



Projections of Hawai'i Nursing Clinical Placement Demand

Four-year projection of clinical placement needs

Hawai'i State Center for Nursing

September 2022

Purpose:

In June 2022, the Hawai'i State Center for Nursing (HSCN) surveyed schools of nursing across the state to collect current and projected clinical placement and enrollment data to assist with long and short-term planning of clinical placement needs and identify high-priority clinical placement areas. The aim of this report is to provide data on statewide clinical placement needs for schools of nursing and providers, highlight critical gaps, be used to inform discussions with stakeholders, and support clinical facilities in their planning to meet clinical training needs for Hawai'i's nursing students. As with all projections, it is impossible to predict the future. Projections are intended to be used as a tool to align plans and expectations and improve the future outcome of meetings to achieve demand and capacity equilibrium.

Methodology:

The data summarized in this report are from a survey developed by the HSCN and delivered to Hawai'i schools of nursing. A preliminary draft tool was created and disseminated to two schools for review prior to fielding to ensure question and format clarity. The instrument consisted of a matrix of questions arraigned into two primary sections for pre- and post-licensure nursing programs.

Respondents were asked to provide expected nursing program enrollment by the academic program for the current year through to the academic year 2025-2026 (AY 26). Participants were further requested to provide the total number of clinical education hours required for each of the 13 core clinical education specialties, as well as the total number of students expected to engage in those individual rotations over time. Respondents were then asked to rate the level of difficulty in securing clinical experiences for each clinical education specialty by the nursing program. An open-ended item was included for each core specialty to enable respondents to provide general comments and additional information. A total of 542 distinct data points were built into the tool to collect data on expected enrollment and clinical rotation utilization. Respondents were instructed to answer all questions for each program offered by their academic institution and not to provide any individually identifiable student information.

Survey invitations were emailed in May 2022 to the dean or director of 12 schools of nursing operating or proposing to operate in Hawai'i. Schools were provided the option of split

submissions from designated completers. No duplicative submissions were encountered. Surveys were predominantly completed and submitted by school clinical education coordinators. The overall response rate was 75%, with nine schools of nursing submitting data. Responses are summarized in aggregate form in this report. Additionally, comprehensive summary tables are provided as a supplemental file and contain the aggregate responses for each discipline. A copy of the survey instrument is available as a supplemental file to this report.

Respondents:

The HSCN would like to thank the deans, directors, and department chairs at all of the schools of nursing participating in this survey. Participants include Arizona College of Nursing, Chamberlain University, Chaminade University of the Honolulu, Hawai'i Pacific University, Kapi'olani Community College, Kaua'i Community College, University of Hawai'i Maui College, University of Hawai'i at Mānoa Nancy Atmospera-Walch School of Nursing, and University of Hawai'i at Hilo. Participating schools of nursing represent public, non-profit, and private institutions operating or planning physical campuses in Hawai'i or providing education to Hawai'i students through distance learning. Respondents represent programs from across all four Hawai'i counties.

Background on Nursing Clinical Placements:

Logistics of Nursing Clinical Placements in Hawai'i:

Hawai'i schools of nursing partnered with clinical facilities across the state to provide learning experiences for undergraduate and graduate-level nursing students. Clinical placements, often referred to as clinical experiences or rotations, provide nursing students with supervised hands-on learning experiences taking place directly with patients. Clinical placements help students gain critical clinical skills and confidence to prepare them for safe and effective nursing practice.

Undergraduate clinical placements occur in groups or cohorts of students supervised by the nursing facility. Undergraduate students undertaking capstone projects are paired with a skilled nursing preceptor. Graduate nursing students undertake up to 1,050 hours of clinical placements supervised by preceptors. Preceptors mentor and guide both undergraduate and graduate students into real-world clinical practice and play a vital role in nursing education. Preceptors are frequently volunteers, and are not compensated or incentivized for their role as mentors, despite the added workload of supervising students.

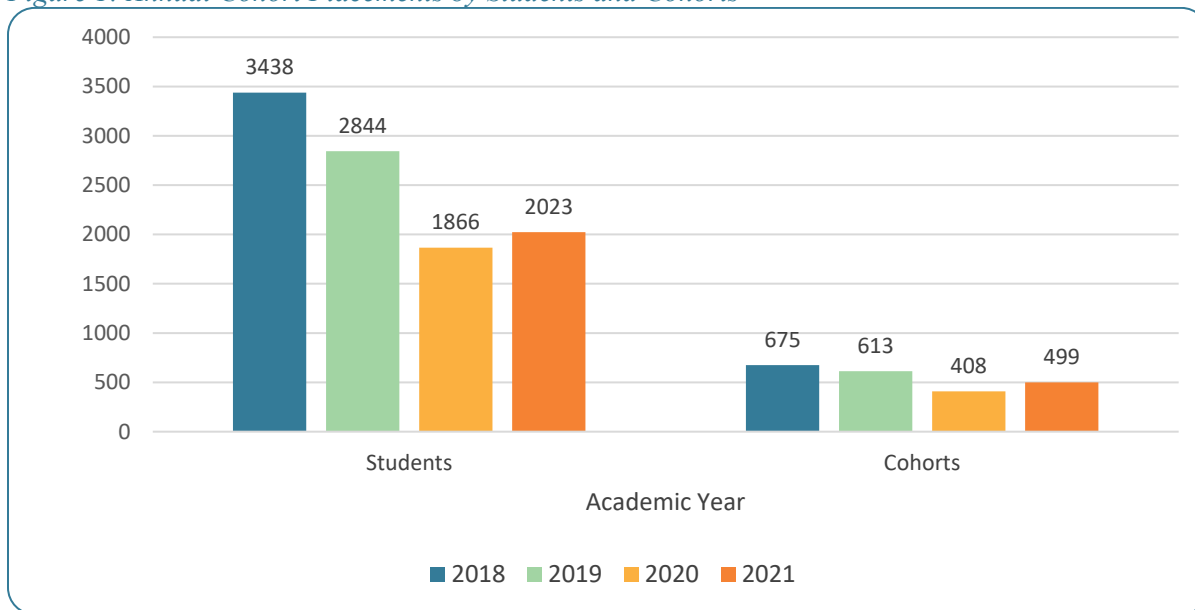
Summary of Past Findings Regarding Nursing Clinical Placements in Hawai'i:

The Hawai'i Clinical Placement Collaborative (HCPC), convened by HSCN, supports clinical education coordination for O'ahu and Kaua'i. HSCN reported that the HCPC lost the most significant number of clinical placements in AY 2020 due to COVID-19 impacts.¹ In AY 21, clinical placements began to recover. However, a loss of 38.9% of clinical

¹ Hawai'i State Center for Nursing. (2021) *2021 Clinical Placement Capacity*.
https://www.hawaiicenterfornursing.org/wp-content/uploads/2021/12/Clinical-Placement-Cap.-Brief-Dec-2021_Final.pdf

placements persisted in AY 21 as compared to the pre-pandemic AY 19. In AY 21, cohort sizes, the number of cohort groups, and the total number of students remained smaller than AY 19 and is significantly lower than AY 18. Compared to AY 18, AY 21 only processed 58% of students and 74% of cohorts. The incongruent shifts are due to decreasing cohort ratios that started in AY 19 and continued through AY 21, effectively increasing the volume of work effort and clinical unit involvement for a smaller student yield. Preceptor utilization grew disproportionately during this same time frame due, in part due to an increase from a 1:1 student-to-preceptor ratio to a 2:1 student-to-preceptor ratio. While the number of precepted students grew, facilities indicated that lack of preceptor preparation and limited preceptor availability were constraints.

Figure 1: Annual Cohort Placements by Students and Cohorts

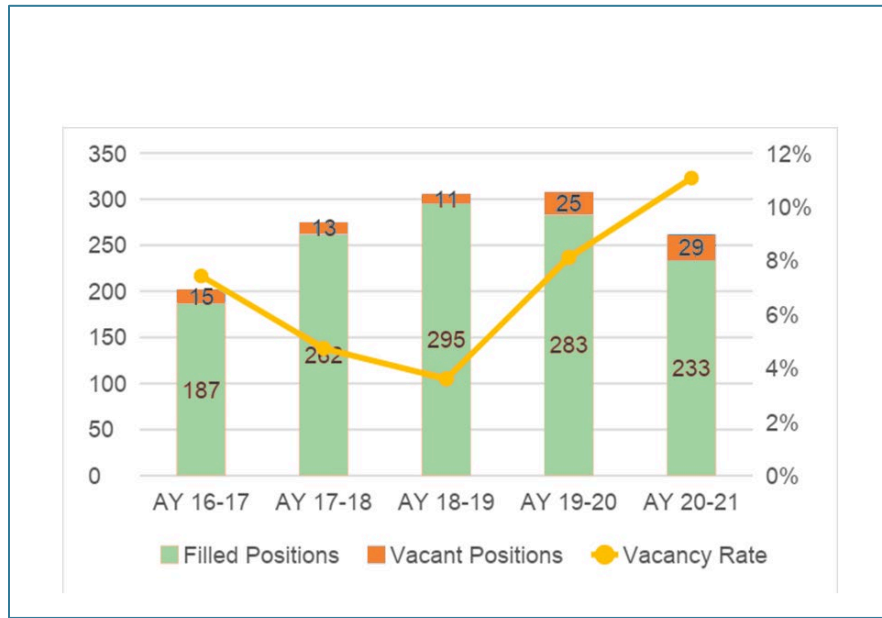


The Hawai'i State Nurse Education Capacity Report for AY 21 validates findings that there is some improvement in the nursing education environment, though it also highlights areas that continue to be of concern.² Overall, pre-licensed programs across the state have increased students by 2% compared to AY 20, with associate degree (ADN) programs rising by 5% and baccalaureate (BSN) programs increasing by 6%. Practical nursing programs lost 35% of their seats in AY 21, and graduate entry programs in nursing (GEPN) remained unchanged. For graduate education, master's (MS) level education enrollment capacity decreased by 56% and doctor of nursing practice (DNP) programs decreased by 23%, indicating a declining capacity to train graduate-prepared nurses in our state. The top challenges reported by academic programs include an insufficient number of preceptors for clinical training experiences (63%), and training sites (50%). However, of all challenges, challenges with funding for faculty are cited more frequently by academic programs. Due to decreases in cohort sizes and increased demand for nursing education, Hawai'i schools are experiencing an increase in demand for

² Hawai'i State Center for Nursing. (2022). *Hawai'i State Nurse Education Capacity Report, Academic Year 2020-2021*. https://www.hawaiiicenterfornursing.org/wp-content/uploads/2022/08/2020-2021-Hawaii-Nurse-Education-Capacity-Statewide-Report-v.Final_.pdf

faculty.³ Concerningly, funded nursing faculty positions have decreased over time, and the number of vacancies has doubled since AY 16. Therefore, any increases in the education volume will require attention to faculty in order to ensure success.⁴

Figure 2. Total, Filled, and Vacant Funded Nurse Faculty Positions, AY 17 thru AY 21



To assess opportunities to accommodate clinical losses during the pandemic, HSCN convened nurse faculty and simulation center nurse educators to annotate relevant evidence related to simulation in nursing education.⁵ Findings indicate that simulation may be optimized to accommodate clinical education needs and accelerate competency development. National surveys of schools of nursing find that high fidelity-simulation use in undergraduate courses has increased substantially between 2010 and 2017, and schools use a 1:1 ratio of simulation to clinical hours to substitute simulation for clinical hours. In addition, recent research demonstrates the intensity and efficiency of virtual simulation with the completion of more activities in higher levels of difficulty in significantly less time than clinical. This evidence supports the substitution of hours at a 2:1 clinical-to-simulation ratio.

³ Hawai'i State Center for Nursing. (2021). *The Hawai'i State Nursing Faculty Shortage: Rallying support for nurse faculty in the face of a critical nurse faculty shortage*. [Informational Brief]. https://www.hawaii-center-for-nursing.org/wp-content/uploads/2021/12/State-of-Hawaiis-Faculty-November-2021_FINAL_11-29-21.pdf

⁴ Hawaii State Center for Nursing. (2022). Hawaii State Nurse Education Capacity Report trends. Unpublished analysis from <https://www.hawaii-center-for-nursing.org/educationcapacity/>

⁵ Hawai'i State Center for Nursing. (2021). *Utilization of Simulation (2021)*. https://www.hawaii-center-for-nursing.org/wp-content/uploads/2021/12/Simulation-Use-in-Nursing-Education_FINAL-rev2.pdf

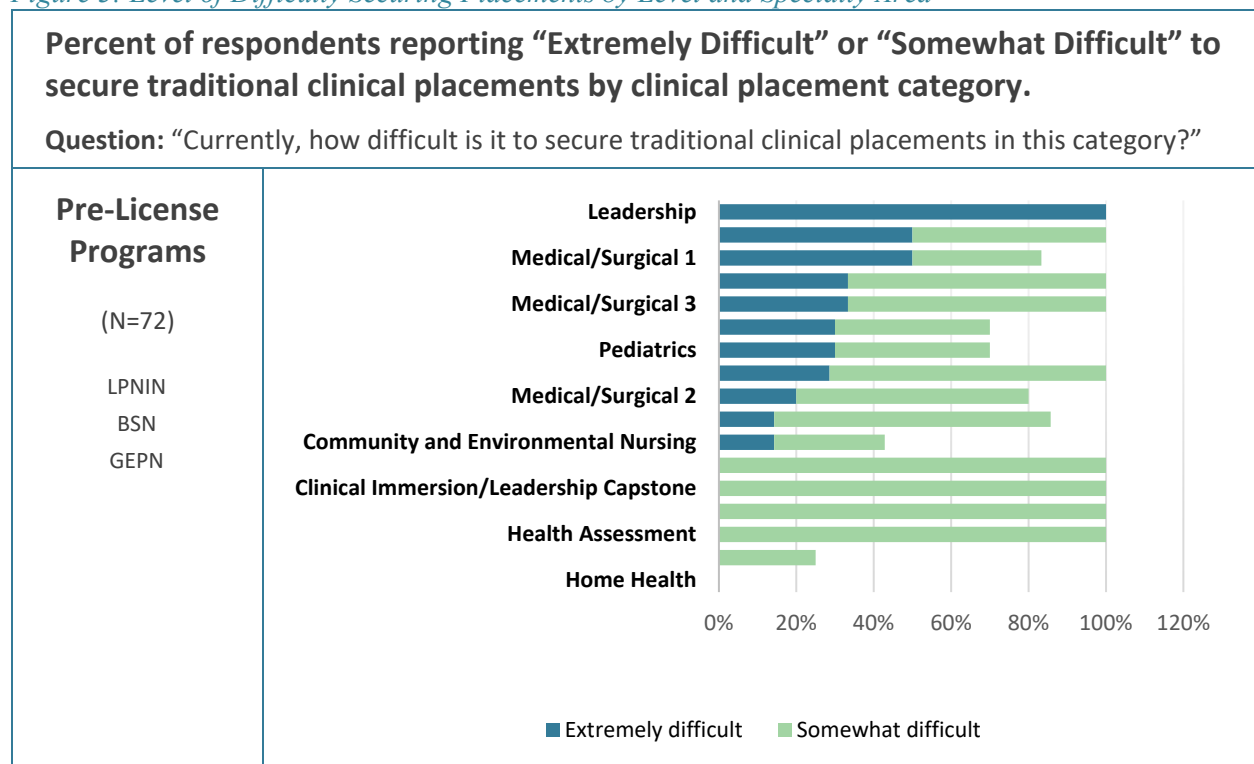
Projection Findings

The following sections describe findings based on the series of questions included in the assessment tool.

Difficulty Securing Clinical Education Placements

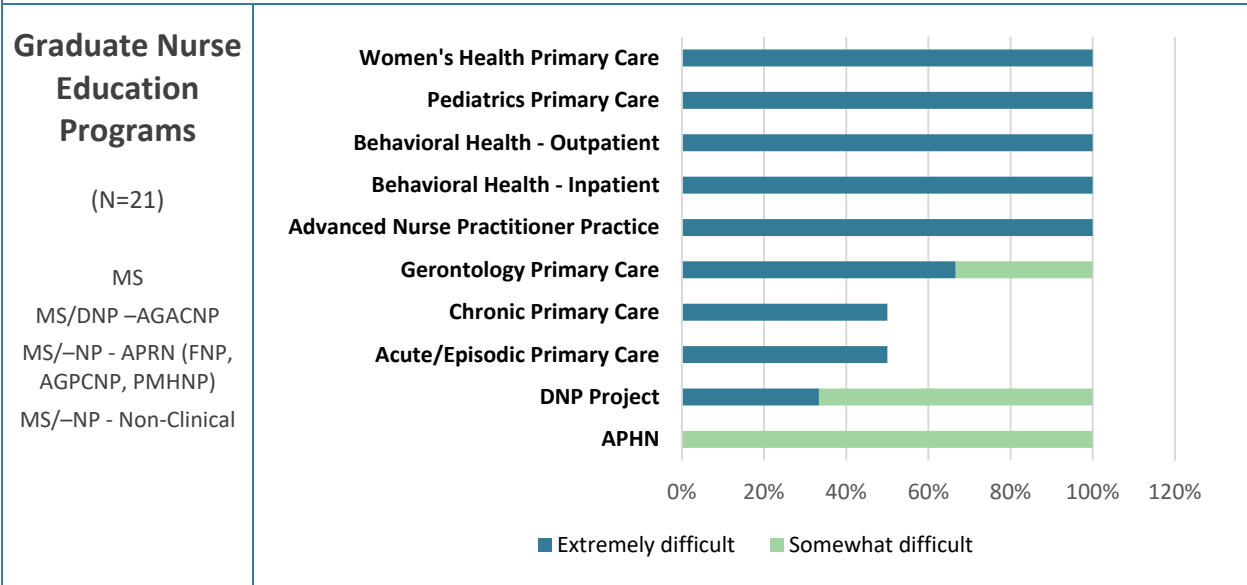
Each type of educational program had a unique set of core clinical education specialties for which they had difficulty securing clinical placements. Figure 3 shows the share of respondents in each academic program group who indicated that securing clinical placements for students in specific areas was “extremely difficult” or “somewhat difficult”. Overall, 55% of all responses indicated difficulty securing clinical opportunities. Placements in gerontology, pediatrics, women’s health, and behavioral health were identified as being difficult to secure for both pre-licensure and graduate education programs. The most difficult to secure placements for pre-licensure programs were reported to be in Leadership, gerontology, and medical-surgical 1 (MS1). Notably, 74% of all placements for pre-licensure programs, and 100% of all clinical immersion capstone placements were noted to be either “extremely difficult” or “somewhat difficult” to secure. Conversely, the vast majority of clinical placements for graduate nursing programs were reported to be difficult to secure, with 90% of all placement areas being of concern. The difficulty reported in securing graduate program placements and those for capstone projects highlights the challenges schools currently face in securing preceptor clinical placements.

Figure 3: Level of Difficulty Securing Placements by Level and Specialty Area



Percent of respondents reporting “Extremely Difficult” or “Somewhat Difficult” to secure traditional clinical placements by clinical placement category.

Question: “Currently, how difficult is it to secure traditional clinical placements in this category?”



*Note: Figure includes top seven (7) reported by the level of difficulty.

Expected Enrollment Growth

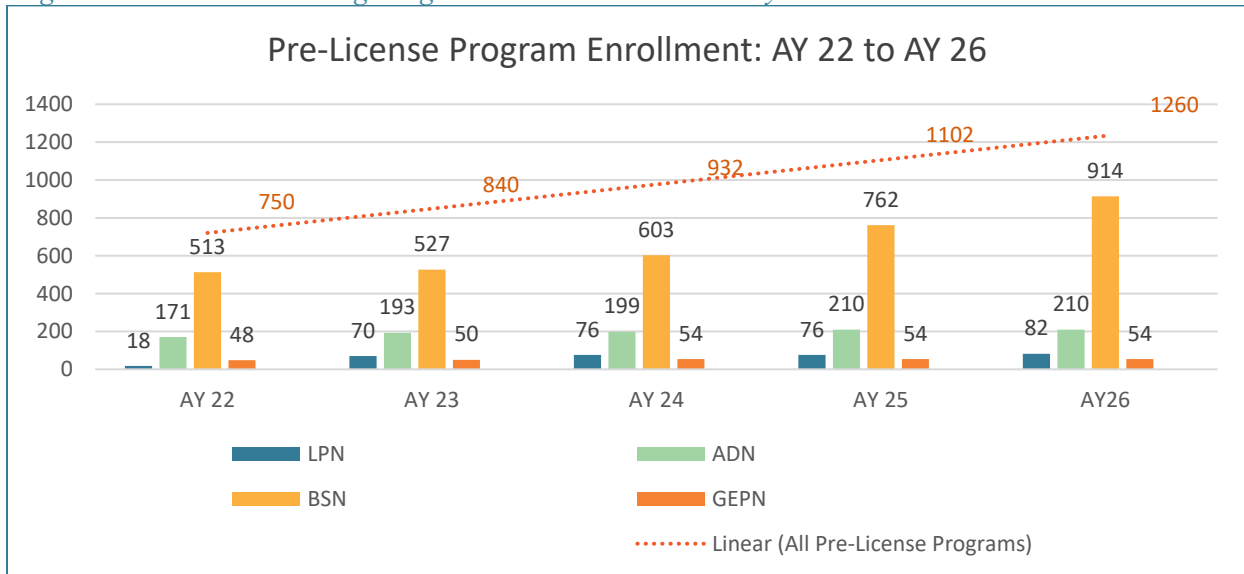
Changes to academic program admissions impact clinical placement demand. The survey asked respondents to identify the total student program enrollment for the academic year ending in 2022 (AY 22) and the anticipated enrollment for AY 23, AY 24, AY 25, and AY 26 for pre and post-licensure nursing programs. This provided a baseline and a projection of enrollment through the summer of AY 26. Total enrollment across nursing programs in AY 22 is 872 and is projected to increase by 40% or 589 students by AY 26. The majority of schools reported an expected increase in overall student enrollment by AY 26. Of the nine respondents, six schools expect to increase enrollment by AY 26 by more than 20%, two of which expect increases of more than 40%. The average expected increase in enrollment for all schools is 23%, with only one school reporting an anticipated decrease in overall enrollment and one reporting no expected change to enrollment in nursing programs.

As compared to AY 22, the number of students enrolled in all pre-licensure nursing programs is projected to increase by 40% in AY 26. Enrollment in LPN programs in AY 22 was 18 students, the lowest in recent history and a substantial decrease from the 48 seats reported for AY 21 in the 2021 Hawai'i State Nurse Education Capacity Report⁶. LPN program enrollment is expected to increase by 78% or 64 students per annum by AY 26. ADN and BSN programs are anticipated to increase enrollment by 19% (~39) and 44% (~401) respectively while GEPN enrollment is anticipated to increase by 11% (~6) compared to AY 22.

⁶ Hawai'i State Center for Nursing. (2022). *Hawai'i State Nurse Education Capacity Report, Academic Year 2020-2021*. https://www.hawaiiicenterfornursing.org/wp-content/uploads/2022/08/2020-2021-Hawaii-Nurse-Education-Capacity-Statewide-Report-v.Final_.pdf

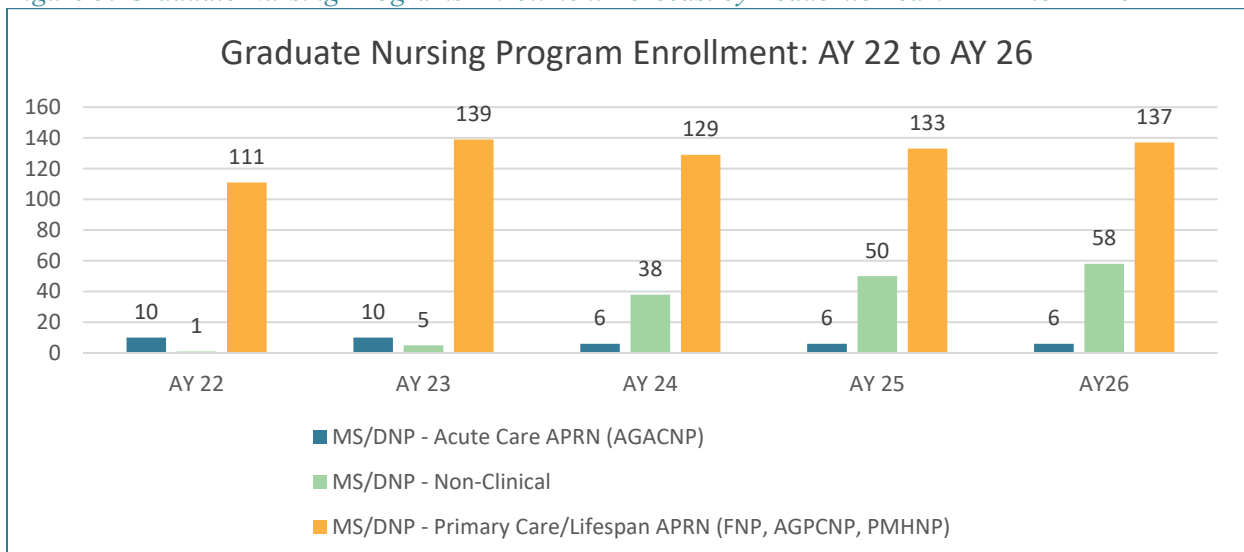
Compared to AY 22, the number of students enrolled in all pre-license nursing programs is projected to increase by 40% in AY 26.

Figure 4: Pre-license Nursing Programs Enrollment Forecast by Academic Year: AY 22 to AY 26.



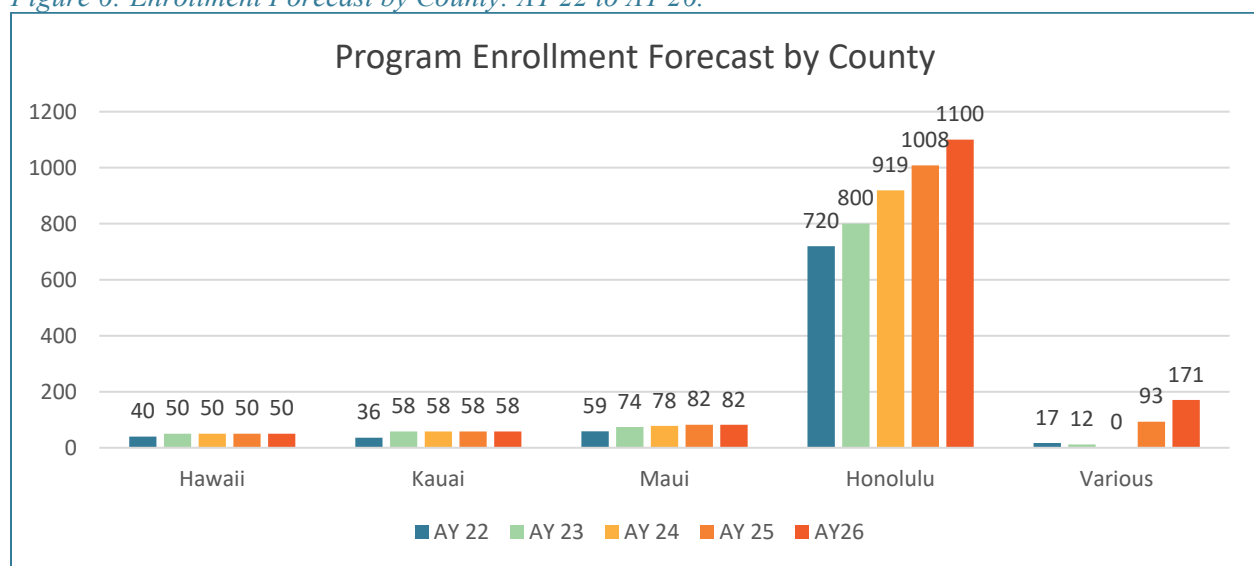
Across all graduate nursing programs, respondents reported having 122 students enrolled in AY 22, of which only one student was enrolled in a non-clinical graduate nursing program. Enrollment across graduate nursing programs is expected to increase by 39% with a projected addition of 79 students by AY 26. Enrollment in clinical MS/DNP AGACNP programs is anticipated to decrease by four students, or 64%, by AY 26. Conversely, MS/DNP programs for FNP, AGPCNP, PMHNP, will increase enrollments by 19%, totaling 26 student additions. Notably, Hawai'i schools indicate they intend to increase enrollment in non-clinical graduate nursing programs by adding 57 students, equating to a 98% increase by AY 26.

Figure 5: Graduate Nursing Programs Enrollment Forecast by Academic Year: AY 22 to AY 26.



All counties are expected to increase nursing program enrollment over the next four years. The most significant increase, 35% or a total of 380 additional students, is in Honolulu City & County. The expected enrollment in nursing programs in neighboring island counties (Hawai'i, Kauai, and Maui Counties) is projected to increase by 29% (~55 students) by AY 26. A significant increase in long-distance program enrollments, represented as “various” in the figure below, was reported by respondents. The location of these students across Hawai'i's counties is not able to be determined at the time of compilation. However, long-distance programs tend to benefit rural residents and will likely positively impact neighbor island counties. It should be noted that the most dramatic increase by county is expected to occur in LPN enrollments, with the initiation of 20 new students into new neighbor island county programs, a projected growth in LPN enrollments in Honolulu county by 71%, equating to 44 students.

Figure 6: Enrollment Forecast by County: AY 22 to AY 26.



Expected Clinical Placement Demand Growth

Despite reported difficulty securing clinical opportunities for both pre-license and graduate education programs, the current need is being met for Hawai'i programs. However, future planning is necessary to ensure adequate and appropriate clinical education opportunities to meet the growing demand. The anticipated increase in enrollments across the majority of schools and programs creates unique and often overlapping clinical placement demands, particularly for those hard-to-place clinical specialty areas and those expected to have the greatest increase in demand. A summary of the projected demand was prepared to assess the overall impact as well as the specific impact on specialty clinical areas. Several factors, such as unit size, staffing levels, patient acuity, and faculty approval, affect the size of student groups or cohorts allowed by providers. Cohort sizes tend to vary across clinical specialty areas. Historical HCPC data for clinical placements from recent years were collated to determine the average cohort size by clinical specialty areas to enable projection of need based on respondent survey responses. A clinical placement demand forecast is presented to include the baseline AY 22 demand, and future demand for clinical placement cohorts for Hawai'i programs for the following four years, through AY 26. The expected overall increase in

demand for clinical placements across all programs creates a need for 353 new cohort placements and 788 additional preceptor placements by AY 26.

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Clinical placement demand for pre-licensure nursing programs in all clinical specialty areas is expected to have a substantial incremental increase over the next four years. The greatest need for pre-licensure programs cohort placements is expected in the areas of behavioral/mental health, nursing fundamentals, medical/surgical 1 and 2, and labor and delivery/postpartum/newborn, with an average increase in demand of 42% by AY 26. Notably, medical/surgical 1 and 2 were identified by respondents as extremely difficult-to-place and will require 91 new cohort placements by AY 26 to meet the expected demand. Likewise, other difficult-to-secure placements for pediatrics, community and environmental nursing, and nursing leadership areas are expected to have an average increase in demand of 30%. In addition, by AY 26, preceptor placement demand is expected to increase by 45%, amounting to an additional 238 preceptor placements required to meet the demand.

Table 1: Pre-licensure Nursing Education Programs: Clinical Placement Demand Forecast by Clinical Education Specialty

Nursing Clinical Education Specialty Details			Projected Students Requiring Placements over 4 Academic Years				Projected 4 Year Increased Demand (compared to 2021/2022 baseline)			
Type / Category	Required Clinical Hours per Student	AY 22 Students (Baseline)	AY 23	AY 24	AY 25	AY 26	4 Year Growth	Avg. Cohort Size	Additional Clinical Hours Needed	Additional Cohort Placements needed
Cohort Group										
Behavioral / Mental Health	694	419	465	489	538	688	269	5	963	54
Nursing Fundamentals	1152	485	539	596	728	893	408	8	1560	51
Medical/Surgical 1 *	1368	458	477	530	635	788	330	7	1698	47
Medical/Surgical 2 *	982.5	341	352	442	521	649	308	7	1291	44
L&D/Postpartum/Newborn	532	497	569	600	673	751	254	6	786	42
Pediatrics *	674	485	504	528	595	673	188	5	862	38
Community and Environ. *	469	238	278	286	317	415	177	7	646	25
Leadership *	70	232	219	228	258	287	55	3	125	18
Medical/Surgical 3	583.5	251	285	298	316	356	105	7	689	15
Long-Term Care	544	52	111	110	120	120	68	8	612	9
Gerontology	305	48	70	76	76	82	34	8	339	4
Community Health Nursing	135	70	70	70	70	94	24	7	159	3
Acute Care	270	48	50	54	54	54	6	4	276	2
Health Assessment *	95	48	50	54	54	54	6	7	101	1
Preceptor										
Clinical Immersion/Capstone *	640	264	280	360	402	452	188	1.2	828	157
Home Health *	56	0	64	64	64	64	64	1		64
Leadership Capstone	270	70	70	70	70	94	24	1.4	294	17

Note: * Denotes the most difficult-to-place specialty areas

Graduate nursing program clinical placement demand is expected to have an overall projected

growth in demand of 80%, with a projected requirement of 550 additional preceptor placements, totaling 8,009 additional clinical hours. Substantial growth in demand is expected for women's health and pediatrics primary care, advanced nurse practitioner practice, and outpatient behavioral health, all areas noted as "extremely difficult" to secure, and will require an additional 242 placements in those areas alone. In recent years, preceptor placements have been scarce and require schools to spend significant time and resources to meet the current need. The projected increase in demand will exhaust currently available preceptors and necessitate the development of a substantial number of new preceptors and possibly an adjustment to the student-to-preceptor ratio to meet the expanding need.

The expected increase in demand for clinical placements across all graduate programs creates a need for 550 additional preceptor placements, totaling 8,009 additional clinical hours.

Table 2: Graduate Nursing Education Programs: Clinical Placement Demand Forecast by Clinical Education Specialty

Nursing Clinical Education Specialty Details			Projected Students Requiring Placements, Annually				Projected Increase in Demand (compared to AY 22)			
Type / Category	Number Required Clinical Hours per Student	21/22 Students (Baseline)	AY 23	AY 24	AY 25	AY 26	4 Year Growth	Avg. Cohort Size	Additional Clinical Hours Needed	Additional Cohort Placements needed
Preceptor										
DNP Project	2294	35	73	108	127	123	88	1	2382	88
Chronic Primary Care	485	4	80	79	83	87	83	1	568	83
Acute/Episodic Primary Care	515	13	90	85	89	93	80	1	595	80
Women's Health Primary Care *	605	17	95	97	89	93	76	1	681	76
Pediatrics Primary Care *	605	13	82	87	79	83	70	1	675	70
Advanced Nurse Practitioner Practice *	360	3	65	65	65	65	62	1	422	62
Behavioral Health – Outpatient *	215	0	14	16	32	34	34	1	249	34
Behavioral Health - Inpatient	340	0	14	16	22	24	24	1	364	24
Gerontology Primary Care	650	20	40	42	34	38	18	1	668	18
Nursing Education Leadership	270		15	15	15	15	15	1	285	15
Adult Acute Care - Inpatient	475	0	0	0	0	0	0	1	475	0
Adv. Public Health Nurse	270	12	12	12	12	12	0	1	270	0
Geriatric Acute Care - Inpatient	375	0	0	0	0	0	0	1	375	0
Population Health Project	0	0	0	0	0	0	0	1	0	0
Population Health Project/Capstone	0	0	0	0	0	0	0	1	0	0

Note: * Denotes the most difficult-to-place specialty areas

The anticipated increase in demand for both pre-license and graduate clinical placements within the next four years is significant. In order to meet the expected demand, schools and facilities will need to collaborate to establish additional clinical placement opportunities. The projected demand necessitates the extensive utilization of all available clinical opportunities, the development of new quality clinical sites, and additional faculty, and may require changes to the method in which clinical education is delivered to meet the expanding need.

Impact

Changes to academic program admissions create the potential for pre-license nursing programs to produce additional graduates for entry into the nursing profession. The substantial planned increase in pre-license nursing programs will have a positive impact on the workforce. Additionally, the planned increase in admission for graduate programs will increase the number of incumbent nurses with advanced competencies in professional practice, leadership, and research roles.

The substantial planned increase in pre-license nursing programs will positively impact the workforce.

A clinical forecast of the overall workforce gain expected for planned admissions changes is presented below. The forecast assesses the cumulative gain over the next four years due to increased admission as compared to current or baseline enrollment totals. The survey did not collect data on program attrition, stop-outs, or standalone program graduation rates. Due to the COVID-19 pandemic and the effect it continues to have on academic progression, historical graduation rates from other published sources were not used, as they are unlikely to have contemporary value; however, it should be noted that attrition rates from Hawai'i nursing programs tended to be low. Therefore, the forecast represents potential additions to the current workforce and incumbent nurse progression. The overall expected workforce gain for all license levels is expected to be 1,363 nurses by AY 26 compared to those graduating in AY 22.

Table 3: Expected Workforce Gain or Loss by Program Type and License Type

Nursing Program Admissions	LPN	RN			APRN		RN
	LPN	ADN	BSN	GEPN	MS/DNP AGACNP	MS/DNP FNP, AGPCNP, PMHNP	MS/DNP Non- Clinical
AY 22 Program Admissions (Baseline)	18	171	513	48	10	1	111
Total program admissions by AY 26	82	210	914	54	6	58	137
Cumulative potential gain due to projected admissions through AY 26	232	128	754	20	-12	147	94
TOTALS	232	902			135		94

By AY 26, LPNs are expected to grow by 232 graduates as a result of admission changes. However, it is important to note that an unknown number of LPNs may directly enter ADN programs rather than enter the workforce. The RN workforce is expected to increase by 902 nurses who have completed ADN, BSN, or GEPN programs. For ADN and BSN, this growth represents a gain of 19% and 44%, respectively.

If demand for graduate programs matches the expected graduate program capacity between AY 22 and AY 26, APRN leading-graduate programs are expected to produce a cumulative gain of 135 clinical APRN nurses. It should, however, be noted that there is an expected loss of 12 AGACNP nurses due to an expected decrease in enrollment during the report years.

There is an expected gain of 19%, totaling 135 nurses completing graduate programs for FNP, AGPCNP, and PMHNPs. The most considerable growth in graduations from post-license programs is expected in non-clinical MS and DNP programs at 94, which is a 98% gain from AY 22.

Table 4: Expected Workforce Gain or Loss by Program by County

Nursing Program	Hawai'i	Kaua'i	Maui	HNL	Various	Total
LPN	0	40	40	152	0	232
ADN	0	48	40	40	0	128
BSN	40	0	0	450	264	754
GEPN	0	0	0	20	0	20
MS/DNP - Acute Care APRN (AGACNP)	0	0	0	-12	0	-12
MS/DNP - Primary Care/Lifespan APRN (FNP, AGPCNP, PMHNP)	0	0	0	150	-56	94
MS/DNP - Non-Clinical	0	0	0	147	0	147
TOTALS	40	88	80	947	208	1363

In order to achieve the projected workforce gains, interest in nursing programs by qualified applicants must match or exceed the projected admission offered by local nursing education programs, faculty gains must pace admissions, and appropriate, quality clinical placements must be available for Hawai'i nursing students.

Opportunities:

Statewide Clinical Placement Strategy

Of the twelve schools that were sent this survey, seven currently are members of HSCN's Hawai'i Clinical Placement Collaborative (HCPC) Collaborative; all HCPC members participated in the survey. The majority of HCPC members reported expecting more than a 20% increase in enrollment in nursing programs over the next four years. Only one HCPC member school reported that they do not expect substantial enrollment growth. Two non-HPCP member schools reported expected enrollment growth greater than 20% by AY 26 academic year. With the projected overall growth of 40% in nursing education program enrollment expected by AY 26, it is imperative that robust strategies for managing the increased demand for clinical placements are implemented across the state. The schools that are not currently engaged in statewide collaborative programs like the HCPC or have robust clinical placement management strategies may benefit from an inter-school and inter-facility collaborative approach to managing and optimizing clinical placements (Table 5). Conversely, the absence of statewide collaborative approaches will impede success by decreasing the accuracy of state, system, facility, and unit clinical placement capacity and utilization, resulting from poor or imperfect utilization.

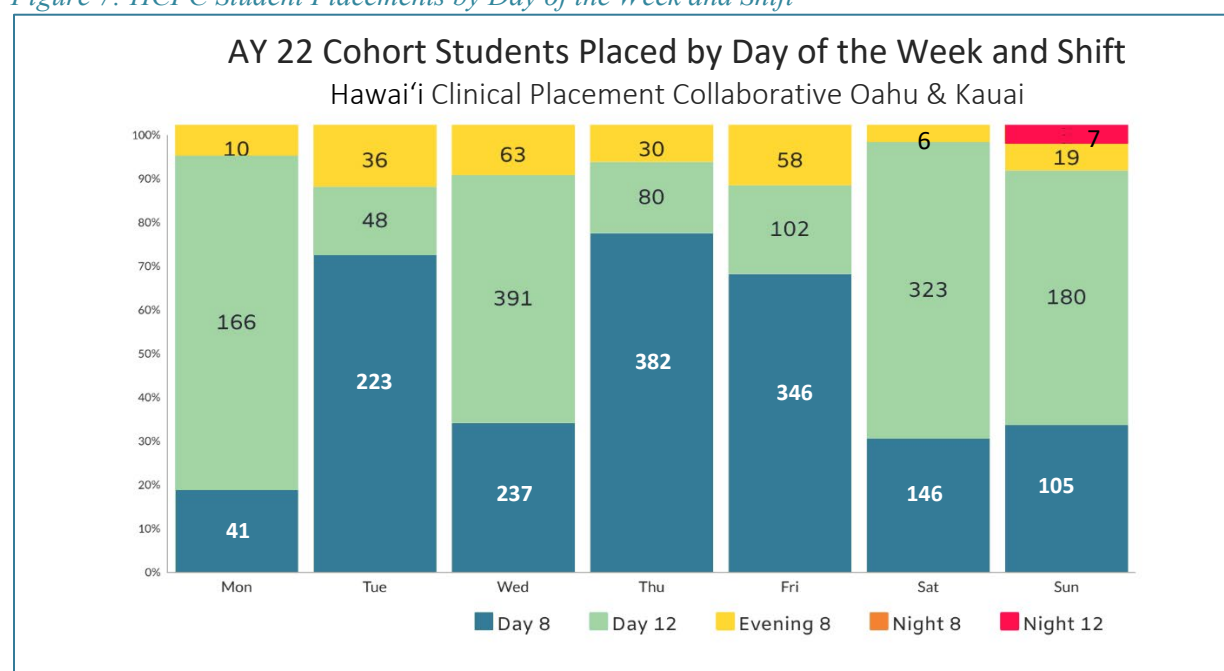
Table 5: Comparison of schools indicating expected enrollment growth by HCPC membership status.

HCPC Membership Status	Count of Schools of Nursing	Count of Schools of Nursing reporting greater than 20% growth by AY 26
An active member of the HCPC Collaborative	7	6
Not a member of the HNRPC Collaborative	3	2

Increase Utilization of Night and Weekend shifts

Based on information from current HCPC placements, utilization predominantly occurs during the day shifts with a variation of 8-hour shifts (Day 8) (49%) and 12-hour shifts (Day 12) (43%), depending on the day of the week. Of the remaining shift types, evening (Evening 8) is the next most often occurring shift used, though it only represents 7% of total placements secured. In comparison, night shifts only had 0.2% utilization, and only in 12-hour shifts (Night 12). Clinical placement utilization for evening and night shifts could increase clinical placement capacity significantly and expose student nurses to nursing care around the clock. While some placement types are inappropriate for evening and night shifts, all in-patient care requires around-the-clock nursing coverage, therefore, must have staff present to facilitate learning. Challenges may include larger patient-to-nurse ratios in some settings, which may challenge staff nurses' ability to support student learning, and difficulty securing faculty or instructors to support students. Additionally, students may have access to fewer procedures and opportunities to practice skills on patients, particularly for patients where rest has been prioritized. Noting the challenges, any increase in utilization in these shifts would be utilization that would neither conflict with current placements.

Figure 7: HCPC Student Placements by Day of the Week and Shift



Innovative clinical placement concentration

The reduction in the student-to-faculty ratio in recent years has substantially impacted academic programs and the availability of clinical placements. Many clinical partners have reduced allowable cohort sizes from eight to six students per instructor; in some cases, the student-to-faculty ratio has reduced to four students per instructor. Clinical partners have communicated several factors and considerations for reduction; these include concerns that the number of students on the floor may exceed nurses and the decrease in nurse staffing due to diminished patient ratios. Clinical partners must also consider the impact on units from simultaneous nurse education activities, such as new graduate nurse residency programs. In addition, providers must balance nurse workload to support well-being, including provisions for breaks from activities that are above and beyond patient care, such as student and resident teaching and precepting. The decrease in the student-to-faculty ratio also increases the number of cohorts needed to process the same number of students and results in an increased number of faculty required to instruct the students by up to 25%. The current average cohort size for placements ranges and depends on the clinical specialty type, with only 21% at eight students per cohort, 36% are between three and six students per cohort, and 43% with seven students per cohort.

Currently, the average daily census is higher than at any point since 2019, per communication provided by Healthcare Association in Hawai'i (October 06, 2022). In addition, the accelerated use of high-fidelity simulation and coupling students in placements to maximize available placements during the early COVID pandemic demonstrated the capacity to expedite competency development through innovation.

Using the concepts utilized in simulation where one set of students are observing and assessing the clinical environment while another group of students engages in clinical activities may provide opportunities to increase student capacity. This concept could be done for clinical placements by creating a purposeful pairing of students. For instance, two students can be assigned to the same patient(s). One student engages in clinical care while the other student documents; when not in the patient room, students can assess their plan of care together, review skills and procedures before performing them, and investigate clinical questions before seeking guidance from a nurse or instructor. They can facilitate one another's learning. This model may also decrease the time students engage in the clinical setting. Increasing the total number of students on a unit would increase the number of students processed within this model, thus decreasing the total number of cohorts needed to process students and decreasing the total amount of time students are on units.

To exemplify this idea, if schools and facilities agreed to move to maximize student ratios to 10 students per instructor, there would be a reduction of 20-50% of the 4-year projected demand would be reduced. In addition, by coupling students, five patients or five nurses could be assigned the pairs of students, maintaining assignments within a unit of six or fewer. Increased cohort sizes would also decrease the number of cohorts, which would, in turn, reduce the overall cohort student time on the floor, making room for student and nurse resident precepting. The reduction may also provide opportunities for staff nurses to take breaks from non-patient care activities.

Table 6: Projection Model: Pre-license Nursing Education Programs: Clinical Placement Demand Projection with Increased Faculty-to-Student Ratio for Cohort Groups

Nursing Clinical Education Type and Specialty Details			Projected 4 Yr. Increased Demand (compared to AY 22 baseline)			Projected 4 Year Increased Demand (compared to AY 22 baseline)			
Clinical Area	Required Clinical Hours per Student	21/22 Students (Baseline)	4-Year Growth	Average Cohort Size	Additional Cohort Placements needed	Adjusted Cohort Size	Adjusted Total Cohort Placements Needed	Reduction in Demand	Est.% Change
Cohort Group									
Behavioral Health / Mental Health	694	419	269	5	54	8	34	20	38%
Nursing Fundamentals	1152	485	408	8	51	10	41	10	20%
Medical/Surgical 1	1368	458	330	7	47	10	33	14	30%
Medical/Surgical 2	982.5	341	308	7	44	10	31	13	30%
L&D/Postpartum/Newborn	532	497	254	6	42	10	25	17	40%
Pediatrics	674	485	188	5	38	10	19	19	50%
Community and Environmental Nursing	469	238	177	7	25	10	18	8	30%
Leadership	70	232	55	3	18	6	9	9	50%
Medical/Surgical 3	583.5	251	105	7	15	10	11	5	30%
Long-Term Care	544	52	68	8	9	10	7	2	20%
Gerontology	305	48	34	8	4	10	3	1	20%
Community Health Nursing	135	70	24	7	3	10	2	1	30%
Acute Care	270	48	6	4	2	6	1	1	33%
Health Assessment	95	48	6	7	1	10	1	0	30%
TOTALS	7874	3672	2232	89	353	130	234	119	450%

Table 7: Projection Model: Post-license Nursing Education Programs: Clinical Placement Demand Projection with 2:1 Student-to-Preceptor Ratio for Preceptor Placements

Nursing Clinical Education Type and Specialty Details			Projected 4 Yr. Increased Demand (compared to AY 22 baseline)			Projected 4 Yr. Increased Demand (compared to AY 22 baseline)			
Clinical Area	Required Clinical Hours per Student	21/22 Students (Baseline)	4 Year Growth	Average Cohort Size	Additional Cohort Placements needed	Adjusted Cohort Size	Adjusted Total Cohort Placements Needed	Reduction in Demand	Est.% Change
Preceptor									
DNP Project	2294	35	88	1	88	2	44	44	50%
Chronic Primary Care	485	4	83	1	83	2	42	42	50%
Acute/Episodic Primary Care	515	13	80	1	80	2	40	40	50%
Women's Health Primary Care	605	17	76	1	76	2	38	38	50%
Pediatrics Primary Care	605	13	70	1	70	2	35	35	50%
Advanced Nurse Practitioner Practice	360	3	62	1	62	2	31	31	50%
Behavioral Health - Outpatient	215	0	34	1	34	2	17	17	50%
Behavioral Health - Inpatient	340	0	24	1	24	2	12	12	50%
Gerontology Primary Care	650	20	18	1	18	2	9	9	50%
Nursing Education Leadership	270		15	1	15	2	8	8	50%

Nursing Clinical Education Type and Specialty Details			Projected 4 Yr. Increased Demand (compared to AY 22 baseline)			Projected 4 Yr. Increased Demand (compared to AY 22 baseline)			
Clinical Area	Required Clinical Hours per Student	21/22 Students (Baseline)	4 Year Growth	Average Cohort Size	Additional Cohort Placements needed	Adjusted Cohort Size	Adjusted Total Cohort Placements Needed	Reduction in Demand	Est.% Change
Adult Acute Care - Inpatient	475	0	0	1	0	2	0	0	0%
Adv. Public Health Nurse	270	12	0	1	0	2	0	0	0%
Geriatric Acute Care - Inpatient	375	0	0	1	0	2	0	0	0%
Population Health Project	0	0	0	1	0	2	0	0	0%
TOTALS	7459	117	550	N/A	550	2	0	0	0%

Other Opportunities

Distribute clinical demand within specialty types across the academic year to decrease peaks and valleys of demand.

Currently, courses are offered within schools of nursing using a cohort model, which efficiently concentrates clinical need by specialty category only within the semester in which the didactic course is offered. It is often the case that multiple schools of nursing teach the same course type in the same semester. The challenge is that, in turn, this amplifies the clinical demand for these specialty categories during single semesters with limited to no demand in other semesters. Leveling out clinical demand across semesters would increase capacity. However, it may also require curriculum planning across the schools of nursing that offer courses within the same island so that transitions to year-round offerings are well-strategized and executed. Similarly, clinical facilities need to ensure changes to the acceptance of student placements are coordinated and communicated to the units to allow for addressing unanticipated challenges.

Increase ambulatory and non-acute care facilities to offset acute care needs.

The current critical workforce shortage is affecting providers of all settings are finding they have new or growing vacancies for nursing. This shortage presents an opportunity to infuse new clinical engagement with community-based sites across Hawaii, which may then decrease the clinical placement demand in pre-existing facilities. Community-based sites tend to accommodate smaller numbers of students but present opportunities for preceptor recruitment and increased interprofessional clinical experiences. However, the overall impact may be small and the resources needed to set up these new placements may be intensive.

Strategizing clinical achievement through competency-based learning instead of hour-based learning may reduce the hours needed in some or all courses.

Competency-based learning may enable schools to complete education requirements for students sooner, requiring less clinical learning time at facilities than time-based learning. In addition, continuing to use simulation and lab-based skills workshops to frontload hands-on learning may further expedite competency development prior to undertaking patient care.

Increase high fidelity and virtual simulation to accelerate critical thinking.

Simulation is found to improve critical thinking development and may count as double the

hours of clinical learning. However, up-to-date resources and equipment and available staff or faculty trained in simulation may be barriers to expanding simulation. See above for additional considerations.

Improving access to clinicals for LPN programs.

Practical nursing education has seen significant declines in recent years, despite the continued need by industry partners. Identifying the primary employment locations of LPNs and seeking to develop clinical education partnerships with these facilities may increase the availability of clinical placements that are unique to practical nursing education needs. In addition, opportunities for practical nursing students to develop settings-specific competencies may also aid future employment interest and thus support onboarding and retention successes in these settings.

Improving access to clinicals for APRN programs.

Advanced practice leading nursing education has seen significant increases and continues to have projected growth. Preceptor tax credits have improved preceptor engagement, but not at the rate that supports future demand. Identifying the primary employment locations for APRNs and seeking clinical education partnerships with benefits to the employer organization may help nursing students develop settings-specific competencies that may also aid future employment interest and may therefore support onboarding and retention successes at these settings.

Development of dedicated education units (DEU).

Dedicated education units are partnerships between a nursing school and a facility in which a unit and its staff are assigned to a nursing school, and all clinical education that happens at that facility's DEUs is for that particular school. It can improve the continuity of education as students may benefit from deepening knowledge at the same organization, semester after semester. It may decrease the administrative workload for schools and facilities as the students and faculty become more consistent. Challenges include increased workload for DEU staff nurses who may have increased overall teaching demands in addition to patient care. Schools within the same region may lose access to that site or facility, thereby decreasing clinical placement availability or organizational exposure for others. A description of a DEU is provided in the article by Dapremont & Lee (2013).⁷

Improving software supports for use across the state.

As demand for clinical placements grows and competition for clinical experiences increases, there is a growing need for coordination across schools and disciplines. Expanding the utilization of current supportive practices (i.e. Hawai'i Clinical Placement Collaborative) to include nursing on islands that currently do not use HCPC and for non-nursing/allied health programs may improve data-driven clinical placement coordination. Additionally, using software to manage health information requirements may decrease the administrative workload for schools and facilities while improving the management and security of this data.

⁷ Dapremont, J., & Lee, S. (2013). Partnering to educate: Dedicated education units. *Nurse Education in Practice*, 13(5), 335–337. <https://doi.org/10.1016/j.nepr.2013.02.015>

Developing preceptors to support clinical demands.

Preceptor education demands have the need for clinical nurses with the additional skillset needed for precepting. Improving access to preceptors requires its own unique strategies; this includes the training of teaching and precepting skills, provision of and schedule adjustments for preceptors to allow for necessary dedicated time, which may consist of a reduction in patient loads. In addition, the provision of financial or professional development incentives, such as the offering of CNEs, library privileges, faculty development or public recognition/awards, may increase the availability of preceptors willing to take student placements.

Establish funding mechanism for clinical education.

Nursing education requires clinical education, but schools of nursing or facilities do not typically budget the cost of education beyond payment for nursing instructors. This is not unique to healthcare or nursing education; it is a pervasive issue for seemingly all education requiring fieldwork. An opportunity exists to imagine and design ways to carve a space for education that recognizes the value of these academic-practice partnerships and accommodates the cost. Should this strategy be selected, it is essential to design it as a collaborative model with long-range implementation goals. This concept may require a new budgeting model or sources of funding.

Other strategies may be developed through partner discussion.

Table 8: Commonly Used Acronyms

Acronym/Term	Description
ADN	Associate Degree Program in Nursing
AGACNP	Adult-Gerontology Acute Care Nurse Practitioner
APRN	Advanced Practice Registered Nurse
BSN	Baccalaureate Degree Program in Nursing
DNP	Doctor of Nursing Practice
FNP	Family Nurse Practitioner
GEPN	Graduate Entry program in Nursing
LPN	Licensed Practical Nurse
MSN	Master's Degree Program in Nursing
PMHNP	Psychiatric Mental Health Nurse Practitioner
RN	Registered Nurse