

Delaware Healthcare Workforce Update

Timothy E. Gibbs, MPH¹ and Matt McNeill, BS²

1. Executive Director, Delaware Academy of Medicine/Delaware Public Health Association
2. Research Associate, Delaware Academy of Medicine/Delaware Public Health Association

Abstract

Working from data provided by the Delaware Division of Professional Regulation from May 2022 to September 2023, this 16-month update supports a general rebound in active licensing numbers across the Delaware Healthcare industry in professions licensed through the Division of Professional Regulation's DelPros system. This report articulates the types of data analysis currently available through the data and research initiative of Delaware Health Force, provides a high-level overview of the data, and offers preliminary recommendations based on the data. Overall, the healthcare workforce in Delaware shows a steady rebound, with many license types appearing to reach new highs. There are some areas in which continued loss of active licenses is of concern.

Introduction

Delaware Health Force (DHF) is a public-private partnership between the State of Delaware and the Delaware Academy of Medicine / Delaware Public Health Association (Academy/DPHA). DHF is the outgrowth of work started by the Academy/DPHA and the Delaware Health Sciences Alliance (DHSA) in 2019. At inception, DHF was funded, in part, by the Delaware Health Care Commission (DHCC), the DHSA, and Delaware INBRE.

In 2022, DHF received funding from the State of Delaware as a distribution from the American Rescue Plan Act (ARPA). That funding supported four initiatives, of which the Core Data and Research component of DHF is one. The other three initiatives include Delaware Mini Medical School, a graduate medical education expansion initiative, and an interest-free student loan program.

Methods

This report examines changes in the healthcare workforce over the 16-month period from May 2022 to September of 2023 based on data from the State of Delaware's Division of Professional Regulation's (DPR) licensing system called DelPros (Delaware Professional Regulation Online Service). DelPros data exchange is authorized under a Data Use Authorization (DUA) between DPR and the Academy/DPHA. Core to the DUA is that no individual record information is shared under any circumstances with any other party without the express permission of DPR. That said, most of the information is searchable by the general public at https://DelPros.delaware.gov/OH_HomePage.

The DelPros system is seated within the Salesforce cloud-based CRM (Customer Relationship Management) architecture. This robust, highly secure architecture is used by the State to maintain licensing records on many types of healthcare providers licensed to practice in Delaware. It is not a charge of the Division of Professional Regulation to aggregate additional information for each licensee, or to analyze the data based on co-variables including geolocation,

population needs, chronic disease expression, and other factors. Those tasks are performed by the DHF core data and research team in collaboration with Agile Cloud Consulting, the Delaware Health Information Network, Deloitte Digital, and Tech Impact's Data Innovation Lab.

License data from the DelPros system comes with a variety of fields as show in Table 1.

Table 1. License Data from the DelPros System

Account	Account ID	License	License ID
	Account Name		MUSW* APPLICANT
	Created Date		MUSW PRIMARY LICENSEE
	Last Modified Date		LICENSEE NAME
Contact	Contact ID		FACILITY NAME
	Account ID		BOARD
	Email		NAME
	Phone		MUSW TYPE
	Gender		LICENSED BY
	Deceased		MUSW STATUS
	Birth Year		NON DISCIPLINARY ACTION – Field not used
	Deployment Start Date		MUSW EXPIRATION DATE
	Deployment End Date		MUSW RENEWAL DATE
	STILL SERVING IN MILITARY?		EFFECTIVE DATE
	Created Date		MUSW ISSUE DATE
	Last Modified Date		MED SPECIALTY
	First Name		IMLC SPL
	Last Name		Created Date
	Email		Last Modified Date
License Parcel	Record ID	Specialty	Record ID
	MUSW LICENSE2		LICENSE
	PARCEL CITY		SPECIALTY
	PARCEL STATE		ARE YOU BOARD CERTIFIED
	PARCEL ZIP CODE		ARE YOU BOARD ELIGIBLE
	PHYSICAL ADDRESS		LICENSE R.BOARD
	MAILING		Created Date
	PRACTICE LOCATION		Last Modified Date
	OTHER		

* MUSW is a prefix from Clariti software which has no meaning in this context and can be ignored

BOARD
MUSW LICENSE2 R.BOARD
Created Date
Last Modified Date

This data is then supplemented with a variety of other fields as shown in **Table 2**. It should be noted that not all fields shown are relevant to all license types.

Table 2. Supplemental Data Gathered by DHF Core Data and Research Team*

Specialization	Education
AAMC Specialty	Undergraduate School
ACGME Medical Specialty	Undergraduate State
	Year Graduated
National Provider Index	Medical School
NPI Number	Medical School State
NPI Taxonomy	Year Graduated
NPI Number Enumeration Date	Residency Location
NPI Last Update Date	Residency Type
	Residency State
CMS Medicare related	Additional Education/Degrees
PECOS ID	Additional Degree(S)
Accepts Medicare/Medicaid	Additional Degree School
Accepts Other Insurance	Additional Degree State
Is A Concierge Provider	
Other Demographics	Located in Health Professional Shortage Area?
Race/Ethnicity	Primary Care
Language(s) Spoken	Dental Health
Country of Birth	Mental Health

*At the time of writing this report, there is still much data gathering and verification to be done in Table 2 fields. In addition, not all of these fields are relevant to all degree types. For instance, AAMC Specialty (American Association of Medical Colleges) and ACGME Medical Specialty (American College of Graduate Medical Education) information is only relevant to physicians (both D.O. and M.D.).

Data is exported from DelPros to DHF where it is imported into Salesforce.org. This is accomplished by SFTP, and in the future will be handled by a Salesforce Connector which provides seamless integration of data across system boundaries. For geographic analysis we use Geopointe and ArcGIS.

Current Data Analytic Capabilities

Three types of data analysis can be undertaken with the data to varying degrees based on the completeness of data records: descriptive analysis, comparative analysis, and predictive analysis.

Descriptive Analysis

- Number of licensed providers of a particular type
- Age (and therefore retirement likelihood)
- Gender
- Degree
- Specialization (if applicable)
- Location by zip code
- School attended (for physicians – partial complete)
- Undergrad school attended (for physicians – partial complete)
- DIMER – yes/no
- Rural designation

Comparative Analysis

- Providers to population ratios
- Specialists to chronic disease ratios
- Change in provider numbers by license type
- Degree advancement – for instance, resident to fully time practice physician, or stacking of nursing degrees
- Providers and provider type against most publicly available census data

Predictive Analysis

- We need a minimum of three data points over time with which to work. In the first quarter of 2024 we will have collected enough data over time to begin predictive analytics.
- We will be prepared to start showing trends (and therefore be predictive) after we have the fourth data point (monolithic data upload) in January 2024.
- We CAN perform simple linear regression analysis, and therefore identify outlier datapoints from a statistical standpoint using the sorting method, data visualization method, z scores, or interquartile range method.

There are limitations and key basic assumptions regarding any analysis run by DHF. First, we accept data from the DelPros system as our source of truth and do not double check it for accuracy which would be out of scope for this work.

Next, the licensing cycle of boards is not consistent across the healthcare workforce and can result in cyclic trends that would otherwise appear to represent shortages and surpluses from time period to time period.

Except in nursing, active license status does not imply that a practitioner is seeing patients. To maintain an active nursing license in Delaware, nurses must complete 30 hours of continuing education (CE) every two years. This includes three hours of CE related to substance abuse. Nurses must also show that they have practiced at least 1,000 hours in the last five years or 400 hours in the last two years.¹ Most other license types renew on a biennial basis, but only require continuing education, not practice hours. In many categories of licensed healthcare practitioners, this leads to much higher numbers of active licenses than is reflective of actual “practicing” clinicians and healthcare professionals.

Concierge physicians (also called membership medicine, cash-only practice, and direct care) are those practitioners who are paid directly by patients, not by third parties. We are making every effort to determine, on an ongoing basis, which providers are concierge practitioners.

At this time, we do not have an effective grasp on which insurance coverages are accepted by which practitioners, however we do have current information from CMS regarding practices who are signed up to receive Medicaid/Medicare.

Users of the DelPros system do not consistently note their practice location versus the address they use for their license. This creates bias in the resulting maps, showing provider clustering by zip code around medical facilities. We are working to address this.

Results

From a high-level view, “rebound” in healthcare practitioners licensing is substantiated by the data. In other words, after a period of time where active licenses in healthcare decreased, active licenses are returning to, and in some cases exceeding, pre-pandemic levels.

Interstate Compacts are a legally binding agreement between two or more states. They carry the force of statutory law and allow states to perform a certain action, observe a certain standard, or cooperate in a critical policy area. In the healthcare field, this is the vehicle by which healthcare providers licensed in another state can legally practice in Delaware. For instance, the Nurse License Compact (NLC) works by requiring state nursing boards to participate in a national database, Coordinated Licensure Information System (CLIS), or a Nurses License Verification database. This allows states (like Delaware), to share information for verification of nurse licensure, discipline, and practice privileges.² These compacts allow practitioners to hold one multistate license with the privilege to practice in other compact states.

The following pages are comprised of data, diagrams, mapping, and other relevant data. Beneath the data content is a discussion of the data. DelPros encompasses twenty boards of practice, and one overarching advisory committee. These 21 elements are listed in alphabetic order with additional relevant data interwoven throughout (Table 3). Several boards encompass more types of licenses than can be portrayed in one data content component, notably the Board of Medical Licensure and the Board of Nursing.

Table 3. Boards of Practice

Figure	Board or Related Data Element
1	Board of Chiropractic

2	Board of Dentistry and Dental Hygiene
3	Board of Dietetics and Nutrition
4	Board of Funeral Services
5	Board of Massage and Bodywork
6	Board of Medical Practice, Physician MD Distribution by Zip Code
7	<i>Geographic Distribution of Physician DOs and Physician Assistants</i>
8	<i>Physician Specialty by AAMC Taxonomy</i>
9	<i>Geographic Distribution of Pediatric Physicians and Family Medicine Physicians</i>
10	<i>Geographic Distribution of Psychiatry Physicians and Internal Medicine Physicians</i>
11	<i>Board of Medical Practice: Paramedics, Genetic Counselors, and Respiratory Practitioners</i>
12	<i>Geographic Distribution of Genetic Counselors and Paramedics</i>
13	Board of Mental Health
14	Board of Mental Health and Chemical Dependency Professionals
15	Board of Nursing
16	<i>Registered Nurses and Licensed Practical Nurses</i>
17	<i>Certified Nursing Specialists</i>
18	Board of Nursing Home Administrators
19	Board of Occupational Therapy Practice
20	Board of Examiners in Optometry
21	Board of Pharmacy
22	Board of Physical Therapists and Athletic Trainers
23	Board of Podiatry
24	Board of Examiners of Psychologists
25	Board of Speech Pathologists, Audiologists, and Hearing Aid Dispensers
26	<i>Geographic Distribution of Audiologists and Speech/Language Pathologists</i>
27	Board of Social Work Examiners
28	<i>Geographic Distribution of Bachelor of Social Work and Master of Social Work Practitioners</i>
29	<i>Geographic Distribution of Licensed Clinical Social Workers</i>
30	Board of Veterinary Medicine
31	Controlled Substance Advisory Committee

All data, graphs, and maps are based on data from May 2022 to August 2023, a period of 14 months. The combination of net loss over the reporting period plus the retirement eligible number is reflected in the red flag at the top right of the graphic, indicating opportunity for improvement/renewal.

Board of Chiropractic

As shown in Figure 1, there are a total of 383 licensed chiropractors in Delaware, of which 247 are men and 103 are women. Currently, gender selection is not a required field. The recommendation is to make this field required, with contemporary updates to gender selection. Based on Social Security Administration age data, 37 of them are full retirement age eligible.

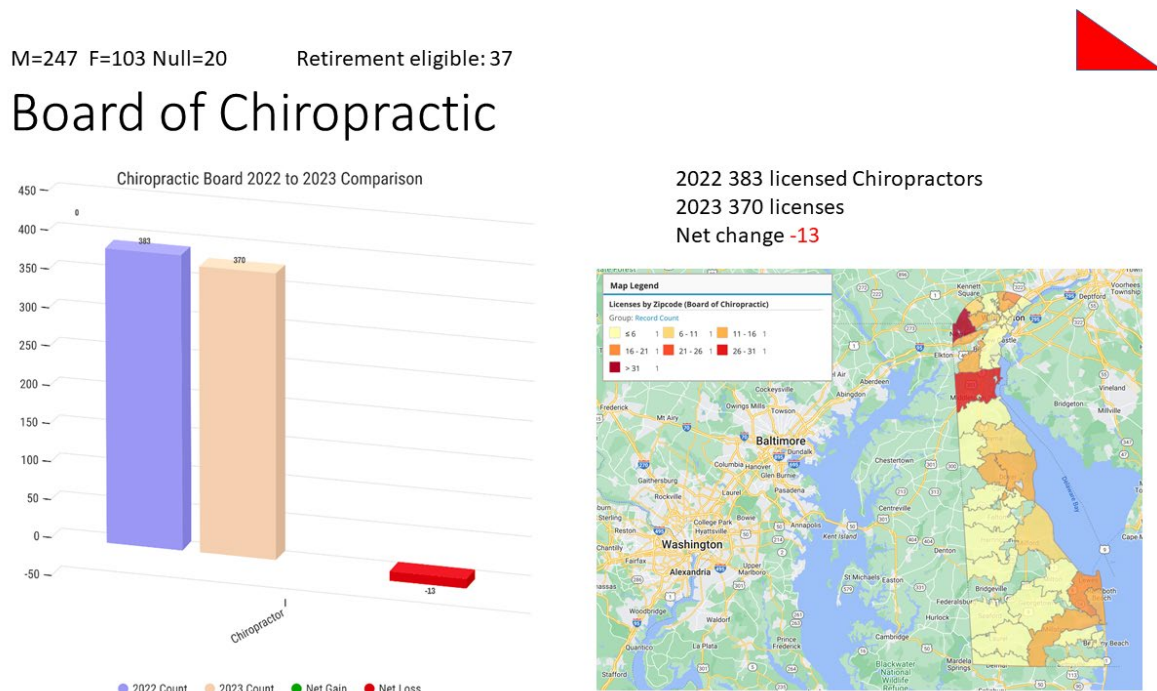
At this time, the Board of Chiropractic does not distinguish between licensed and seeing patients versus maintaining a license but not seeing patients. As a result, the number 383 may not represent the actual number of chiropractors seeing patients in Delaware. For this board and all other boards with the exception of the Board of Nursing, the recommendation has been made to request practice status at the time of license renewal to address this data deficiency.

Another recommendation common to all boards is to ask practitioners to specify practice location(s) separately from the postal address they use when obtaining or renewing their license. Based on November 2023 data from CMS we see that many providers who accept Medicare operate from multiple sites. This aids in distinguishing between license address versus practice address, and while the CMS data is enlightening, is only covers a portion of the total healthcare workforce.

During the period reviewed, there was a net loss of 13 active licenses (-3.3943%). Chiropractor licenses renew in June of even years.

As shown on the map, there is a high concentration of chiropractors in New Castle County than there are in Kent and Sussex where there are some zip codes with few or no practitioners.

Figure 1. Board of Chiropractic



Board of Dentistry and Dental Hygiene

Practitioners licensed under the Board of Dentistry and Dental Hygiene cover a variety of degree types including DDS, DMD, and dental hygienists. Focusing on dentists, there are a total of 565 licensed dentists in Delaware, of which 353 are men and 219 are women (Figure 2). Based on Social Security Administration age data, 109 of them are full retirement age eligible.

During the period reviewed, there were 856 dental hygienists of which 833 are women, and 17 are men. Based on Society Security Administration age data, 33 of them are retirement eligible.

At this time, the Board of Dentistry and Dental Hygiene does not distinguish between licensed direct patient care, versus maintaining a license but not seeing patients. As a result, the number 539 may not represent the actual number of dentists seeing patients in Delaware, and the number 856 dental hygienists may be high as well.

For dentists during the period reviewed, there was a net addition of 26 active licenses (+4.824%). However, there was a net loss of 20 dental hygienists (-2.336%). All Board of Dentistry and Dental Hygiene licenses renew in May of even years.

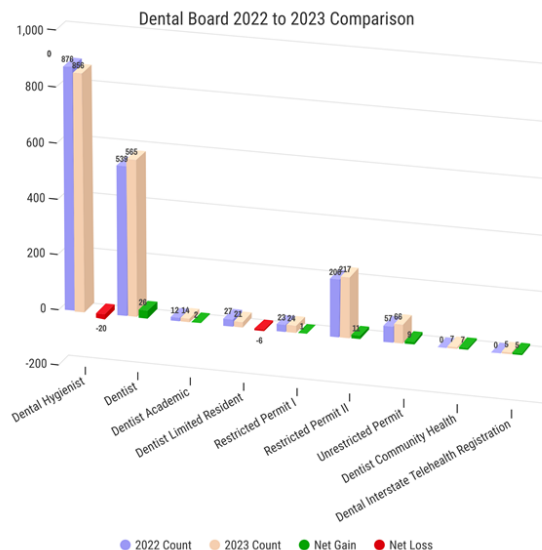
As shown on the map, there is a higher concentration of dentists in New Castle County than there are in Kent and Sussex where there are some zip codes with few or no practitioners. In particular, western Sussex County appears to have a continuing shortage of dental providers.

Figure 2. Board of Dentistry and Dental Hygiene

Dentists M=353 F=219 Null=7 Retirement Eligible: 109

Dental Hygienists M=17 F=833 Null=6 Retirement Eligible: 33

Board of Dentistry and Dental Hygiene



2022 876 licensed **dental hygienists**
 2023 856 licenses
 Net change **-20**

2022 539 licensed **dentists**
 2023 565 licenses
 Net change **+26**

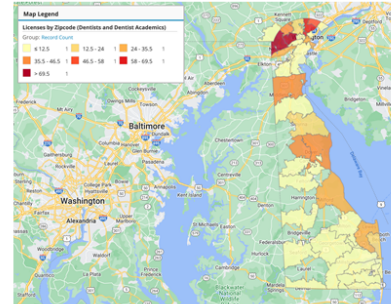
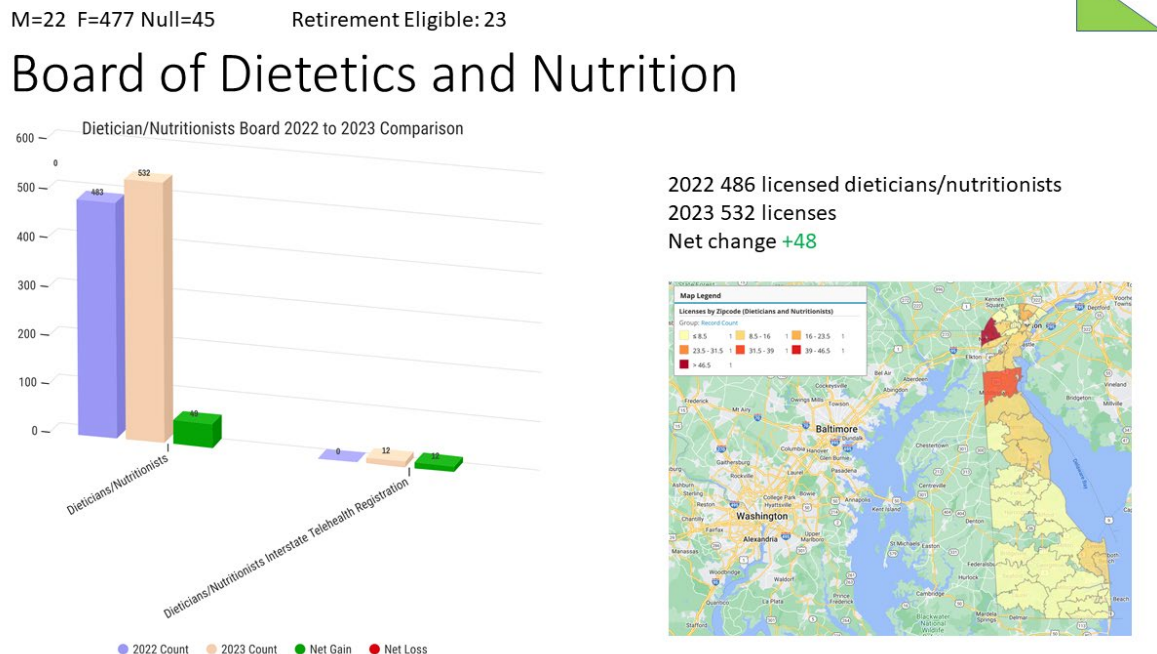


Figure 3. Board of Dietetics and Nutrition



Board of Funeral Services

The Board of Funeral Services licenses both individuals and facilities. There is a total of 185 licensed funeral directors in Delaware, of which 158 are men and 65 are women (Figure 4). Based on Social Security Administration age data, 48 of them are full retirement age eligible.

At this time, the Board of Funeral Services does not distinguish between licensed and practicing, versus maintaining a license but not practicing. As a result, the number 185 may not represent the actual number of funeral directors in Delaware.

During the period reviewed, there was a net loss of seven active funeral director licenses (-3.784%). However, there was an increase of three additional funeral resident interns. Funeral director and establishment licenses are renewed in August of even years.

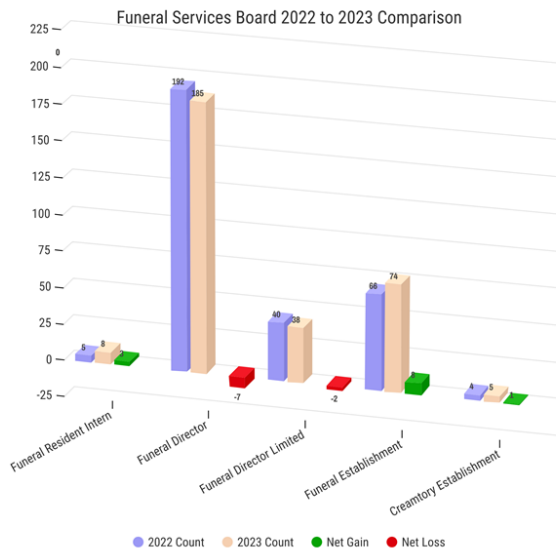
As shown on the map, there is a population appropriate distribution of funeral directors throughout the State, and the number of licensed Funeral Establishments increased by 8 (+3.784%).

Figure 4. Board of Funeral Services

M=158 F=65 Null=7

Retirement Eligible: 48

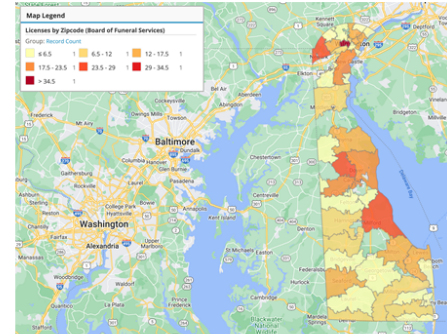
Board of Funeral Services

2022 192 licensed **Funeral Directors**

2023 185 licenses

Net change **-7**2022 66 licensed **Funeral Establishments**

2023 74 licenses

Net change **+8**

Board of Massage and Body Work

The Board of Massage and Body Work licenses both establishments and individuals. There is a total of 630 licensed massage therapists and 507 massage technicians in Delaware, of which 154 are men and 917 are women (Figure 5). Based on Social Security Administration age data, 42 of them are full retirement age eligible.

At this time, the Board of Massage and Body Work does not distinguish between licensed and practicing, versus maintaining a license but not practicing. As a result, the numbers shown may not represent the actual number of massage therapists and technicians in Delaware. Licenses renew in August of even years.

For Massage therapists during the period reviewed, there was a net loss of 33 active licenses (-5.238%). However, there was an increase of 54 addition massage technicians equaling an increase of 11.921%. The loss of over 10% of the workforce is concerning. Massage practitioners and establishment licenses are renewed in August of even years.

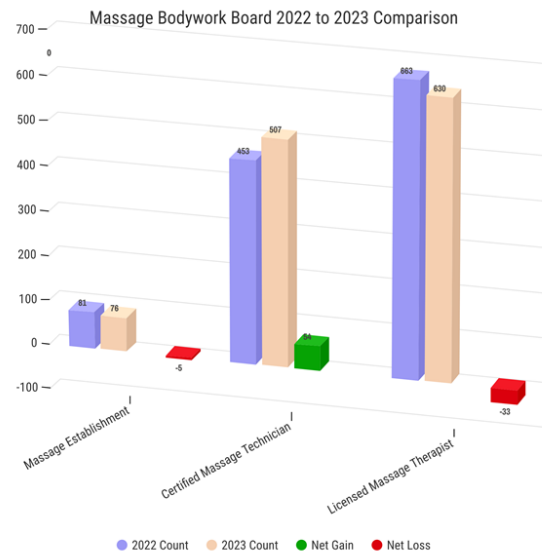
As shown on the map, there is a population appropriate distribution throughout the State.

Figure 5. Board of Massage and Body Work

M=154 F=917 Null=66

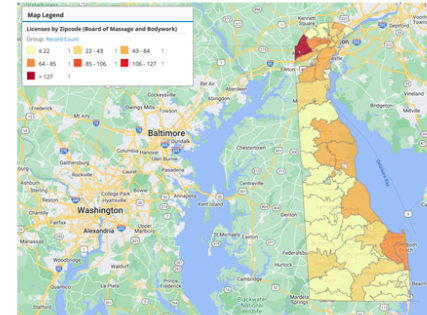
Retirement Eligible: 42

Board of Massage and Body Work



2022 453 licensed **Message Technicians**
 2023 507 licenses
 Net change **+54**

2022 663 licensed **Message Therapists**
 2023 630 licenses
 Net change **-33**



Board of Medical Licensure and Discipline

The Board of Medical Licensure and Discipline is the second largest board in the Division of Professional Regulation having to do with healthcare (the largest is the Board of Nursing). Due to the large number of license types administered by this board, licensing occurs in both odd and even years for different license types.

At this time, the Board of Medical Licensure and Discipline does not distinguish between licensed and practicing, versus maintaining a license but not practicing. As a result, the numbers shown may not represent the actual number of licenses of any given type in Delaware. That fact notwithstanding, there was a significant increase in MDs and DOs during the reporting period, which was joined by most other license types issued by this board.

The reporting period ended with 1,145 physician DO licenses, an increase of 154 licenses (+15.657%). Physician MD licenses increased to 6,181, an increase of 681 licenses (+12.382%).

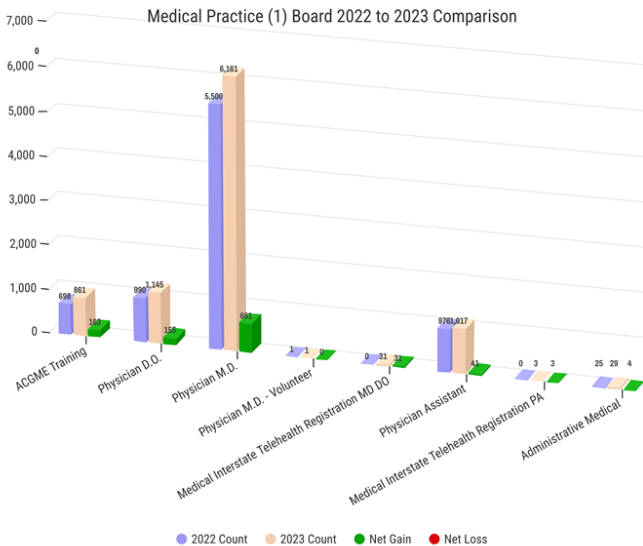
There is a total of 1,145 licensed physician DOs and 6,181 physician MDs in Delaware, of which 4,350 are men and 2,779 are women (Figure 6). Based on Social Security Administration age data, 874 of them are full retirement age eligible.

As shown on the map, there is a population appropriate distribution throughout the State, although the reader should remember that this is all physicians without respect to their specialty. Areas of Kent and Sussex Counties remain primary care shortage areas, as well as other select designated areas including correctional facilities. Figure 6 shows overall numbers and a map specific to physician MD distribution by zip code.

Figure 6. Board of Medical Practice, Physician MD Distribution by Zip Code

M=4350 F=2779 Null=178 Retirement Eligible: 874

Board of Medical Practice



2022 990 licensed **Physician D.O.**
2023 1,145 licenses
Net change **+154**

2022 5500 licensed **Physician M.D.**
2023 6,181 licenses
Net Change **+681**

2022 976 licensed **Physician Assistants**
2023 1,017 licenses
Net Change **+41**

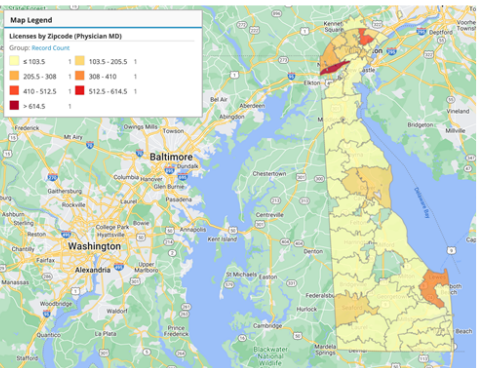
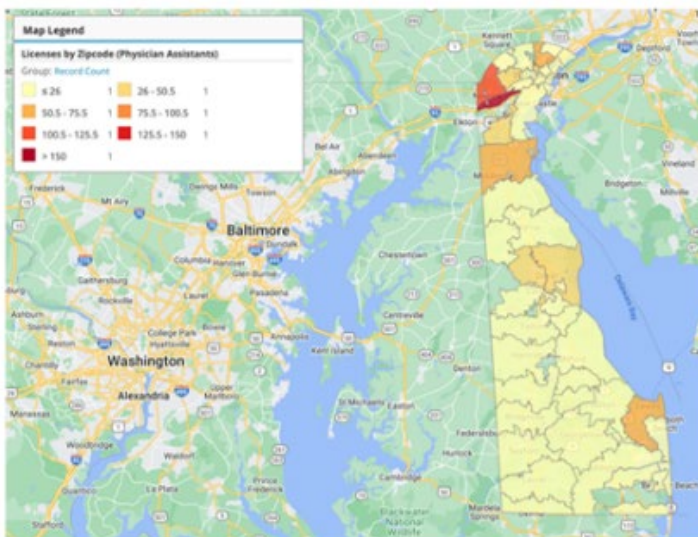
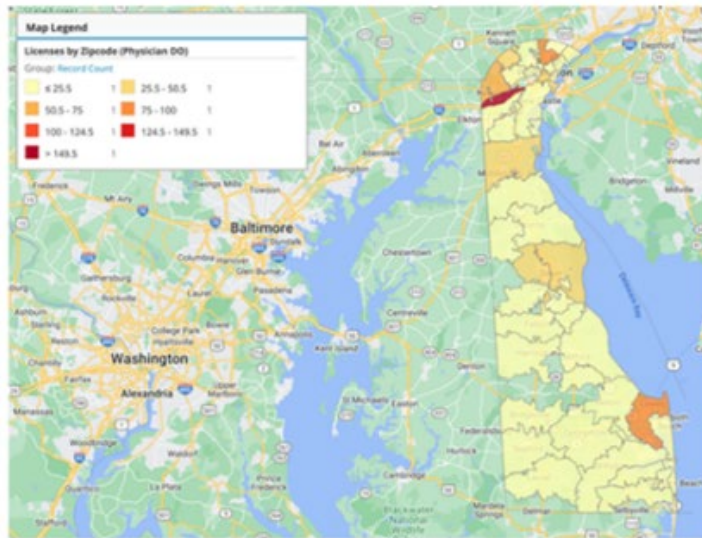


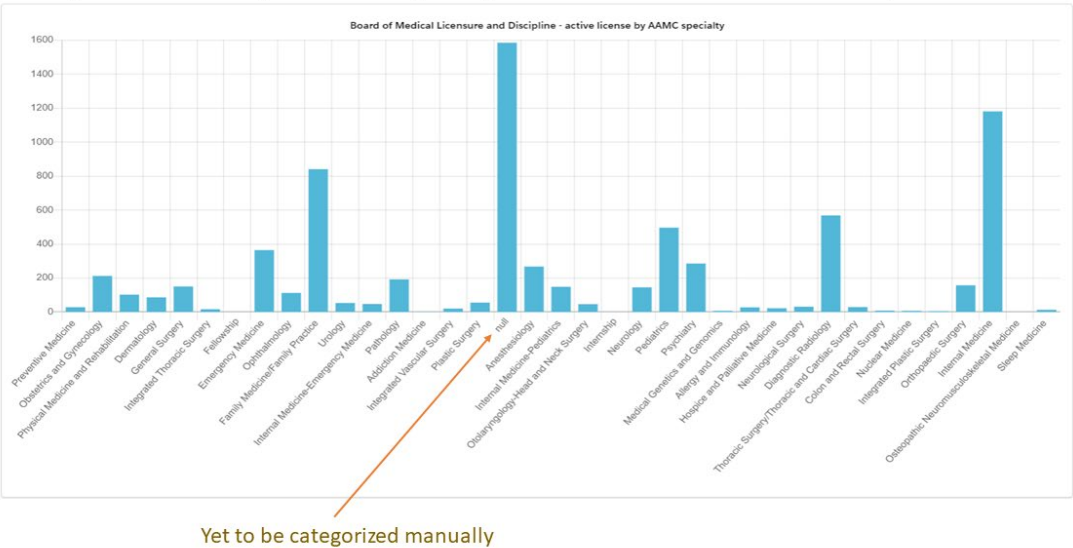
Figure 7 shows the geographic distribution of physician DO and physician assistants by zip code. Figure 7. Geographic Distribution of Physician DOs (top) and Physician Assistants (bottom)



One of the greatest challenges with the data collection method of the current licensing system is in determining what specialty a physician is practicing in Delaware. A recommendation has been made to amend the method of data collection to provide a picklist of AAMC taxonomy-based specialties to address this data deficiency going forward. This is essential information for understanding ratios of specialists to population needs. As a result, DHF researchers have been individually reviewing each of the over 7,300 physician license records and doing deep research to determine specialty type. At the writing of this report there were still close to 1,600 records to be researched (Figure 8).

Figure 8. Physician Specialty by AAMC Taxonomy

Physician Specialty by AAMC Taxonomy



Internal medicine specialists are followed by family medicine, diagnostic radiology, pediatrics, emergency medicine, and psychiatry in order of license numbers.

A 2024 undertaking of DHF and its partner organizations will be to create license benchmarks which directly relate to current and expected population numbers and healthcare needs.

Figure 9 shows the geographic distribution of pediatric physicians and family medicine physicians, and Figure 10 shows psychiatry physicians, and internal medicine physicians. Based on this visual data, it appears that significant portions of Kent and Sussex Counties need additional pediatricians and psychiatry physicians to obtain better coverage and maintain a healthy ratio of providers to population.

Figure 9. Geographic Distribution of Pediatric Physicians (left) and Family Medicine Physicians (right)

Board of Medical Practice Maps, Continued

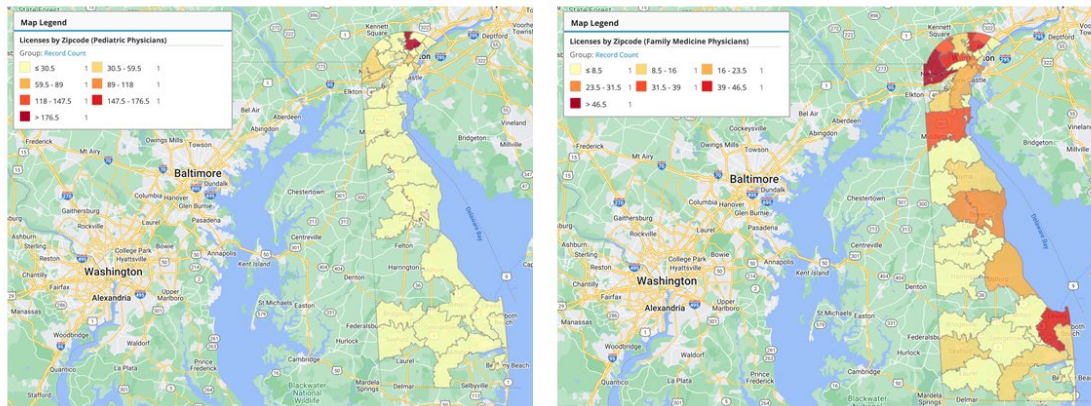
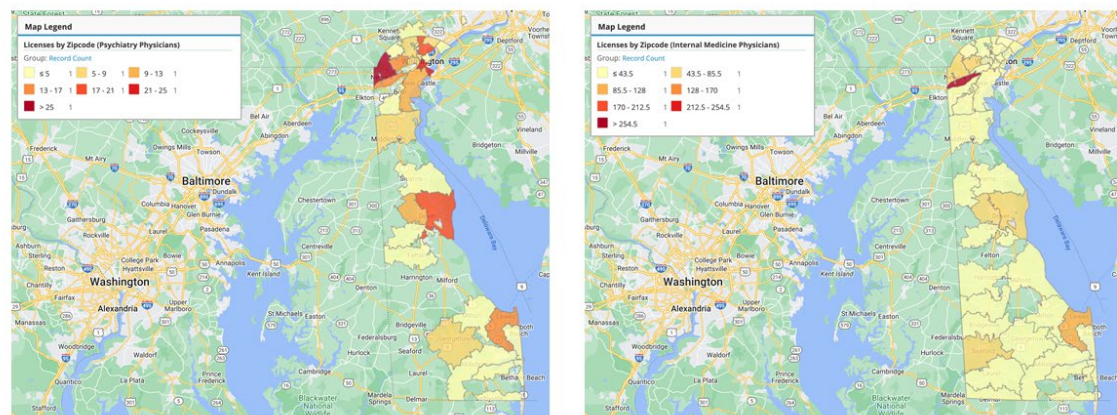


Figure 10. Geographic Distribution of Psychiatry Physicians (left) and Internal Medicine Physicians (right)

Board of Medical Practice Maps, Continued

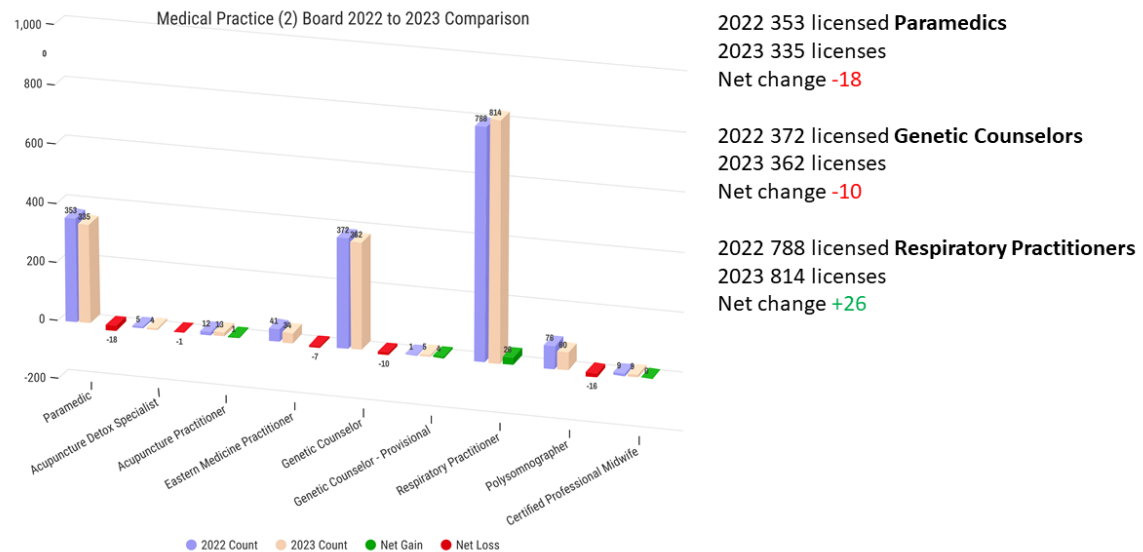


There was a loss of 18 paramedics (-5.373%, Figure 11). Similarly, the number of genetic counselors decreased by 10 licenses (-2.762%). On the other hand, there was a 20 license increase in respiratory practitioners (+3.299% increase).

Figure 11. Board of Medical Practice: Paramedics, Genetic Counselors, and Respiratory Practitioners



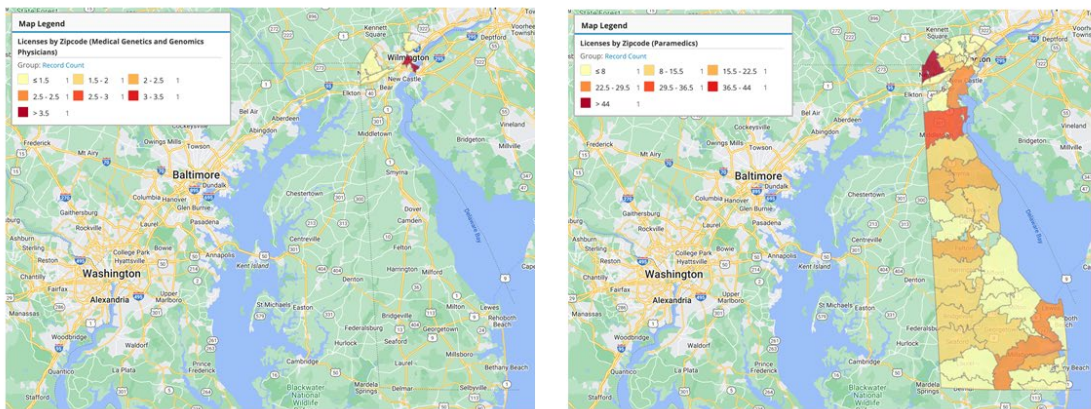
Board of Medical Practice



Zip code mapping (Figure 12) shows the distribution of genetic counselors, with the major concentration in northern New Castle County. Paramedics, on the other hand, are more evenly distributed in relation to the population density.

Figure 12. Geographic Distribution of Genetic Counselors (left) and Paramedics (right)

Board of Medical Practice Maps, Continued



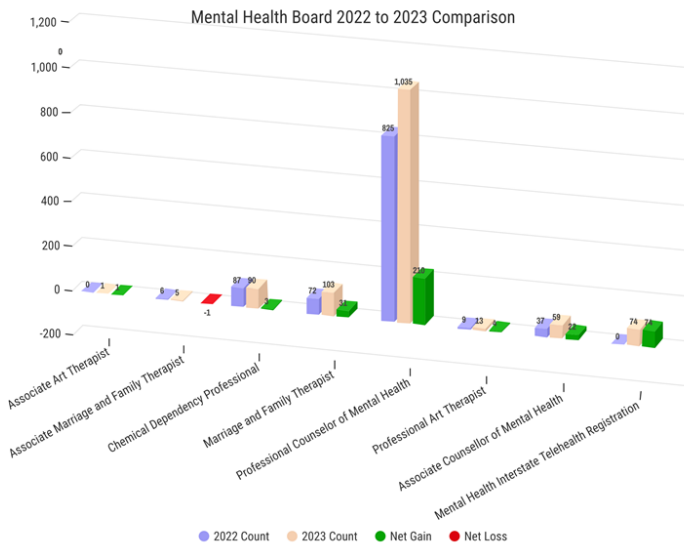
Board of Mental Health

The Board of Mental Health oversees eight license types (Figure 13). Highlights include the addition of 210 professional counselors of mental health (+25.455%). The number of chemical dependency professionals also increased by 3 (+3.445%, Figure 14).

Figure 13. Board of Mental Health

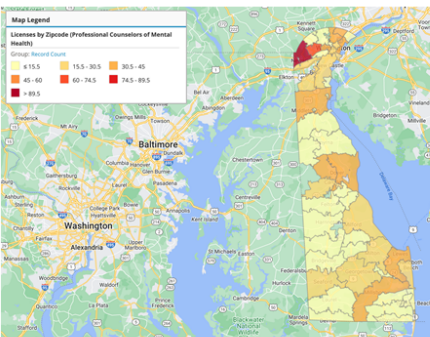
M=216 F=1059 Null=105 Retirement Eligible: 118

Board of Mental Health



2022 87 licensed **Chemical Dependency Prof.**
2023 90 licenses
Net change +3

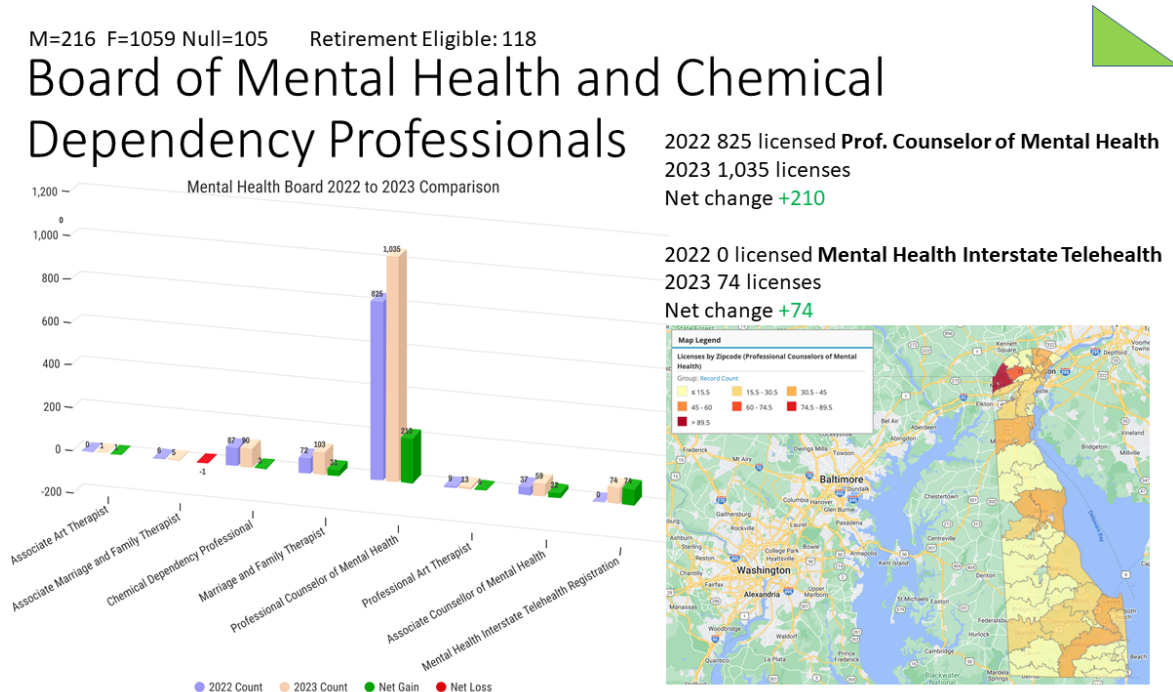
2022 825 licensed **Prof. Counsellor of Mental Health**
2023 1,035 licenses
Net change +210



Please note the addition of Mental Health Interstate Telehealth Registration. Interstate telehealth registration requires a health care provider to be licensed in a state other than Delaware and to

have a healthcare provider-patient relationship established. The provider must also be currently licensed in good standing in all states where they are licensed.

Figure 14. Board of Mental Health and Chemical Dependency



Board of Nursing

The Board of Nursing represents the single largest component of Delaware's healthcare workforce with 28,749 practitioners licensed across 30 license types. Of that total, 25,797 are women and 2,952 are men, with 1,031 nurses being at Social Security Administration full retirement age (Figure 15).

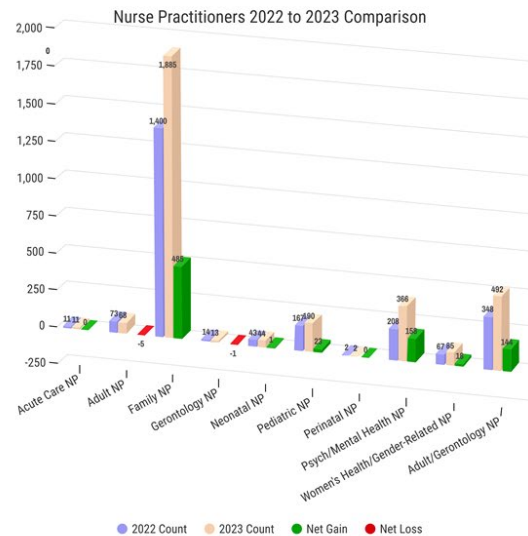
In the reporting period, there was an addition of 485 family nurse practitioner licenses, or a very significant 34.643% increase. Similarly, the number of adult/gerontology nurse practitioners increased by 144 licenses (+41.379%). These two increases represent two of the highest workforce improvements during the reporting period.

As with the Board of Medicine Licensure, various types of nursing licenses are renewed in both even and odd years. It is important to note that to be licensed as a nurse in Delaware, there are minimum patient contact hour requirements.³ As a result, the numbers shown below are accurate counts of nurses seeing patients in Delaware.

Figure 15. Board of Nursing

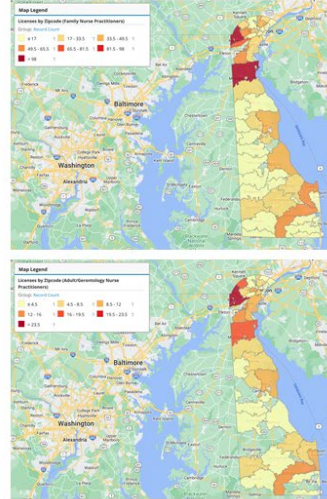
M=2952 F=25797 Null=190 Retirement Age: 1,031

Board of Nursing



2022 1,400 licensed **Family Nurse Practitioners**
 2023 1,885 licenses
 Net change **+485**

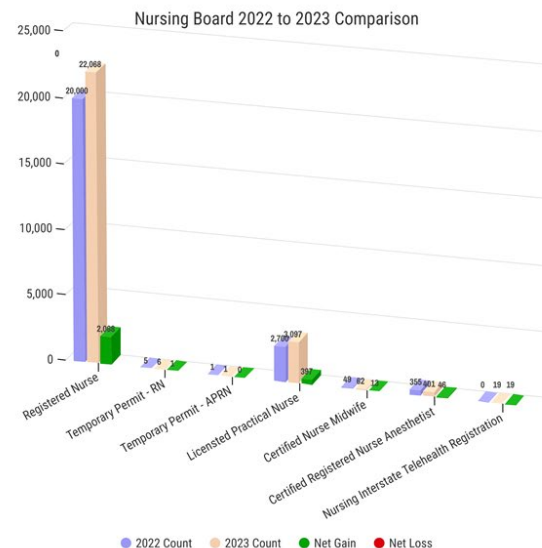
2022 348 licensed **Adult/Gerontology Nurse Practitioners**
 2023 492 licenses
 Net change **+144**



As seen in Figure 16, registered nurses (RN) and licensed practical nurses (LPN) both enjoyed significant increases as well. RNs licenses increased by 2,068 (+10.34%). LPN license numbers increased by 397 (+14.704% increase).

Figure 16. Registered Nurses and Licensed Practical Nurses

Board of Nursing



2022 20,000 licensed **Registered Nurses**
 2023 22,068 licenses
 Net change **+2068**

2022 2,700 licensed **Licensed Practical Nurses**
 2023 3,097 licenses
 Net change **+397**

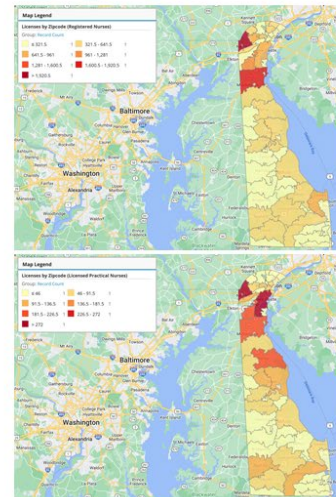
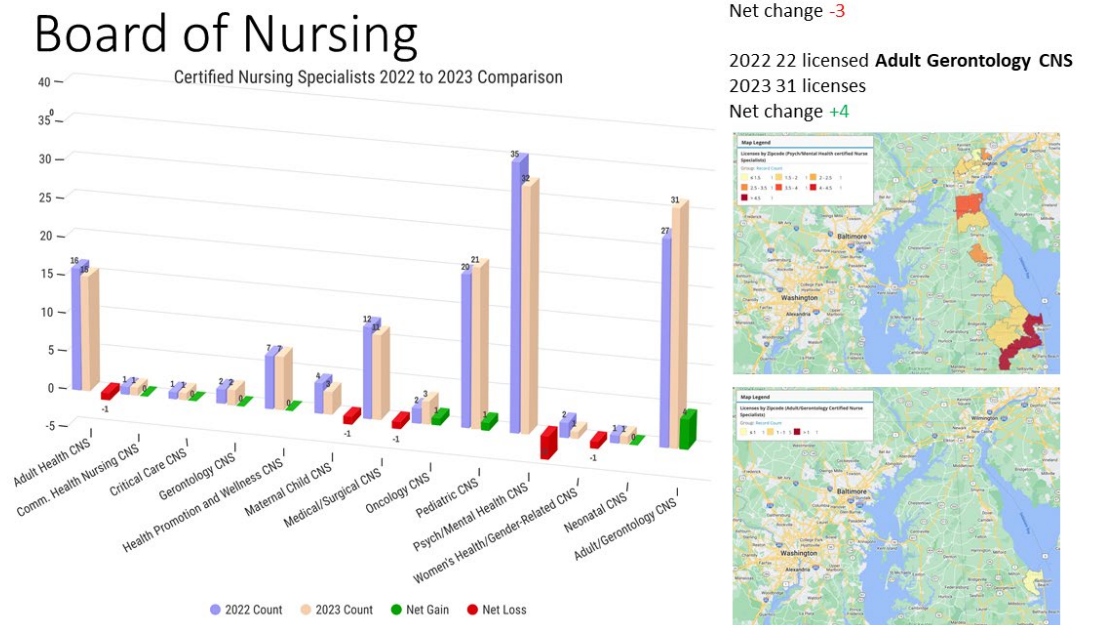


Figure 17 focuses on all types of certified nursing specialists (CNS). The numbers of Nurse CNS licenses are relatively small across all types, with psych/mental health CNS and adult gerontology CNS having the largest numbers of licenses.

Figure 17. Certified Nursing Specialists



Board of Nursing Home Administrators

The Board of Nursing Home Administrators represents one of the numerically smaller license types in Delaware. As such, small decreases or increases results in large percentage differences (Figure 18).

During the reporting period there was a loss of 11 licenses or 6.627%. As previously reported, nursing homes were severely impacted by the pandemic at a time when the population needs them more than ever as we age into the type of care those facilities provide.

Figure 18. Board of Nursing Home Administrators

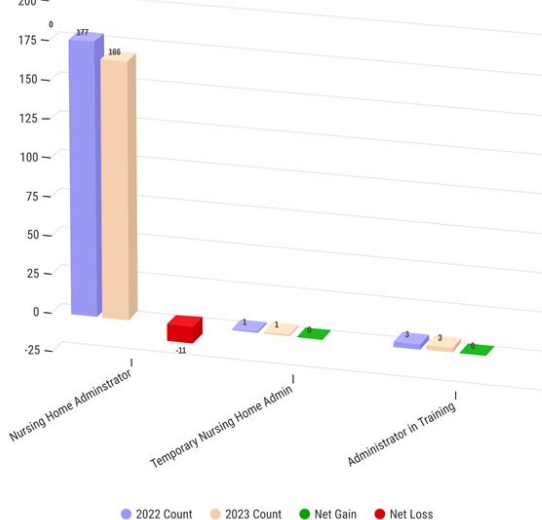
M=62 F=105 Null=3

Retirement Eligible: 14



Board of Nursing Home Administrators

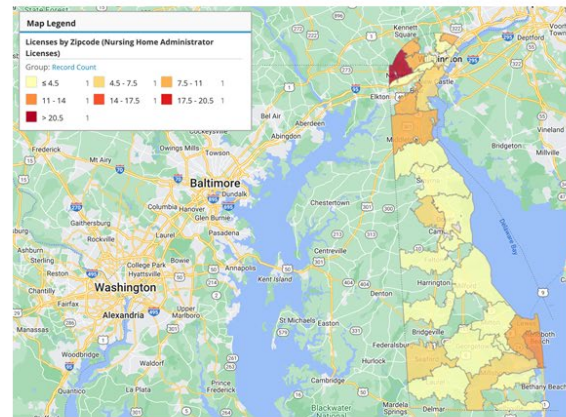
Nursing Home Administrators Board 2022 to 2023 Comparison



2022 177 licensed **Nursing Home Administrators**

2023 166 licenses

Net change **-11**



Board of Occupational Therapy Practice

The Board of Occupational Therapy Practice (Figure 19) experienced losses in both license types they administer. Thirty-one occupational therapy licenses were lost during the reporting period equaling a 3.969% decrease. Sixteen occupational therapy assistant licenses were lost (-4.52%). Of the 781 active licenses, 10 are Social Security Administration full retirement age.

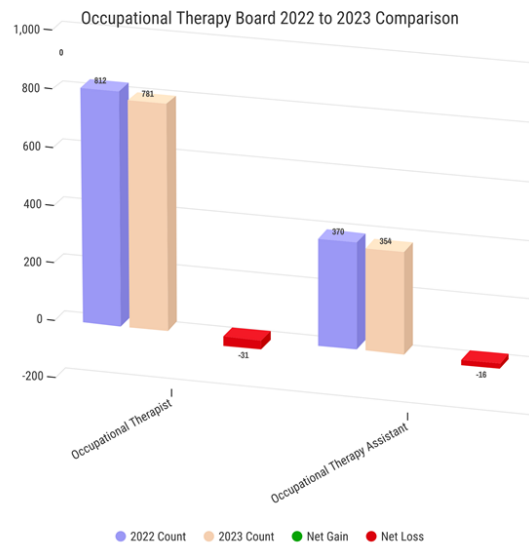
OT licenses renew in July of even years, and it will be informative to see what happens at that renewal window.

Figure 19. Board of Occupational Therapy Practice

M=93 F=949 Null=93

Retirement Eligible: 10

Board of Occupational Therapy Practice

2022 812 licensed **Occupational Therapists**

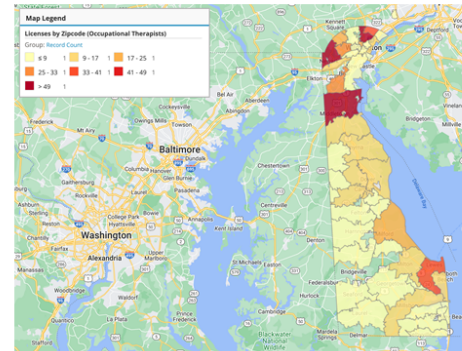
2023 781 licenses

Net change -31

2022 370 licensed **Occupational Therapy Assistants**

2023 354 licenses

Net change -16



Board of Examiners in Optometry

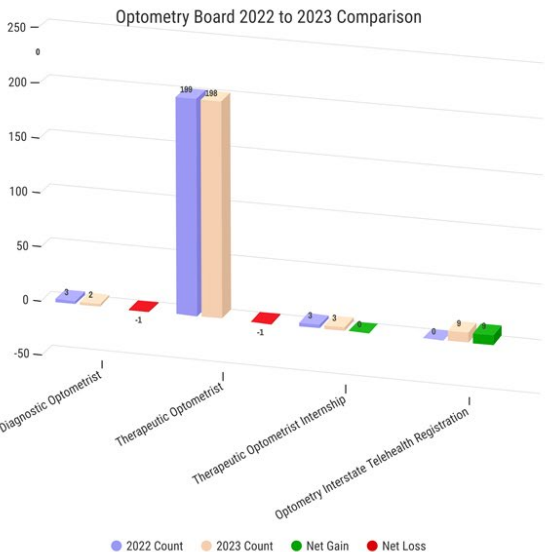
The Board of Examiners in Optometry licenses for types of eyecare practitioners (Figure 20). Changes in the number of licenses were minimal, with the exception of the addition of Optometry Interstate Telehealth Registrations, new for the first time last year. Of the 212 licenses, 116 are women and 89 are men. Twenty-two individuals are at Social Security Administration full retirement age.

As shown on the map, it appears that western Sussex and Kent counties may represent shortage areas for eyecare practitioners.

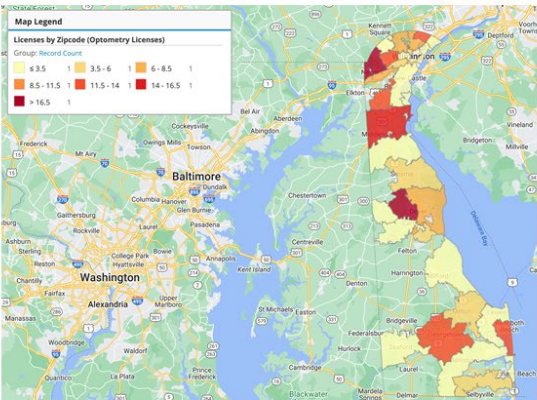
Figure 20. Board of Examiners in Optometry

M=89 F=116 Null=7 Retirement Eligible: 22

Board of Examiners in Optometry



2022 0 licensed **Optometry Interstate Telehealth Registrations**
2023 9 licenses
Net change +9



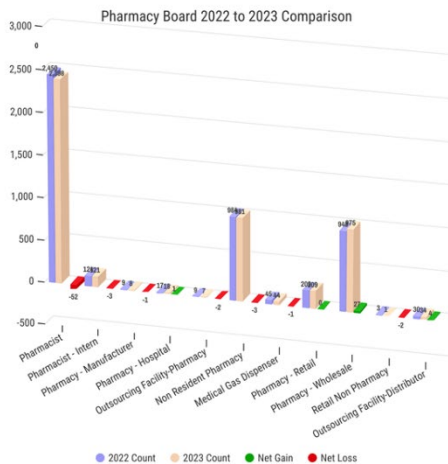
Board of Pharmacy

The Board of Pharmacy renews in September of even years. As shown in Figure 21, 52 licenses were lost during the reporting period, representing 2.596% of the workforce. As shown on the zip code map, pharmacists appear to be evenly distributed relative to population needs. Of the 2,388 active licenses, 90 are Social Security Administration full retirement eligible. Pharmacy licenses renew in September of even years.

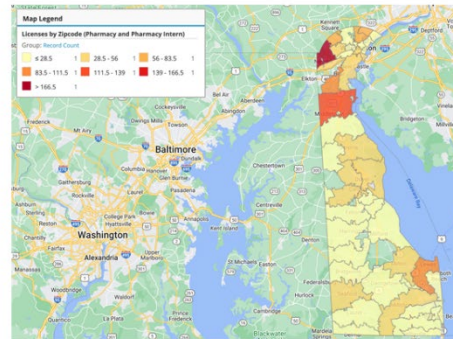
Figure 21. Board of Pharmacy

M=1047 F=1391 Null=81 Retirement Eligible: 90

Board of Pharmacy



2022 2,450 licensed **Pharmacists**
 2023 2,388 licenses
 Net change -52



Board of Physical Therapists and Athletic Trainers

The Board of Physical Therapists and Athletic Trainers renews in January of odd years. As shown in Figure 22, with all licenses added together there are 2,451 physical therapy practitioners, of which 1,551 are women, and 771 are men. Sixty-eight active licenses are Social Security Administration full retirement eligible. Losses were experienced during the reporting period across the board:

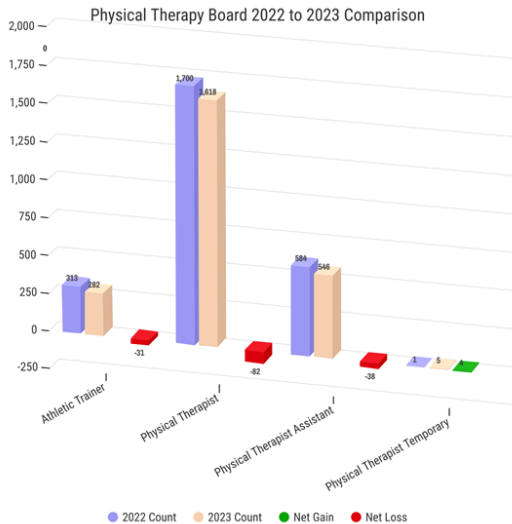
There were 282 licensed athletic trainers, representing a 31 person decrease (-10.993%). A decrease to 1,618 licensed physical therapists (-82 individuals, or -5.068%). There were 546 physical therapy assistants, representing a 38 person decrease (-6.96%).

The zip code map appears to show a fairly even distribution of licenses throughout the State, however we suspect the high concentration in southern New Castle County may not accurately represent the true distribution of practice locations.

Figure 22. Board of Physical Therapists and Athletic Trainers

M=771 F=1551 Null=129 Retirement Eligible: 68

Board of Physical Therapists and Athletic Trainers

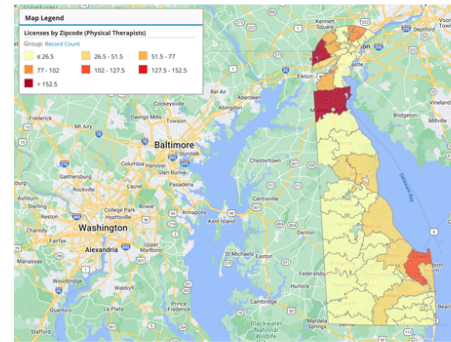


2022 313 licensed **Athletic Trainers**
 2023 282 licenses
 Net change **-31**



2022 1,700 licensed **Physical Therapists**
 2023 1,618 licenses
 Net change **-82**

2022 584 licensed **Physical Therapist Assistants**
 2023 546 licenses
 Net change **-38**



Board of Podiatry

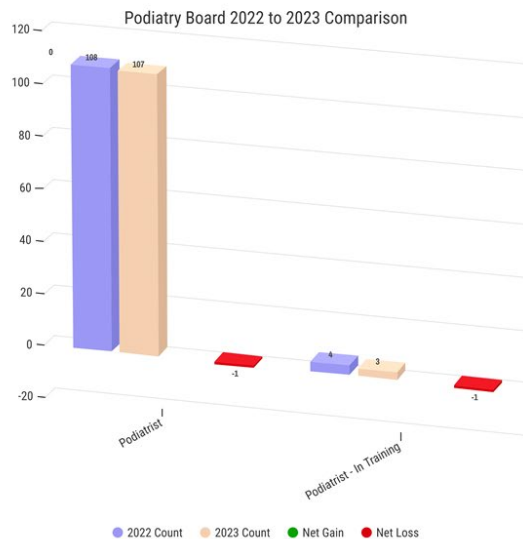
The Board of Podiatry, shown in Figure 23, is one of the smallest boards in terms of number of licenses. During the reporting period it was also one of the most stable with little change. Only four individuals are Social Security Administration full retirement eligible. Podiatry licenses renew in June of even years.

Figure 23. Board of Podiatry

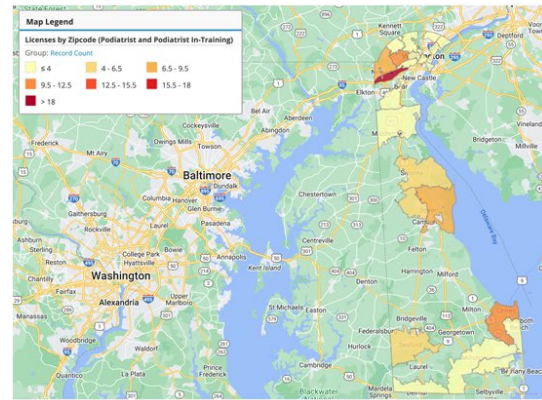
M=75 F=34 Null=1

Retirement Eligible: 4

Board of Podiatry

2022 108 licensed **Podiatrists**

2023 107 licenses

Net change **-1**

Board of Examiners of Psychologists

The Board of Examiners of Psychologists licenses both psychologists and psychologist assistants. New this year, they are also including Psychologist Interstate Telehealth Registration. There is a total of 635 licensed psychologists in Delaware, of which 179 are men and 464 are women (Figure 24). Based on Social Security Administration age data, 116 of them are Social Security Administration full retirement age eligible.

At this time, the Board of Psychologists does not distinguish between licensed and practicing, versus maintaining a license but not practicing. As a result, the number 635 may not represent the actual number of psychologists in Delaware who are seeing patients.

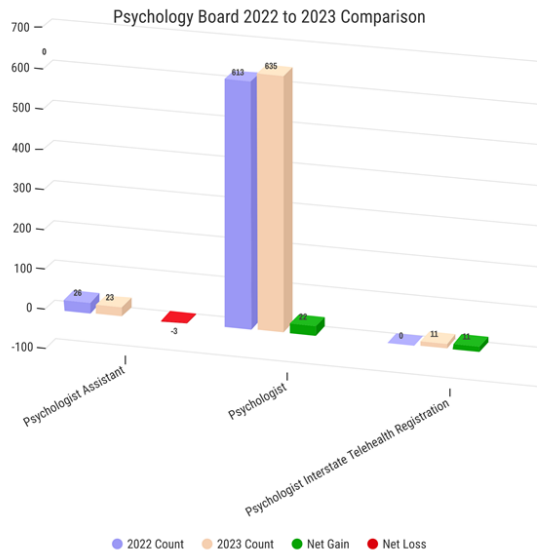
During the period reviewed, there was a net add of 22 active psychologist licenses (+3.589%). Board of Psychology licenses are renewed in July of odd years.

As shown on the map, the distribution of psychologists strongly favors New Castle County, with sizable portions of Kent and Sussex counties showing no or little coverage.

Figure 24. Board of Examiners of Psychologists

M=179 F=464 Null=26 Retirement Eligible: 116

Board of Examiners of Psychologists

2022 613 licensed **Psychologists**

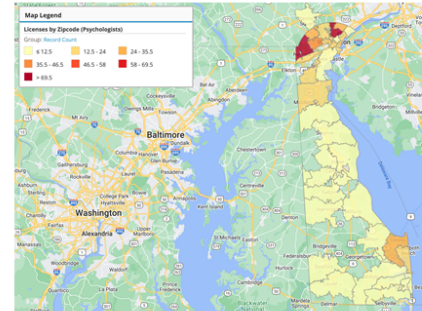
2023 635 licenses

Net change +22

2022 0 licensed **Psychologist Interstate Telehealth**

2023 11 licenses

Net change +11



Board of Speech Pathologists, Audiologists, and Hearing Aid Dispensers

Across license types, the Board of Speech Pathologists, Audiologists, and Hearing Aid Dispensers experienced active license losses during the reporting period. Licenses from this board renew in July of odd years.

Combined, there are 1,004 active licenses within this Board (Figure 25). Of them, 917 are women and 69 are men with 44 individuals are Social Security Administration full retirement eligible.

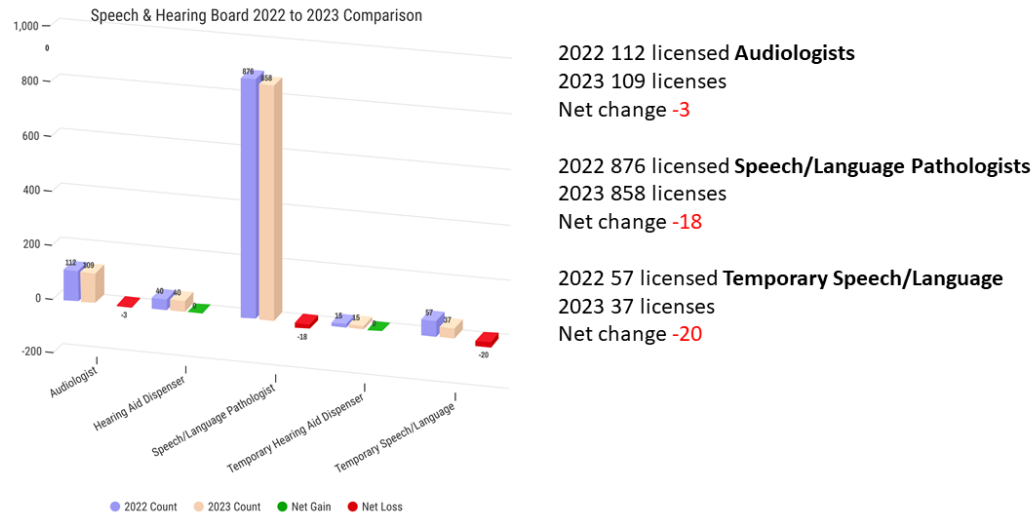
Audiologists lost three licenses (-2.752%); speech/language pathologists lost 18 licenses (-2.098%); and temporary speech/language pathologists lost 20 active licenses (-54.054%). On the other hand, hearing aid dispenser active licenses retained all licenses.

Figure 25. Board of Speech Pathologists, Audiologists, and Hearing Aid Dispensers

M=69 F=917 Null=73

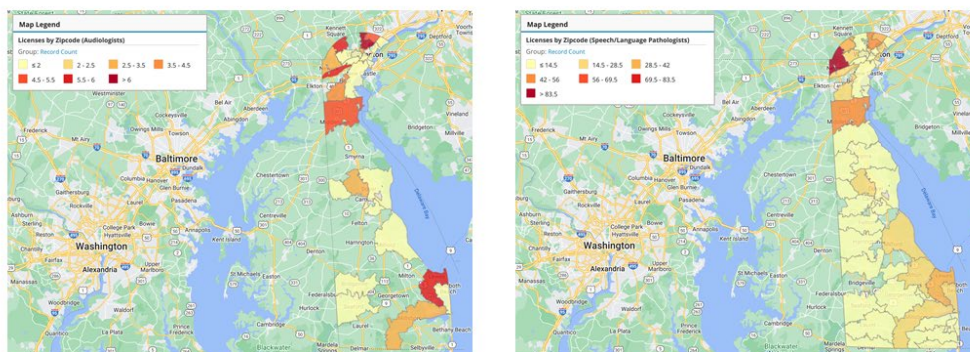
Retirement Eligible: 44

Board of Speech Pathologists, Audiologists, and Hearing Aid Dispensers



The maps in Figure 26 show the distribution of audiologists and speech/language pathologists throughout Delaware. It appears audiologists cluster around more densely populated areas while speech/language pathologists are more evenly distributed statewide.

Figure 26. Geographic Distribution of Audiologists and Speech/Language Pathologists



Board of Social Work Examiners

The Board of Social Work Examiners covers four license types, one of which is the new Social Work Examiners Interstate Telehealth Registration. Figure 27 represents a combined total of 2,833 active licenses: 2,289 women, and 366 men. There are 182 Social Security Administration full retirement eligible individuals.

Bachelors of social work active licenses decreased by 97 (-29.45%). Similarly, masters of social work licenses decreased by 57 (-5.465%). However, Clinical Social Work active license numbers increased by 153 (+12.24%).

Figure 27. Board of Social Work Examiners

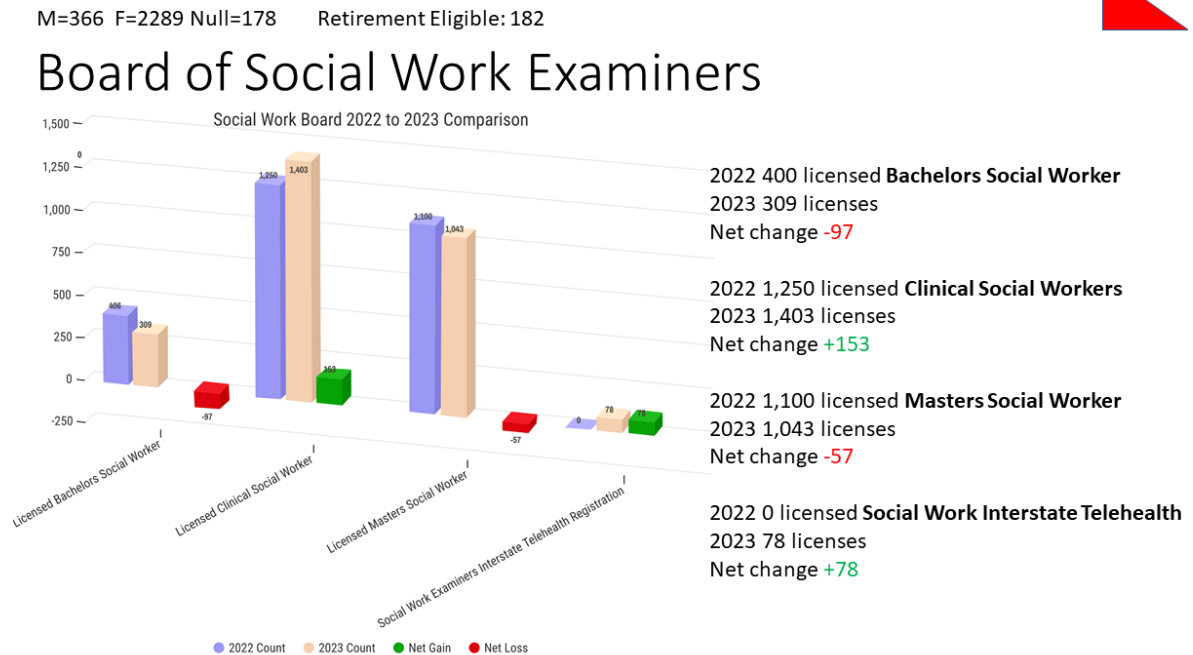


Figure 28 contains two zip code maps showing the distribution of bachelor of social work and master of social work practitioners. Figure 29 shows the distribution of licensed clinical social workers. For all three license types the distribution appears to be relatively population consistent.

Figure 28. Geographic Distribution of Bachelor of Social Work (left) and Master of Social Work (right) Practitioners

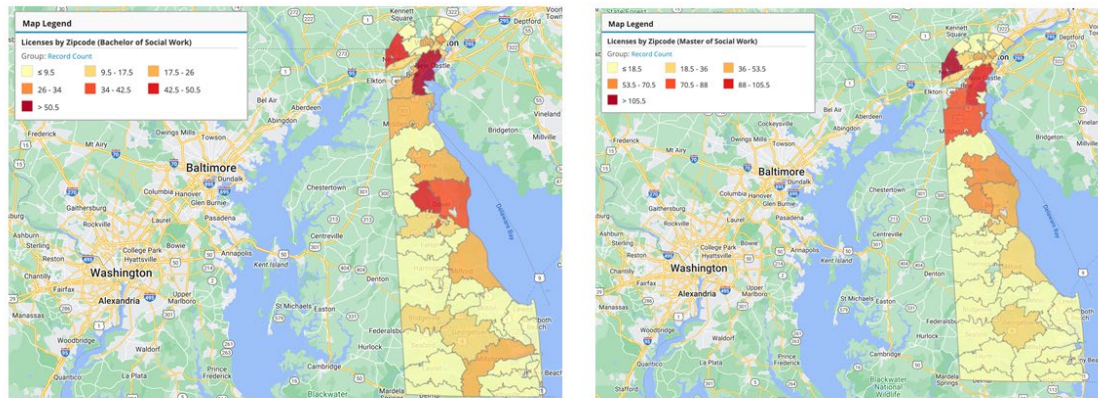
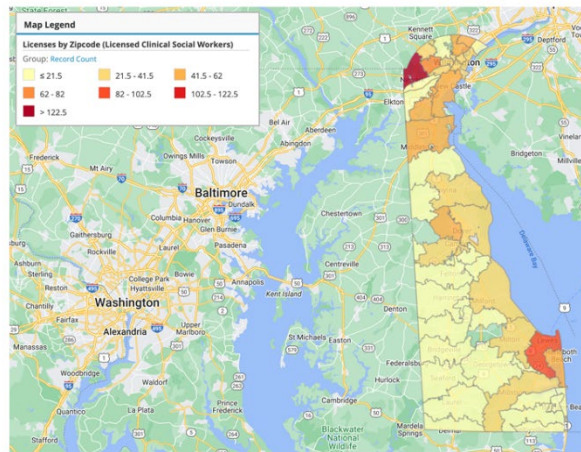


Figure 29. Geographic Distribution of Licensed Clinical Social Workers



Board of Veterinary Medicine

The Board of Veterinary Medicine is always included as a part of the healthcare workforce due to the increasingly obvious connections between animal and human health and wellness. Licenses under this board renew in July of even years.

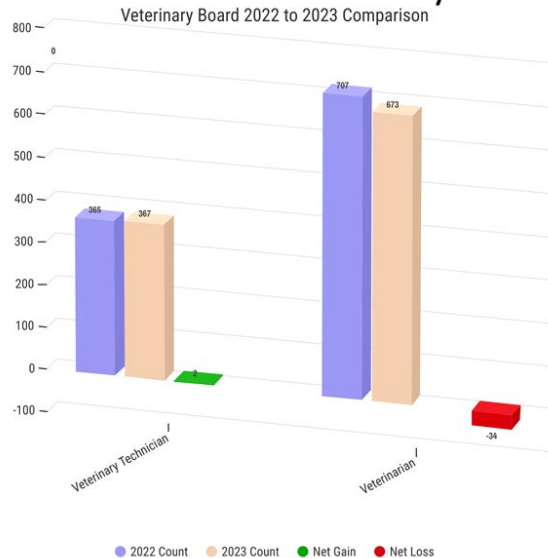
As shown in Figure 30, there were a total of 1,040 active licenses at the end of the study period. Of them, 787 are women and 221 are men, with 71 individuals Social Security Administration full retirement eligible.

Veterinary technicians enjoyed a small gain of two licenses (+0.548%). Unfortunately, there was a 34 active license decrease (-5.052%) in the Veterinarian workforce.

Figure 30. Board of Veterinary Medicine

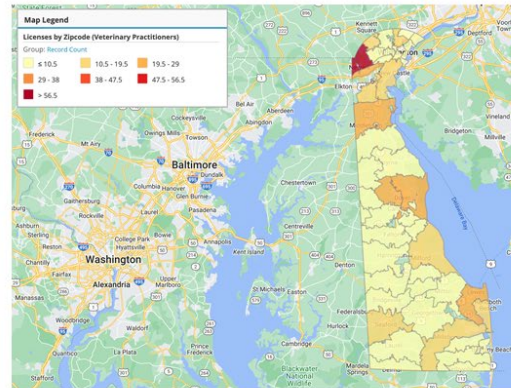
M=221 F=787 Null=33 Retirement Eligible: 71

Board of Veterinary



2022 365 licensed **Veterinary Technicians**
 2023 367 licenses
 Net change +2

2022 707 licensed **Veterinarians**
 2023 673 licenses
 Net Change -34



Controlled Substance Advisory Committee

Finally, the Controlled Substance Advisory Committee provides secondary licensing across a variety of individuals and facility/institutions licensed by other boards.

“The Committee issues registrations to practitioners and facilities that prescribe, dispense, manufacture or distribute controlled substances. Practitioners include physicians, physician assistants, advanced practice registered nurses, podiatrists, dentists, optometrists, and veterinarians. Facilities include pharmacies, distributors, manufacturers, hospitals, clinics, researchers, laboratories and provider pharmacies.”⁴

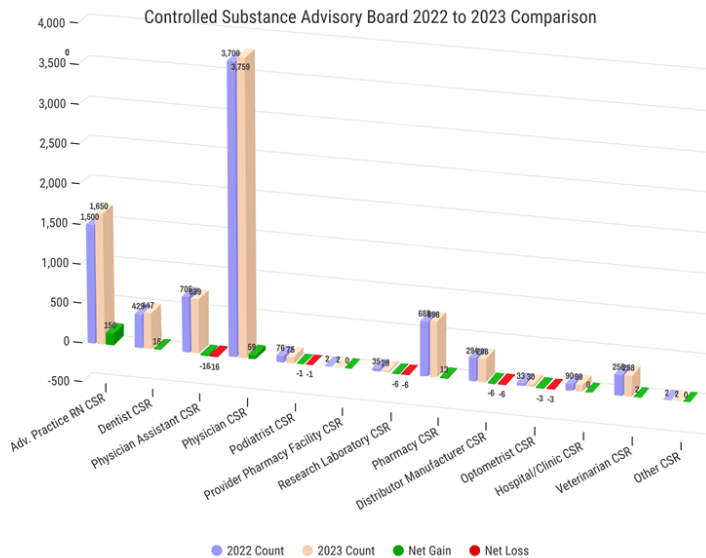
As shown in Figure 31, a total of 8,017 individuals and facilities have been granted CSR licensure. Of those licenses, 3,888 are women and 3,092 are men. The high number of null (no gender selection) is partially due to facility/institutional licenses.

For this study, we highlight increases in advanced practice nurse CSR licenses, adding 150 active licenses (+10%), and the addition of 59 physician CSR licenses (+1.595%).

Figure 31. Controlled Substance Advisory Committee

M=3092 F=3888 Null=1037 Retirement Eligible:557

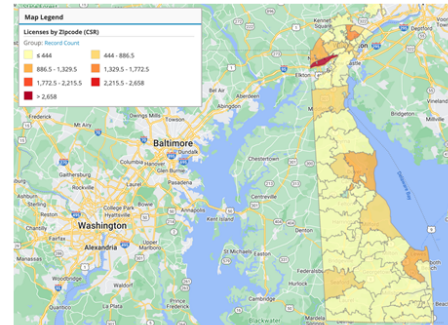
Controlled Substance Advisory Committee

2022 1,500 licensed **Adv. Practice RN CSR**

2023 1,650 licenses

Net change **+150**2022 3,700 licensed **Physician CSR**

2023 3,759 licenses

Net change **+59**

Discussion

With some notable exceptions, the healthcare workforce has added active licenses during the study period. As we move forward to the benchmarking phase of the project, we will establish reality-based numbers against which to compare changes in the workforce.

As we collect longitudinal data, we can start making projections more broadly. At this time, we only project the number of active licenses who are eligible to retire with full Social Security Benefits, and we do not assume that all types of healthcare professionals will approach retirement in the same manner, therefore, we cannot generalize at this time. With additional data over time, we may be able to determine trends and make more relevant predictions.

Policy Recommendations

Throughout this study, we have identified important changes that are recommended to enhance the quality and accuracy of the data – and therefore the conclusions which can be drawn from it. Collectively those policy recommendations include the following:

- Make gender selection required, with contemporary updates to gender selection options.
- In order to distinguish between active licenses who are and are not seeing patients, request practice status at the time of license renewal (as is already done for nursing).
- To provide more accurate and granular information on coverage throughout the State, ask practitioners to specify practice location(s) separately from the postal address used when obtaining or renewing a license.
- Amend the method of data collection to provide a mandatory picklist of AAMC taxonomy-based specialties (specific to MD and DO physician licenses).

- Collect race and ethnicity information from individual practitioners to support racial concordance. This can improve provider/patient trust and communication, improve adherence to medical advice, and improve patient perceptions of care.

“Provider-patient race concordance can achieve broader, systemic goals of improving cross-cultural care delivery and improved patient outcomes. For instance, racial concordance is more clearly associated with better communication between patients and providers in one systematic review that involved Black patients.”⁵

Acknowledgements

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