-12).
ADN Program, Generic/Traditional	A program of instruction that requires at least two years of full-time equivalent college academic work generally within a junior or community college, the completion of which results in an associate degree with a major in nursing and eligibility to apply for licensure as an RN. (See also Hawai'i Administrative Rules §16-89-10).
Pre-License BSN Program, Generic/Traditional*	A program of instruction to prepare *generalist* registered nurses that admits students with no previous nursing education, the completion of which results in a baccalaureate degree (e.g., BS, BSN, etc.) with a major in nursing and eligibility to apply for licensure as an RN. The program requires at least four years but not more than five years of full-time equivalent college course work within a senior college or university. (See also Hawai'i Administrative Rules §16-89-10).
Pre-License *Graduate* Entry (*GEPN*) Program*	A program of instruction that admits baccalaureate degrees in other disciplines and no previous nursing education. The program prepares graduates for entry into the profession, eligibility to apply for licensure as an RN, and upon completion, *awards a graduate degree in nursing (e.g., MSN, DNP, PhD).* (See also Hawai'i Administrative Rules §16-89-10).
Post-license Programs	**Nurse education programs that require a prospective student to hold an active nursing license to be eligible for admission.**
*LPN to BSN Program**	*A program for students licensed as LPNs the completion of which results in a baccalaureate degree (e.g., BS, BSN, etc.) with a major in nursing and eligibility to apply for licensure as an RN.*
Post-License BSN (RN-to-BSN) Program	A *post-license BSN* program for students who are already licensed as RNs whose highest nursing education is a diploma or associate degree.
MSN Program *	A post-license master's program with emphasis on advanced clinical practice, including Nurse Practitioner, Nurse Anesthetist, Nurse Midwifery, and Clinical Nurse Specialist tracks. *Includes RN-to-MSN and post-baccalaureate admissions pathways.*
DNP Program*	A program of instruction that prepares graduates for the highest level of nursing practice beyond the initial preparation in the discipline. The DNP is the terminal practice degree. *Includes post-baccalaureate and post-master's admissions pathways.*
PhD Program*	A post-licensure doctoral program that culminates in the PhD in Nursing. *Includes post-baccalaureate and post-master's admissions pathways.*

Note. *Italicized program titles, definitions, or parts of definitions are additions or modifications to those published in the source document published by the National Forum of State Nursing Workforce Centers (2020).

Appendix B – Method for 2020-2021 Nurse Education Capacity Survey

Instrumentation

The data collection instrument for the Education Capacity Survey is based on the National Nursing Workforce Minimum Dataset for Education as published by the National Forum of State Nursing Workforce Centers (2020). The Forum recommends that states use the appropriate MDS for education, supply, and employment demand so that national dialogue about nursing workforce development can be informed by data that is collected at the state level.

In addition to the data points recommended by the Forum, the Center added several questions regarding specialty or certificate education offered in baccalaureate and graduate nurse education programs, challenges to program growth or sustainability, and the responses schools have had to those challenges.

The survey instrument was converted to a form-fillable .pdf with calculation and data validation fields intended to support the submission of high-quality, error-free data.

The full instrument is available upon request to Dr. Carrie Oliveira, Workforce Researcher at the Hawai‘i State Center for Nursing.

Institutional Review Board Review

Because the survey collected aggregated, secondary data, it does not meet the definition of “human subjects research” and did not require review or oversight by the IRB at the University of Hawai‘i at Mānoa where the Center is housed.

Procedure

The study period commenced on March 1, 2022, when the Center’s Researcher sent emails to the chief administrator of each school of nursing requesting their participation in the study. The email included a link to a website that provided a copy of the form-fillable survey and answers to frequently asked questions. The survey form was also attached to the email for the schools’ convenience. School administrators were asked to complete the survey and email it back to the Center’s researcher by April 1, 2021. All schools submitted their completed surveys by the deadline. Following the submission of all surveys, the Center’s researcher reviewed each survey for data quality issues and followed up with the individual designated on each survey for clarification.

Appendix C – Program Admissions by Semester, AY 2020-2021

	LPN			ADN			BSN			LPN to BSN			RN to BSN			BSN to MSN			RN to MSN			MSN to DNP			BSN to DNP			PhD			BSN to PhD		
# Programs	2			4			4			1			4			2			2			3			2			1			1		
Admissions Semesters*	F	S	I	F	S	I	F	S	I	F	S	I	F	S	I	F	S	I	F	S	I	F	S	I	F	S	I	F	S	I	F	S	I
Associate-Granting Institutions																																	
Hawai‘i Community College	●			●																													
Kapi‘olani Community College	●	●		●	●	●																											
Kaua‘i Community College				●																													
University of Hawai‘i Maui College				●																													
Baccalaureate-Granting Institutions																																	
Chaminade University							●																										
Hawai‘i Pacific University							●	●					●	●		●	●		●	●		●	●		●	●							
University of Hawai‘i at Hilo							●						●	●								●			●								
University of Hawai‘i at Mānoa							●						●	●		●						●			●								

Notes. *Letters in this row refer to the session in a traditional academic year wherein F = Fall Semester, S = Spring Semester, I = Summer Intersession. A gray cell indicates that a school did not offer a given program during AY 20-21. A white cell indicates that a school operated the program during the AY but did not admit new students during the academic term. A dot indicates that a school admitted new students into the program for the indicated semester. Maui College and Kaua‘i Community College do not have standalone LPN programs.

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