UTHealth
The University of Texas Health Science Center at Houston
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Healthcare Field Scan: Synthesis of Current Evidence on Production and Retention of Registered Nurses in Texas

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Purpose and Approach

- Conduct a scan of the health care field post Covid-19 pandemic to provide an ***updated overview*** *of* ***RN production and retention.***
- Identify ***fresh approaches*** to solve the nursing shortage in Texas that are data-informed, financially feasible, and ready to scale.
- **Quality Improvement Mindset**
  - What is the problem we are trying to solve?
  - What are the drivers of the problem?
  - What are the improvement goals and approaches?
  - Rapid testing of improvement around common improvement goals and metrics through collaborative learning and centralized approach to collecting data, reporting data, analyzing data, and sharing data to promote scaling of successful local solutions and learning from ‘failures.’

Background

- Covid-19 pandemic temporarily worsened the shortage, but RN shortage estimates are returning to the pre-pandemic levels (3). National estimates show that by 2036 there will be a shortage of 337,970 FTE RNs with demand exceeding the supply by 9% (4).
- In **Texas there is a deficit of 44,678 FTE RNs**. By 2036 that deficit is projected to grow to 56,370 FTE RNs resulting in an unmet demand of 15.6% (5).
- Resolving the problem of the RN shortage depends on a complex interplay of many supply and demand factors.
- ***Demand factors:*** an aging general population that needs more care, an aging nursing workforce whose retirements will further fuel the shortage.
- ***Supply factors:*** **limited production** of new nurses by the nursing education systems, **low retention** of nurses by the health care system (6).

Production Drivers of Registered Nurses

- There are several production drivers behind nursing education programs' ability to produce an adequate supply of RNs. These drivers include:

    1. **Student supply** (availability of qualified applicants willing and able to apply to and afford nursing education programs)
    2. **Program quality** (graduation and NCLEX -RN pass rates)
    3. **Program capacity** (availability of faculty, clinical placements and preceptors).

RN Production Driver 1: Supply of qualified applicants to nursing programs

- Texas currently has **more fully staffed nursing program seats** including adequate faculty and clinical placements in pre-licensure nursing programs **than qualified applicants to fill the seats.**
- In 2023, 56 ADN and 61 BSN education programs reported a total of 25,255 available seats for new students (16). These programs offered admission to **26,205 applications** for 25,255 available seats, but only **20,274 people** enrolled, leaving ***4,981 fully staffed unfilled seats*** across RN programs in 2023.
- BSN programs have more unfilled seats than ADN programs.
- A larger number of seats are available in metro BSN and ADN programs compared to non-metro BSN and ADN programs.

Figure 1. Texas BSN Program Applications, Empty Seats, Admissions, and Enrollments (2019-2023)

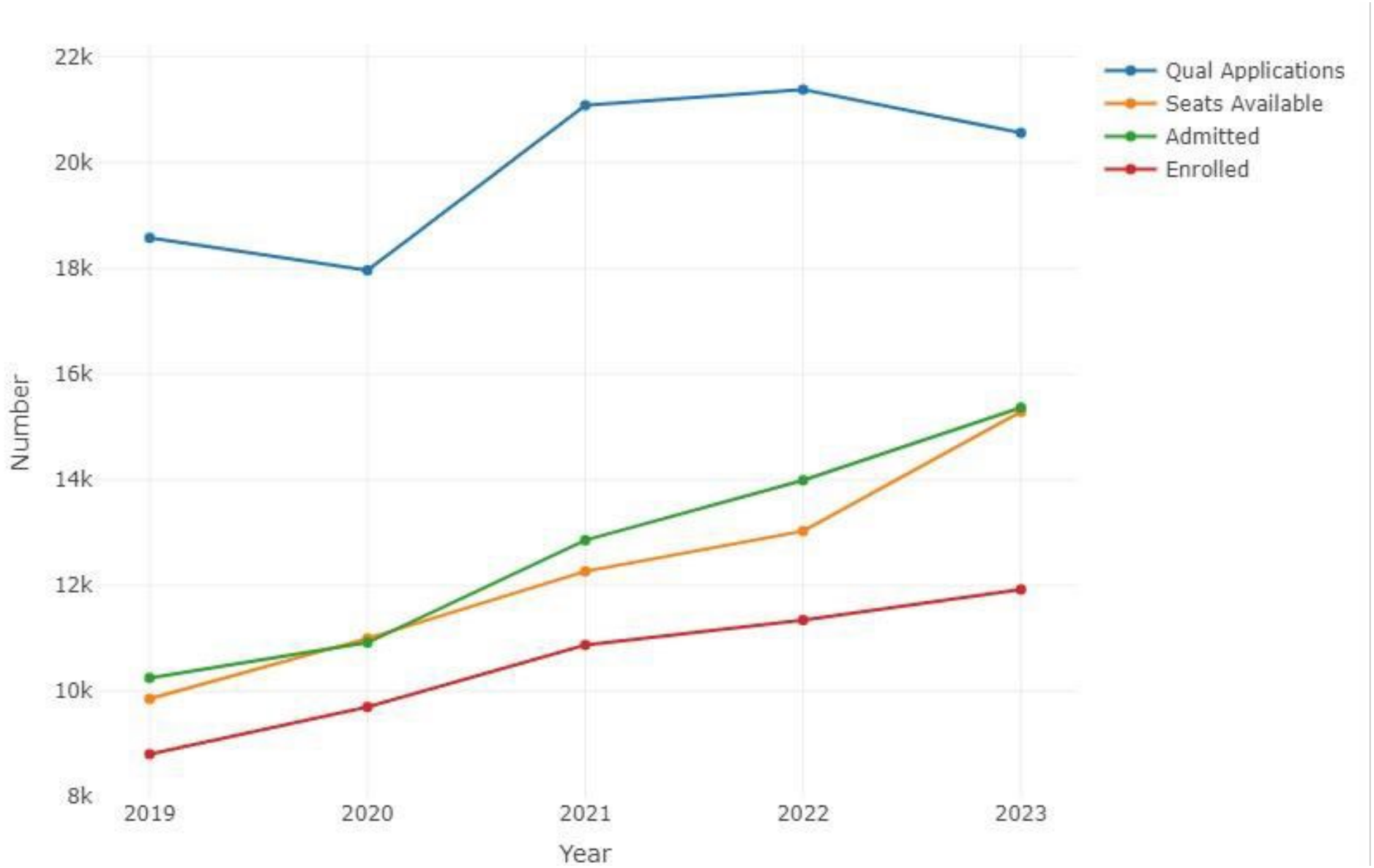


Figure 2. Texas ADN Program Applications, Empty Seats, Admissions, and Enrollments (2019-2023)

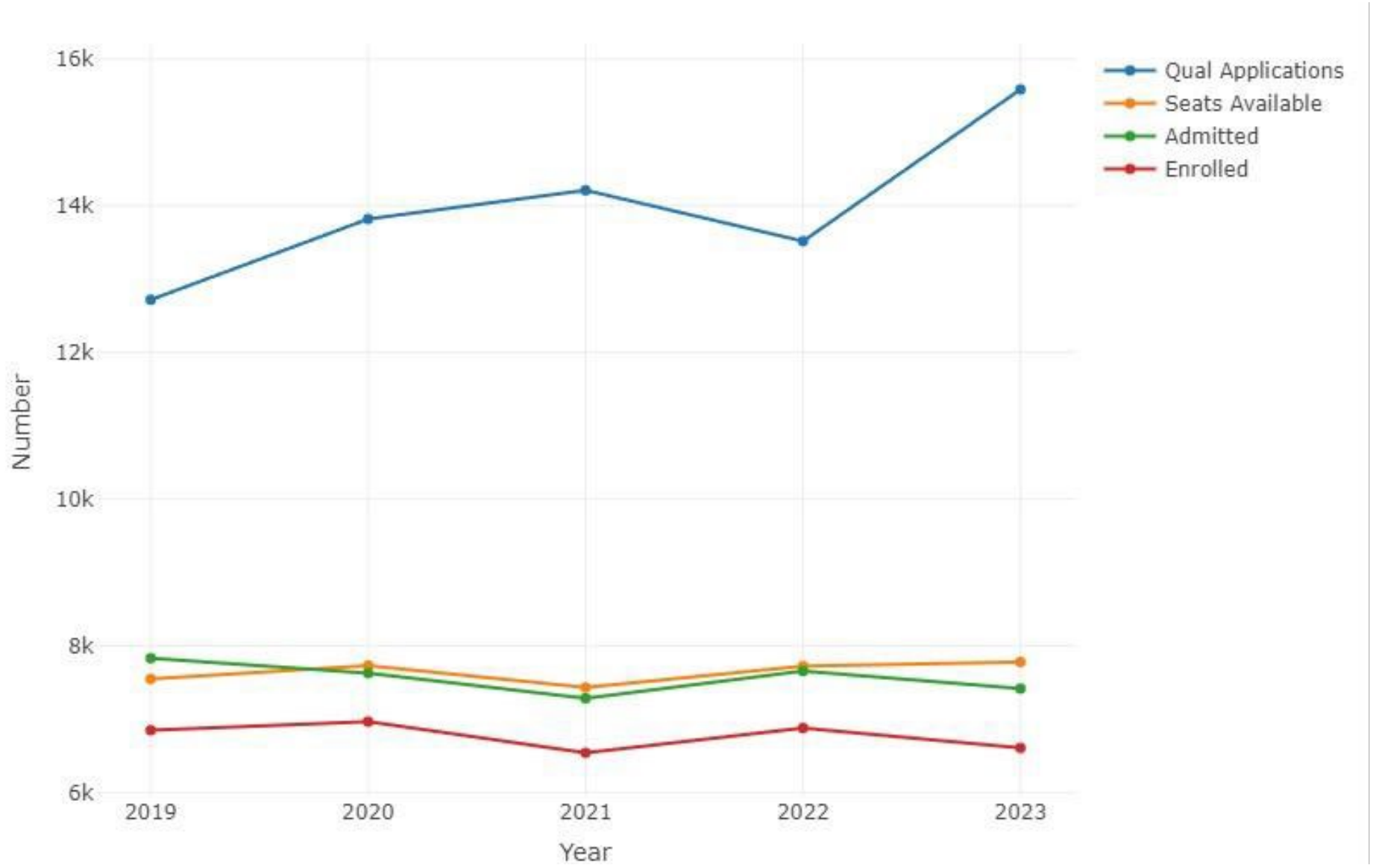


Figure 3. Texas Metro Area BSN Program Applications, Empty Seats, Admissions, and Enrollments (2019-2023)

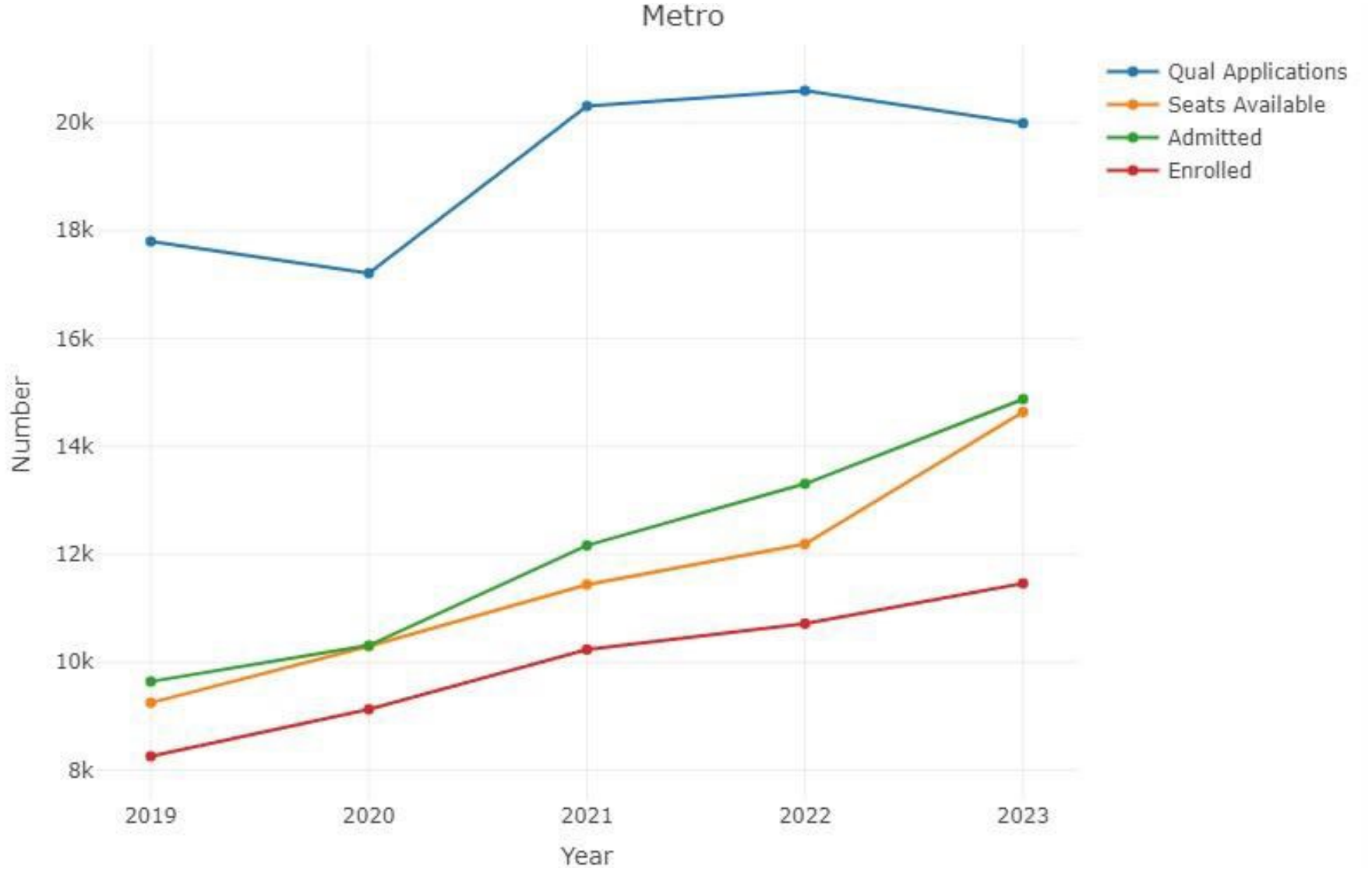


Figure 4. Texas Non-Metro Area BSN Program Applications, Empty Seats, Admissions, and Enrollments (2019-2023)

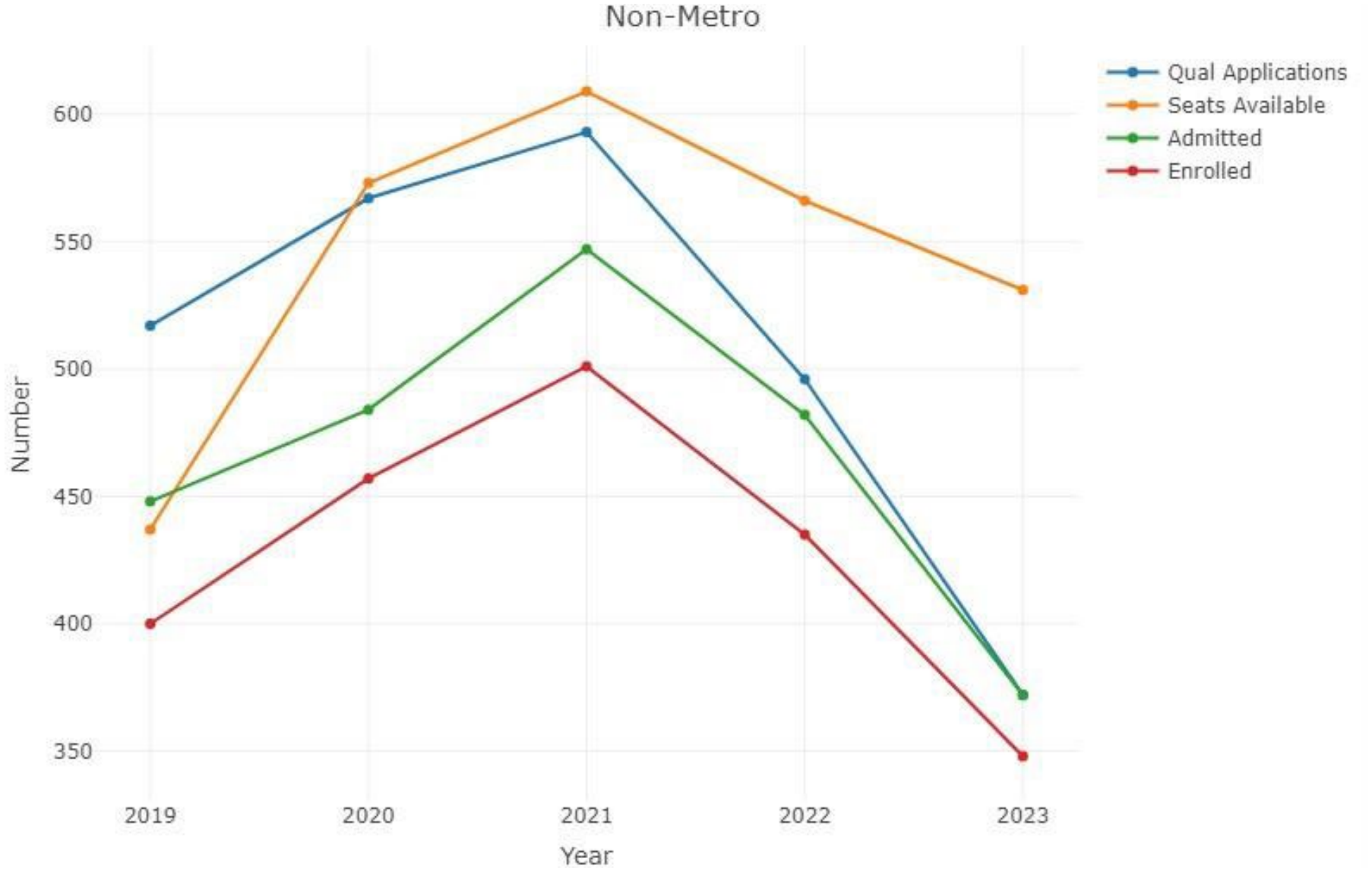


Figure 5. Texas Metro Area ADN Program Applications, Empty Seats, Admissions, and Enrollments (2019-2023)

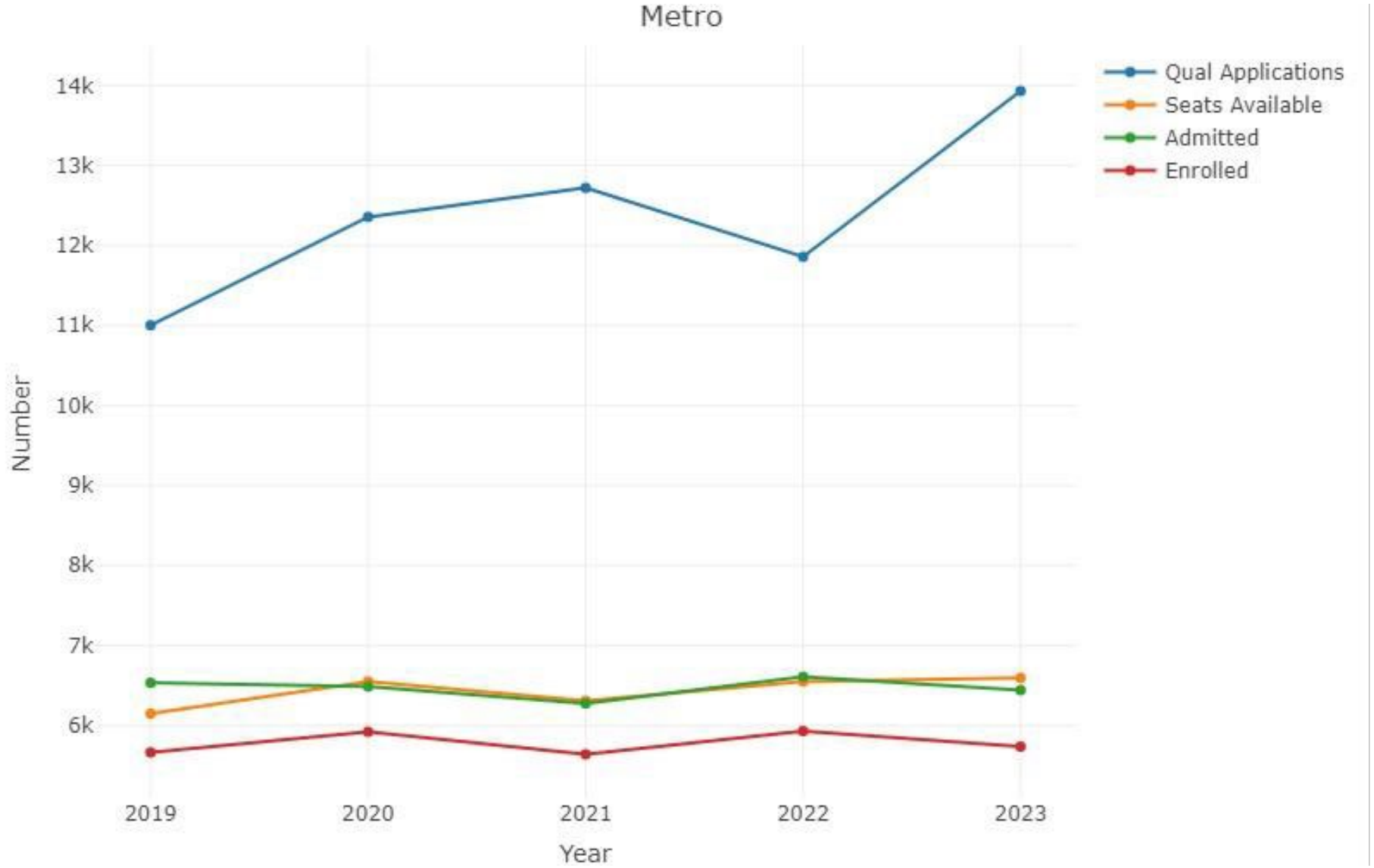
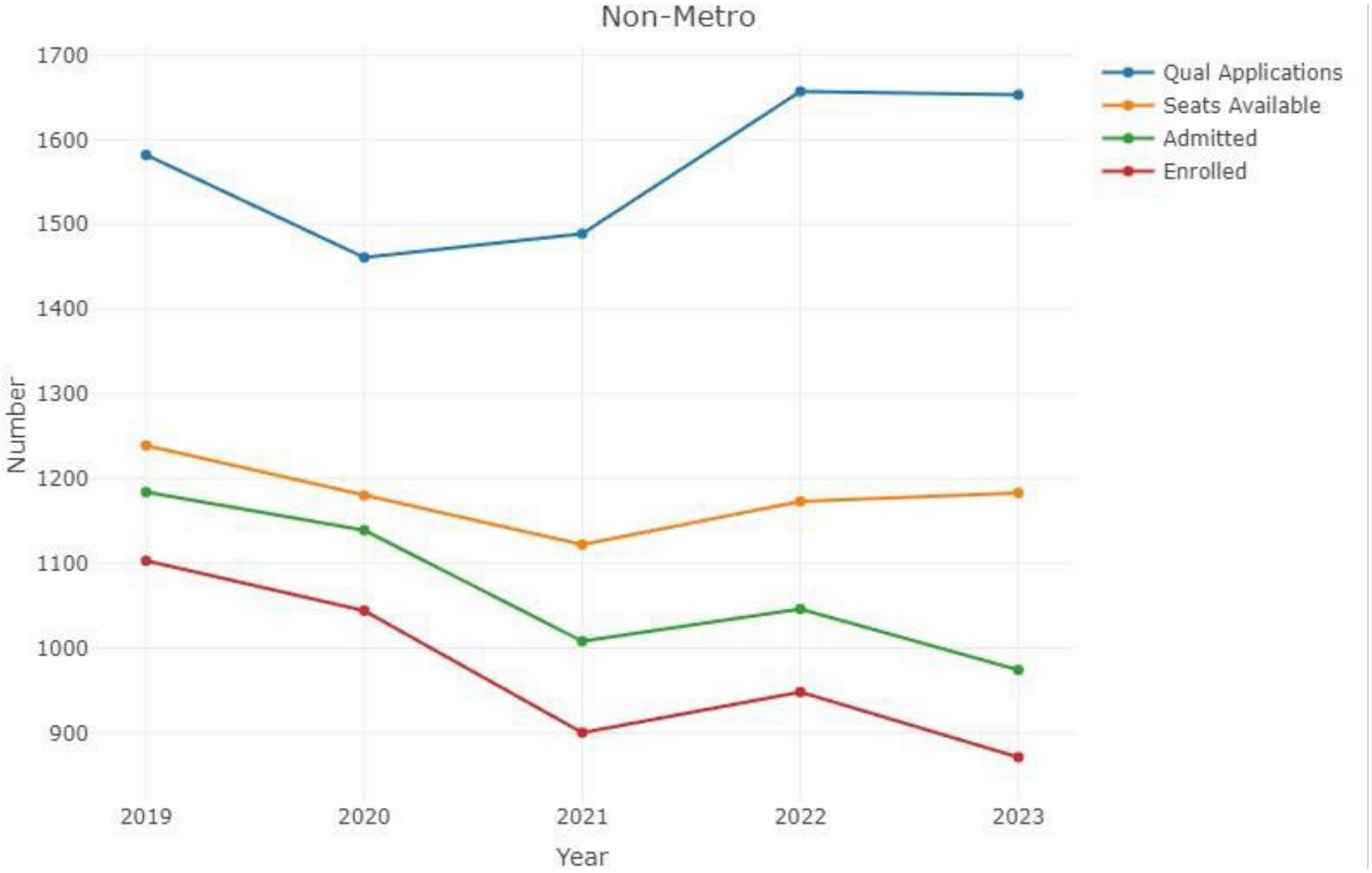


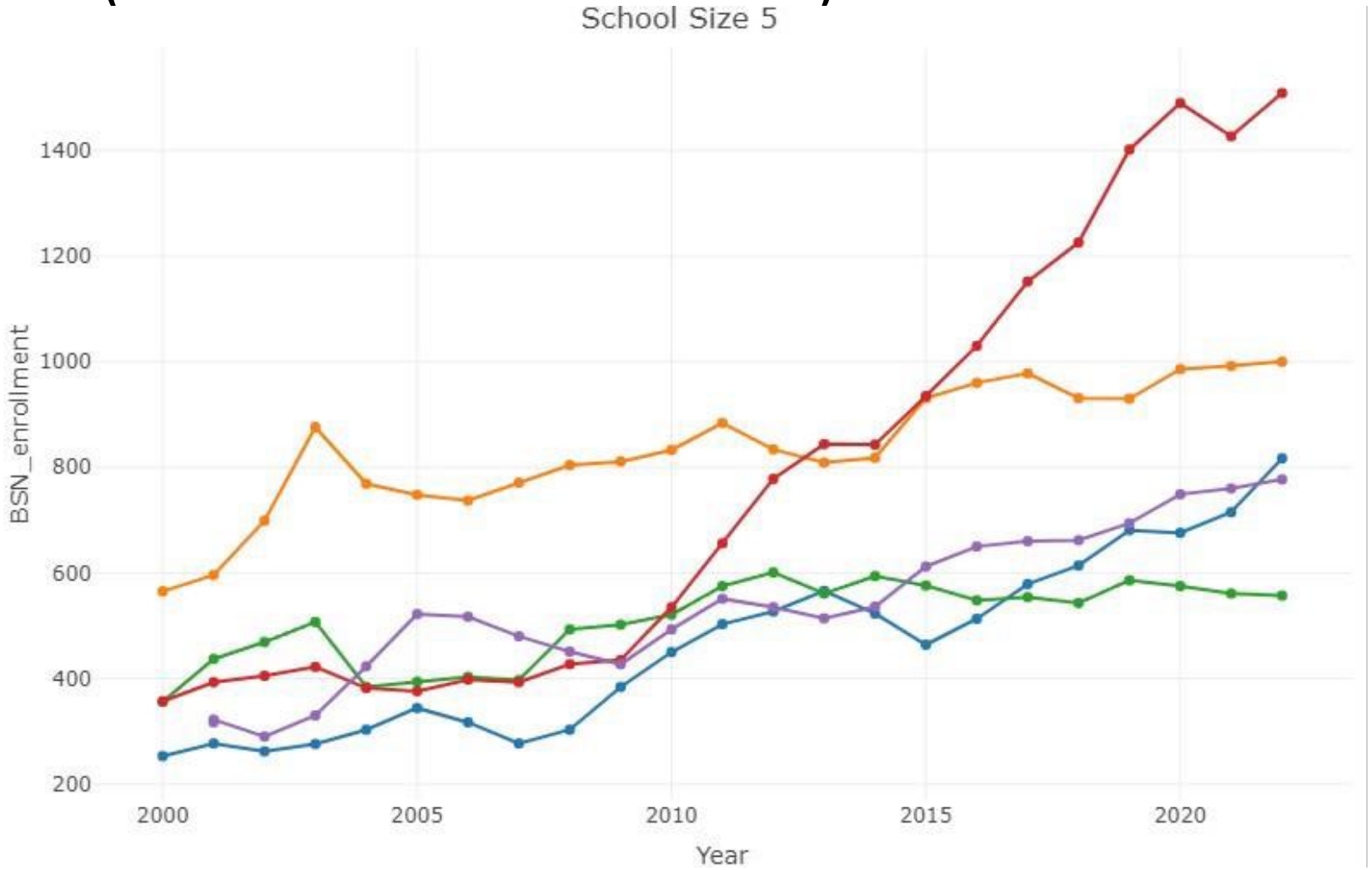
Figure 6. Texas Non-Metro Area ADN Program Applications, Empty Seats, Admissions, and Enrollments (2019-2023)



What about on-line programs?

- It is important to note that programs that offer degree options with full or partial online courses for pre-licensure RN education have seen the **most growth in enrollments**.
- Similar growth in online enrollments is observed across other college majors. For example, the percentage of undergraduate students who took distance education courses exclusively increased from 15% in 2019 to 28% in 2021 (23).
- While online programs have seen a **sizable growth in enrollments**, the **quality of the programs needs to be further studied** specifically looking at graduation and NCLEX pass rate**s.**
- Evidence from the COVID-19 Pandemic suggests that limiting nursing students access to hands-on clinical experiences has prolonged transition to practice and negatively affected their communication, teamwork, advocacy, and basic patient care skills (24).

Figure 7. Five BSN Texas Programs with Highest Enrollments in 2020 (2000-2020).
***Legend*. Largest to lowest enrollment in 2020: 1. Red line (UT Arlington), 2. Orange line (Texas Woman's University), 3. Blue line (Texas Tech University Health Sciences Center), 4. Purple line (UT Tyler), 5. Green line (UT Health Science Center San Antonio).**



Summary and Recommendations on Increasing Student Supply

- In summary, the national and local narrative on the oversupply of qualified applications to nursing programs emphasizes a need for increasing the number of seats in nursing programs. ***However, the most immediate problem is a limited supply of qualified applicants distributed across the state to fill all the available and fully staffed nursing program seats.*** If Texas can fill all the available seats in nursing programs over the next 12 years (e.g., 4,981 seats x 12 = 59,772 RNs), it should be able to produce enough RNs to meet the projected demand by 2036 of 56,270 FTE RNs.
- Numbers of qualified applications and admissions are not a reliable estimate of the actual number of qualified students enrolling in nursing education programs in Texas.

Improvement Goals and Fresh Approaches: RN Production

1) Develop a 5000 Nursing Students Campaign: Conduct a marketing campaign in Texas and neighboring states to enroll 5,000 additional nursing students per year for 12 years to fill all the available and fully staffed RN seats in high-quality programs. Recommendations are to:

a) Create a user-friendly centralized dashboard for parents and students to easily access key indicators for each nursing program in Texas in a standardized format, including graduation rates, first-time NCLEX-RN pass rates, tuition and fees, available seats, and Field of Study for Nursing RN program pre-requisites. Host the dashboard on the Texas Board of Nursing website.

b) Develop systems to automatically share student applications among schools.

c) Create uniform pre-requisite admission requirements among nursing programs following the THECB Field of Study in Nursing requirements.

d) Hire and train professional recruiters and enrollment coaches in nursing programs.

e) Offer scholarships to pre-licensure nursing students to cover tuition, fees, books, technology, and living expenses. Consider a flat fee for each semester in good academic standing.

f) Offer financial incentives such as a state tax credit to recruit and retain RNs to practice in Texas.

RN Production Driver 2: Program Quality

- The second major driver of production capacity for nursing education programs is **program quality measured through two key quality indicators – graduation rate and NCLEX-RN pass rate.**
- We found **a wide range in graduation rates from a low of 10.2% to a high of 98.7%.**
- To **prioritize sending students to empty seats in high-quality programs**, it is essential for the State to request more transparency from all nursing programs, and especially those receiving State funding, on graduation rates specific to nursing programs, to ensure optimal production of practice-ready RNs.
- But, schools in the under-resourced communities must not be penalized for low graduation rates. Strategic investments in student support both academically and with social determinants of success (stipends, child-care, transportation, tax or child care credits, housing) are needed.
- Potential to create **risk-adjusted quality metrics** similar to hospital quality report cards that account for payor mix.

NCLEX-RN Performance

- **RN programs in Texas vary widely in how well their graduates perform on the NCLEX-RN exam**. In 2023, the national average pass rate for first-time NCLEX-RN takers was 88.6% (36). The latest available data for Texas programs from 2022 show a **mean ADN program rate at 82.1% and a mean BSN program rate at 85.9% with some programs reporting a pass rate below 50%.**
- We demonstrate the 13 effect of graduation and NCLEX-RN pass rates on the production of RNs through the following example: ***If we are able to fill the 4,981 available seats, but only 85% graduate, that reduces the number of graduates to 4,234. Further, if only 85% of those who graduate pass the NCLEX-RN, that further reduces the number of practice ready RNs to 3,599 per year. That cuts the production of RNs by 16,587 over 12 years, preventing the State from resolving the projected shortage of nurses by year 2036.***

Improvement Goals and Fresh Approaches: RN Production

2. Achieve 90% RN program graduation and first-time NCLEX-RN pass rates by ensuring a high-quality nursing education experience. Recommendations are to:

a) Hire and train academic tutors, focusing on reading comprehension for students whose native language is other than English and math.

b) Facilitate peer and career mentor networks.

c) Hire mental health counselors.

d) Provide NCLEX-RN prep tutoring.

Production Driver 3: Adequate supply of nursing faculty, clinical placements, and preceptors

- Presently, there are enough faculty, clinical sites, and preceptors to enroll an additional almost 5,000 pre-licensure nursing students across Texas. However, there is a **problem of uneven distribution of available applicants to seats**, which leaves some programs overstaffed with faculty and clinical placements and some understaffed.
- For those nursing programs that are over capacity, the lack of nursing faculty (both lack of budgeted faculty positions and qualified faculty to fill budgeted positions), clinical placements, and clinical preceptors are key barriers to accepting all qualified applications (not applicants) in Texas (17) and nationally (18).
- According to the custom Texas state report by AACN, in 2023 for BSN programs, there were 1,778 budgeted faculty positions with **133 reported vacant positions for a vacancy rate of 7.5%**, which has been consistent since 2015 with some minor fluctuations. To fill the 133 vacant positions, **programs needed 82 doctorally prepared nurses and 51 nurses with a master's degree**.
- It is important to note that there is a projected oversupply of master's degree prepared nurses in Texas (5). This oversupply creates a ***pool of viable candidates who may be willing to consider pursuing jobs in nursing education programs with appropriate training and compensation comparable to jobs for master's prepared nurses in clinical settings***. Matching demand for certain specialties and educational level is necessary to fill vacant faculty positions.

Improvement Goals and Fresh Approaches: RN Production

3) Develop nursing student pipeline programs to expand and accelerate RN program enrollments across Texas. Recommendations are to:

a) Conduct a marketing campaign in partnership with key stakeholder groups to promote nursing.

b) Conduct early outreach to high schools and college pre-health and science majors and offer immersion experiences and nursing program camps.

c) Develop curricula for high schools to allow students to complete all or most of the nursing program pre-requisites to remove BSN program entry bottlenecks.

Retention Drivers of Registered Nurses

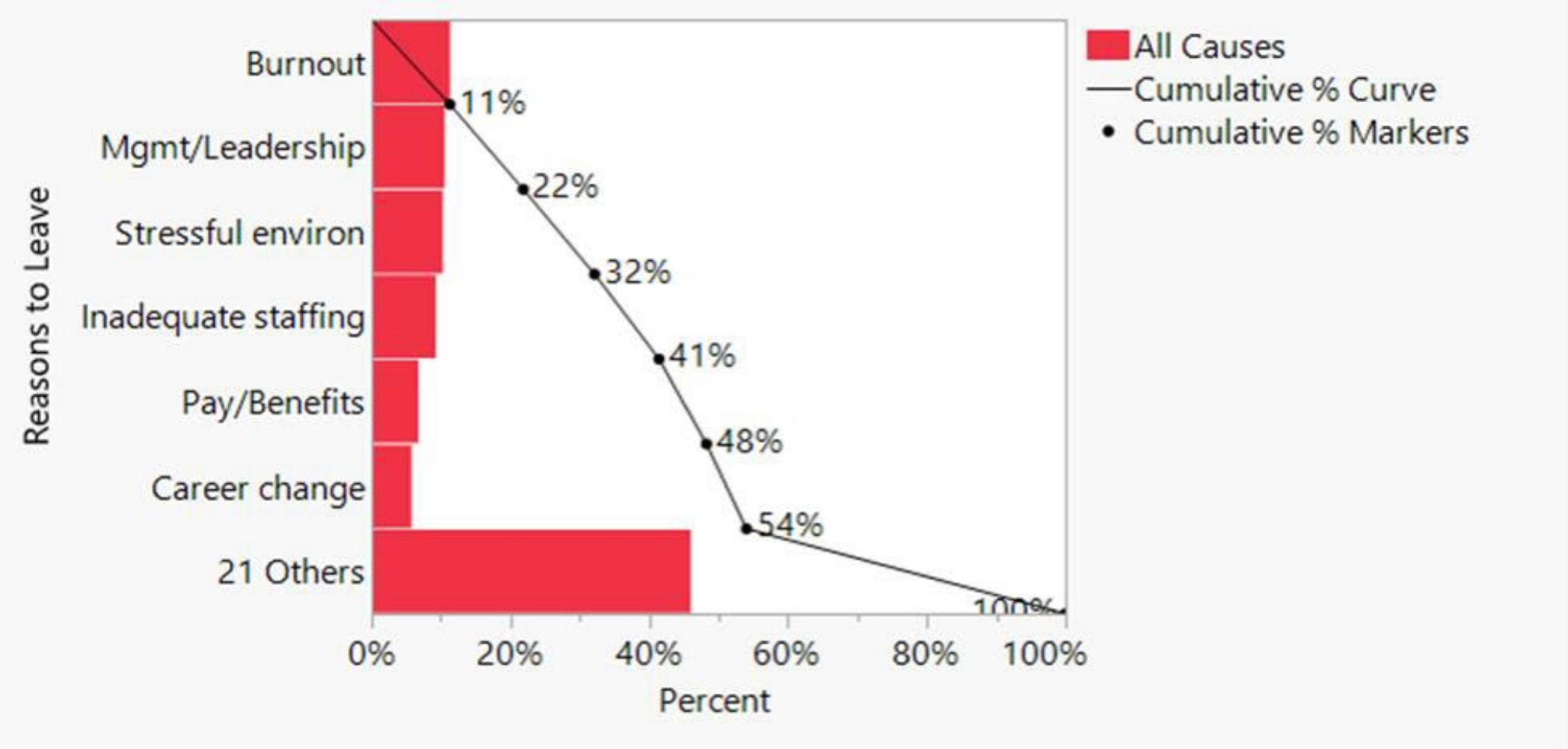
- To help resolve the nursing shortage, adequate production of RNs must be matched by the adequate retention of RNs in the labor market (9). Recent focus has been on the nurses who left nursing during the COVID-19 pandemic as a key contributor to the nursing shortage. Yet, only 3% of all RNs in the U.S. left nursing during the Covid-19 pandemic without intention of returning to work (4).
- Historically, ***nurses do not leave nursing, they leave their employers*** (9). According to the 2022 NSSRN, 25.7% of RNs left their primary nursing position between December 31, 2021, and the date they responded to the survey in late 2022 or early 2023.
- Further, while there are 4,349,377 actively licensed RNS in the U.S., only 3,459,209 of those licensed are actively employed in nursing (4), leaving 890,168 RNs who are licensed, but not working as RNs. Leading nursing workforce experts argue that there is no shortage of RNs, just a shortage of RNs who are willing to work under current conditions and for current wages (9).
- In **Texas**, in 2022 there were 280,688 licensed RNs (not APRNs) (Raw Data, NSSRNS, 2024). Of those who are licensed RNs, only 226,371 were employed, leaving **54,317 RNs who are licensed and not working.**

Retention Drivers Nationally

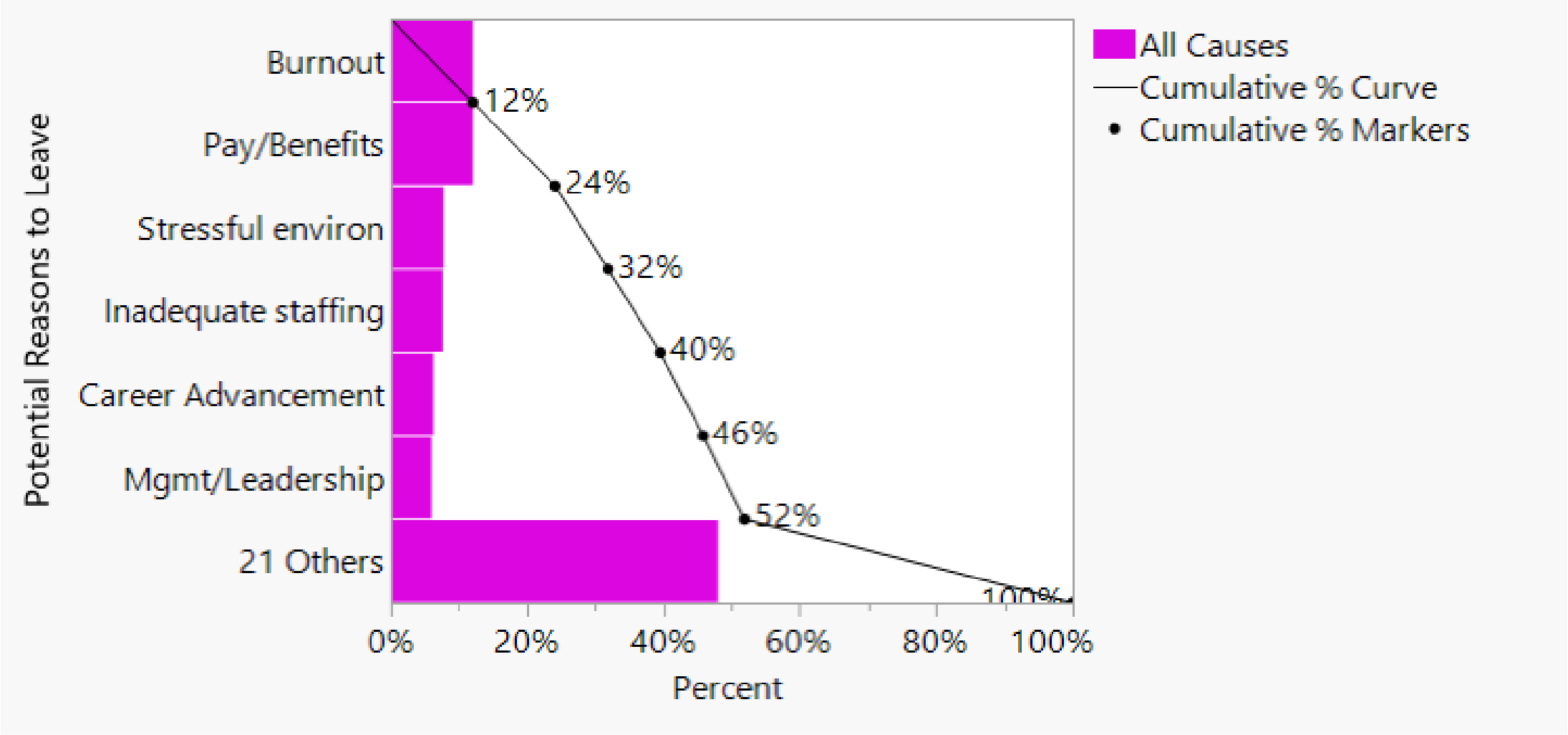
- Nurses may leave their jobs for a number of reasons. **Retirement** was the most common reason given on a national level, followed by **burnout**, a **stressful** working environment, inadequate **staffing**, and lack of good **management** or leadership (4).
- Among retired nurses, 2022 (41%) ended health care employment for reasons other than planned retirement, including **burnout or emotional exhaustion** (1099 [22%]) and **insufficient staffing** (888 [18%]). The age distribution of nurses not employed in health care was similar to that of nurses currently employed in health care, suggesting that a demographically similar, already existing supply of nurses could be attracted back into health care employment.
- Reducing and preventing **burnout**, improving nurse **staffing** levels, and supporting nurses' **work-life balance** (e.g., childcare needs, weekday schedules, and shorter shift lengths) are within the scope of employers and may improve nurse retention. Employers should especially focus on scheduling flexibility (e.g., self-scheduling, a variety of shift lengths, end and start times), mentoring, professional growth, teamwork, and workplace safety (38).

Retention Drivers: Texas (NSSRNS, 2024, Custom Data)

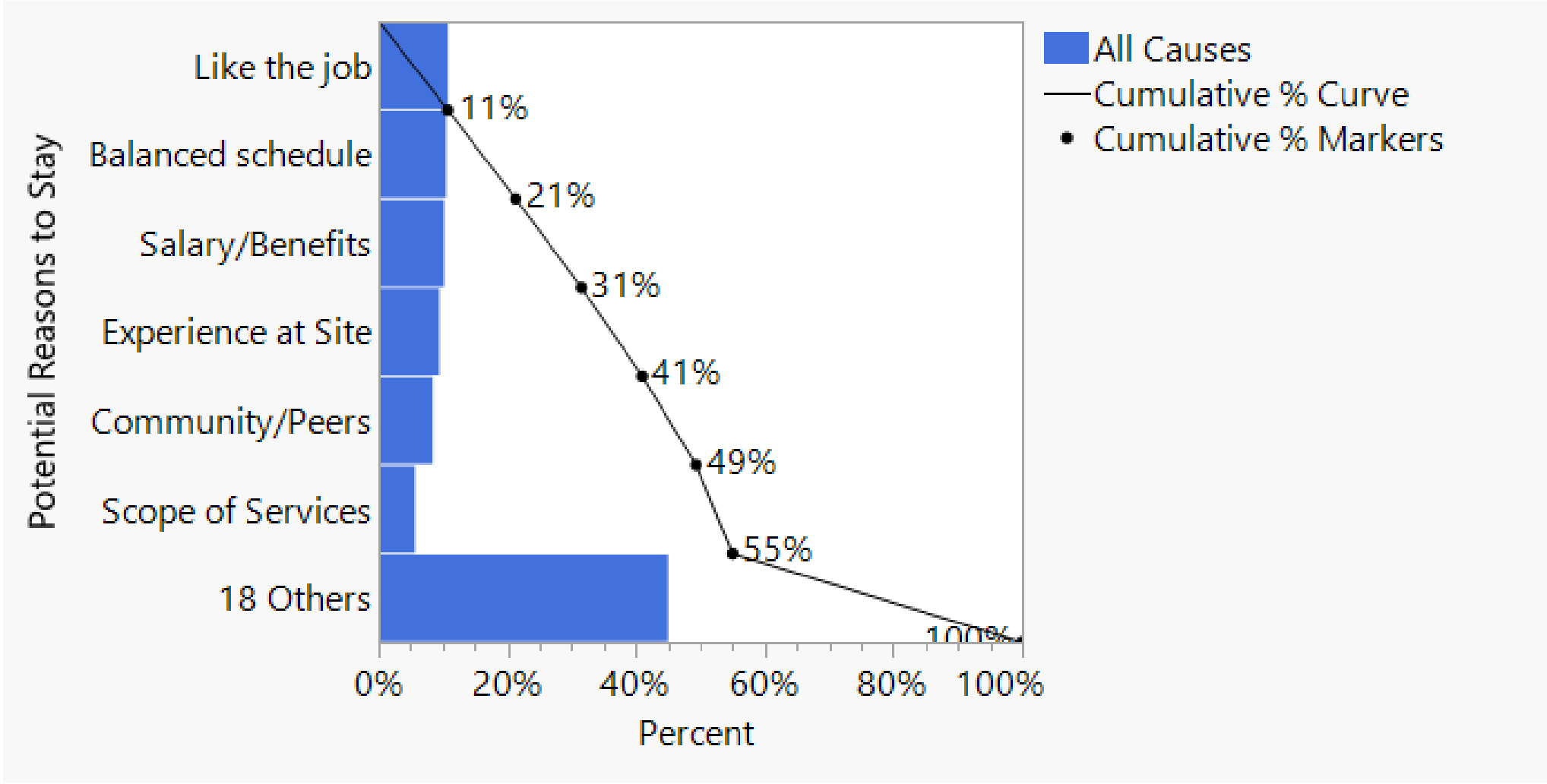
Top Reasons RNs Licensed and Employed in Texas in 2022 Left Their Jobs.



Top Reasons RNs Licensed and Employed in Texas in 2022 Are Thinking About Leaving Their Jobs.



Top Reasons RNs Licensed and Employed in Texas in 2022 Are Staying Employed in Their Jobs.



Summary and Recommendations on RN Retention

- In this report, we focus on current drivers of retaining new nurses working in nursing and not on how to best retain nurses working in any one individual organization.
- Moreover, we focus on what nursing education programs can do to better prepare nursing students to transition to practice and competently face the current realities of nursing practice so that they don't leave nursing at the start of their career.
- The new nurse retention drivers, represent key improvement intervention targets for nursing programs, and include:
  - (1) transition to practice readiness;
  - (2) burnout prevention; and
  - (3) preparedness in emerging and priority nursing practice topics.

Improvement Goals and Fresh Approaches: RN Retention

1. Practice readiness: Retain 90% or more new nurses in nursing in the first year of practice.

a. Partner with clinical settings to create Dedicated Education Units and clinical fellowships to increase opportunities for high quality in-person, hands-on immersion clinical education experiences to accelerate on-boarding, socialization.

b. Integrate competency-based education.

c. Provide clinical preceptor education.

Improvement Goals and Fresh Approaches: RN Retention

2. Burnout prevention: Develop and implement burnout prevention in pre-licensure nursing programs.

a. Integrate National Academy of Medicine well-being and burnout resources into nursing schools.

b. Integrate trauma-informed education into nursing schools.

c. Integrate workplace violence prevention education into nursing schools.

Improvement Goals and Fresh Approaches: RN Retention

3. Improve preparedness for nursing students in emerging and priority nursing practice topics.

a. Communication, teamwork, leadership, management.

b. Techno stress, EPIC training in simulation/EPIC playground.

c. Telehealth and virtual nursing.

d. Artificial Intelligence.

e. Substance use; mental health and disability.

Thank you!

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