

Innovative Health Workforce Data Management Solutions in Indiana

Sierra X. Vaughn, MPH

Assistant Director, Data & Research



Overview

- How Are Health Workforce Data Managed?
- How Are Data Used?
- What are the Impacts in Indiana?





About Us

The Bowen Center

- Housed in the IUSM Department of Family Medicine
- Teams
 - Administration & Communication
 - Policy & Strategy
 - Data & Research
- Our Work
 - Health Workforce Tracking
 - Data Management
 - Data and Policy Research
 - Policy Recommendations
- ***Provide ongoing support, expertise and research to the State of Indiana in Indiana's health workforce data and related health policies.***



Life Cycle of Data





Health Workforce Data Management Strategies

Strategic State Partnerships

Indiana Professional Licensing Agency

- Implementation of supplemental survey questions during license renewal period (every 2 years)
- Schedule for surveys and data extracts
- Technical assistance for licensees

Other Agencies

- Indiana Department of Health
- Indiana Family and Social Services Administration
- Indiana Department of Homeland Security
- Indiana Commission for Higher Education
- Indiana Department of Workforce Development



Data Collection Tool Development



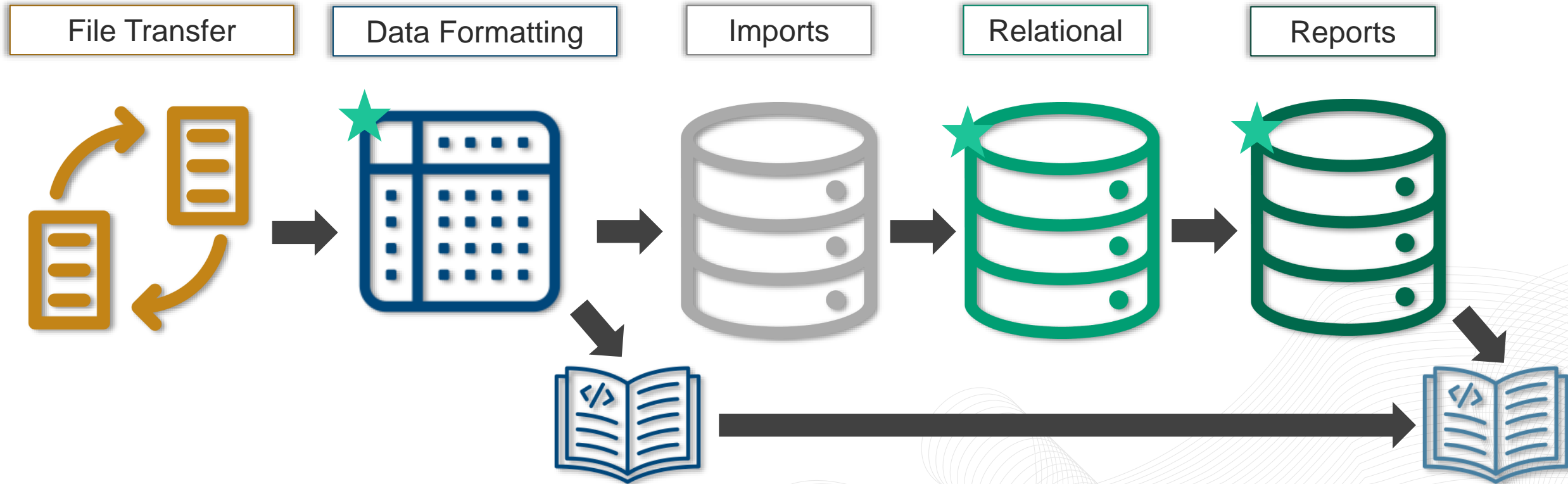
2024 Indiana Dentist License Renewal Information Fields

1. Sex
 - a. Female
 - b. Male
2. Are you of Hispanic, or Latina/o, or Spanish origin?
RADIO BUTTONS
 - a. Yes
 - b. No
3. What is your race? Mark one or more boxes.
MULTI CHECK BOX
 - a. American Indian or Alaska Native
 - b. Asian
 - c. Black or African American
 - d. Native Hawaiian/Pacific Islander
 - e. White
 - f. Some Other Race
4. Where did you complete your dental education that first qualified you for your U.S. dental license?
DROP DOWN LIST
 - a. Indiana
 - b. Michigan
 - c. Illinois
 - d. Kentucky
 - e. Ohio
 - f. Another State (not listed)
 - g. Another Country (not U.S.)
5. Please indicate your highest level of training in dentistry.
CHECK BOXES
 - a. Dental School-No residency completed
 - b. Residency-Advanced Education in General Dentistry Programs (AEGD)
 - c. Residency-Advanced General Dentistry Education Programs in Dental Anesthesiology
 - d. Residency-Advanced General Dentistry Education Programs in Oral Medicine
 - e. Residency-Advanced General Dentistry Education Programs in Orofacial Pain
 - f. Residency-Dental Public Health
 - g. Residency-Endodontics
 - h. Residency-General Practice Residency
 - i. Residency-Oral and Maxillofacial Pathology
 - j. Residency-Oral and Maxillofacial Radiology
 - k. Residency-Oral and Maxillofacial Surgery
 - l. Residency-Orthodontics and Dentofacial Orthopedics
 - m. Residency-Pediatric Dentistry
 - n. Residency-Periodontics
 - o. Residency-Prosthodontics
 - p. Residency-Other

- Primary Research
 - ACS Survey
 - Minimum Data Sets
- Interdisciplinary Committee (Advisory Groups)
 - Educators
 - Employers
 - Health Professionals
 - State Representatives
- Primary Domains
 - Demographics
 - Education and Training
 - Practice Characteristics
 - Services Provided/Populations Served



Data Management Strategy





Data Reporting

Data Reports and Briefs

Figure 2.1. Distribution of Indiana BHHS Professionals

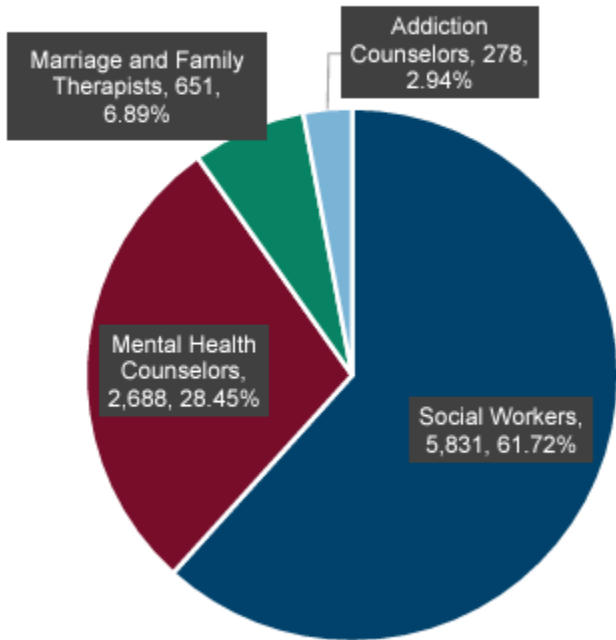
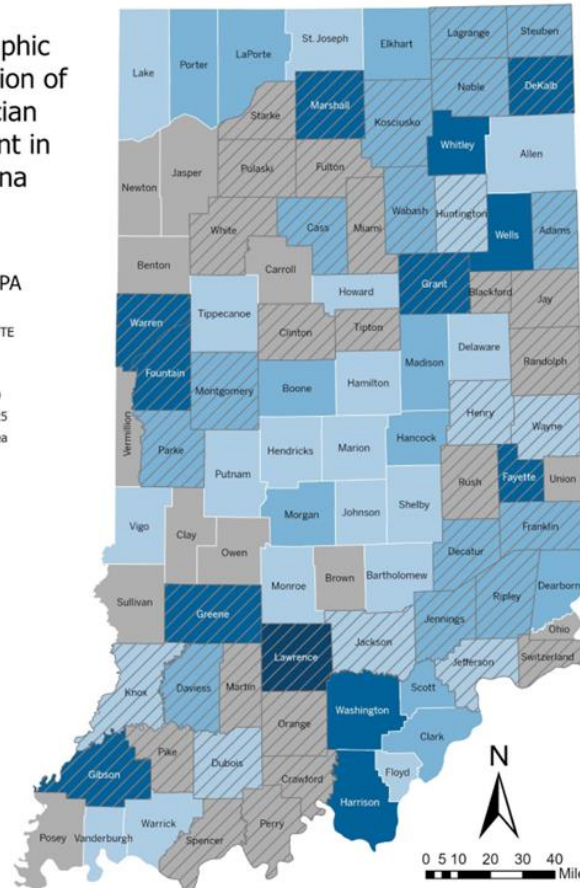


Figure 3.1 Geographic Distribution of Physician Assistants in Indiana

Geographic Distribution of Physician Assistant in Indiana

Resident Per PA FTE

- No Reported FTE
- 0-8,510
- 8,510-28,176
- 28,176-70,090
- 70,090-113,425
- Non-Metro Area



Source: Indiana Physician Assistant Re-Licensure Survey, 2022. US Department of Agriculture, Rural-Urban Continuum codes, 2019. Notes: Residents per PA FTE ratio could not be counted in counties where there was no reported PA FTE

RN WORKFORCE POLICY UPDATES

HOUSE ENROLLED ACT 1003-2022 - NURSING PROGRAMS AND LICENSING MATTERS.

What did it do?

- Increase nursing program enrollment
 - Allowed eligible associate degree or bachelor's degree nursing programs to increase enrollment at any rate deemed appropriate by the program
- Clinical simulation hour substitution
 - It also allowed a nursing program to substitute a certain number of simulation hours for clinical hours in certain circumstances.
- Defined clinical preceptors and modified faculty staffing for some programs
 - Codified requirements for clinical preceptors and established that nurse faculty are not required to be full-time employees of a state educational institution that operates a nursing program that predominantly awards associate degrees.

HOUSE ENROLLED ACT 1192-2022 - QUALIFIED PROVIDERS AND MEDICAID SCHOOL SERVICES

What did it do?

- Defines school-based nurses
 - Created a definition of "school-based nurse" for the purpose of providing Medicaid covered services in a school setting and sets requirements for school-based Medicaid services.
 - "School based nurse", is defined as a registered nurse or licensed practical nurse licensed who is employed by contracts with a school corporation that participates in Medicaid to provide school based Medicaid covered services for a Medicaid recipient.

SENATE ENROLLED ACT 7-2021 - FORENSIC NURSES

What did it do?

- Defines forensic nurses (SANE nurses) and eligibility requirements
 - This bill codified entry requirements that a registered nurse must meet in order to practice as a forensic nurse (beginning 6/30/23). The Board of Nursing was charged with defining biennial continuing education requirements for forensic nurses.

PROPOSED HOUSE BILL 1215-2023 - FUNDING FOR THE DEVELOPMENT OF HEALTH PROFESSIONS.

What would it do?

- Establish the Linking Industry to Nursing Education Fund.
 - Create a competitive grant program for education institutions to recruit new faculty, retain current faculty, provide student scholarships, acquire equipment needed to expand the institutions nurse education program.
 - Institutions must commit to a dollar-for-dollar match. Partial grants may be awarded if funds are not available for a dollar-for-dollar match.
 - Grant awards may not be used for the construction of new buildings or renovations of current buildings.

PROPOSED HOUSE BILL 1353-2023 - HEALTH CARE STAFFING.

What would it do?

- Require a hospital to establish a council with 51% of its members serving as RNs who spend at least 50% of their time in direct patient care.
 - Council would be charge with assisting staff planning functions and reviewing reports of deviations from the established nurse staffing plan
- Establishes workforce protections for nurses that file a deviation report.
 - Would require a hospitals, ambulatory outpatient surgical care centers, and residential care facilities to share with a prospective RN and LPNs hire the hourly and on call requirements.
 - Would not allow these facility to mandate overtime hours and sets certain protections for RNs and LPNs in this settings.

PROPOSED HOUSE BILL 1460-2023 - PROFESSIONAL AND OCCUPATIONAL LICENSING

What would it do?

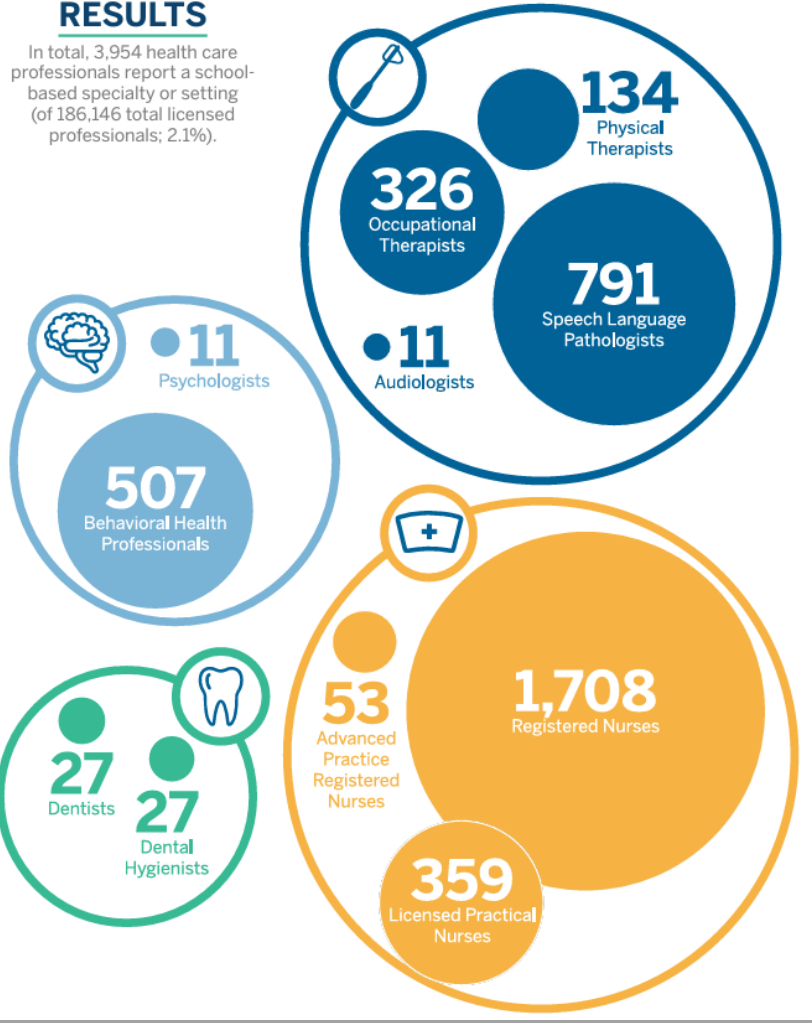
- Applicants for nursing license through endorsement would no longer have to provide their Social Security Number if the applicant can prove they are lawfully in the United States.



Special Reports

RESULTS

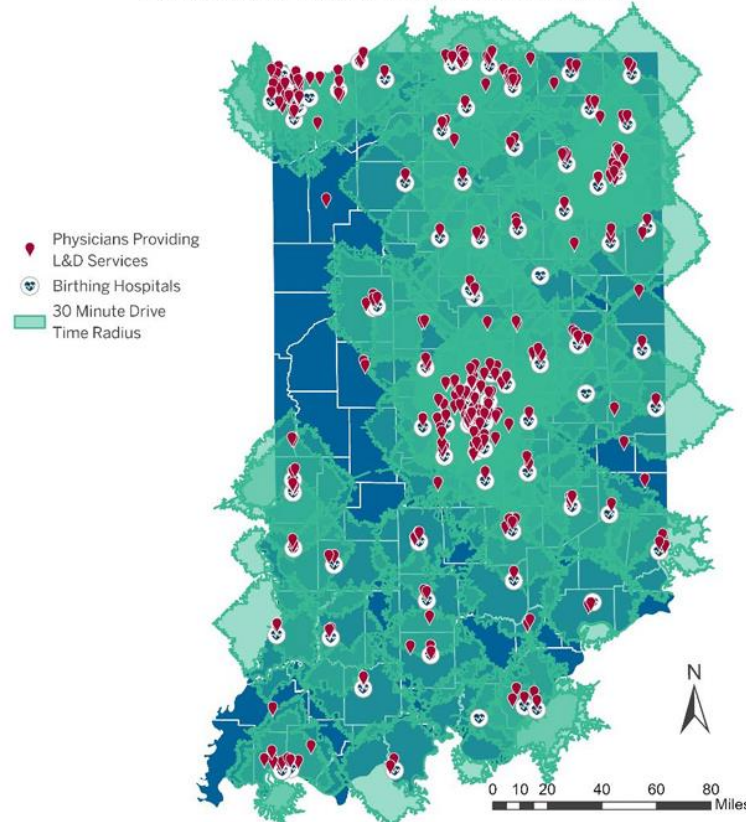
In total, 3,954 health care professionals report a school-based specialty or setting (of 186,146 total licensed professionals; 2.1%).



Maternal Health Workforce

Labor & Delivery Services

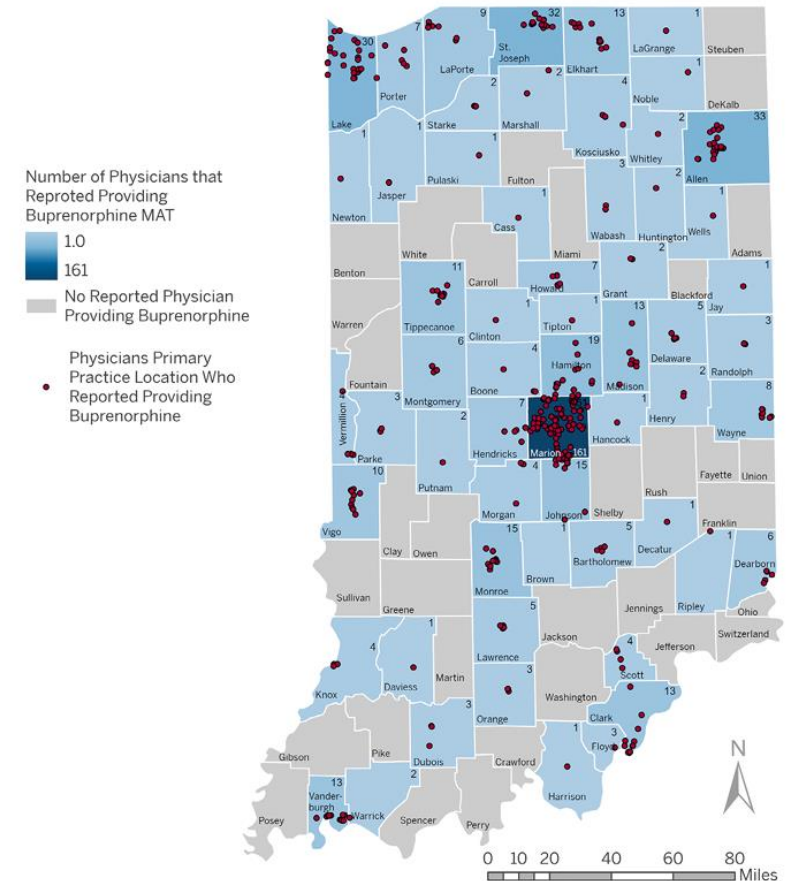
Obstetric and Family Medicine Physicians Providing Labor and Delivery (L&D) Services to Indiana Patients, within a 30 Minute Drive Time Radius of Birthing Hospitals



Source: This map displays Indiana physicians who reported a specialty of Obstetrics and Gynecology and Family Medicine/General Practice (Question 6), a primary, secondary, or tertiary practice setting in Indiana (Question 12, 22, 30), and reported providing L&D services to Indiana patients (Question 8) during the 2021 Indiana physician license renewal process. The full survey administered to all Indiana physicians that renewed online can be found at: <https://hdl.handle.net/1805/26208>; ISDH Maternal and Child Health: Birthing Hospitals can be accessed at https://gis.in.gov/apps/rsdh/meta/resources_layers.htm

Map 1.1. Obstetric and Family Medicine Physicians Providing Labor and Delivery Services to Indiana Patients

Indiana Physicians Providing Buprenorphine Medication-Assisted Treatment (MAT)



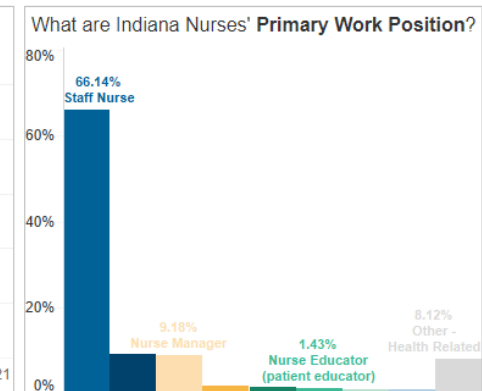
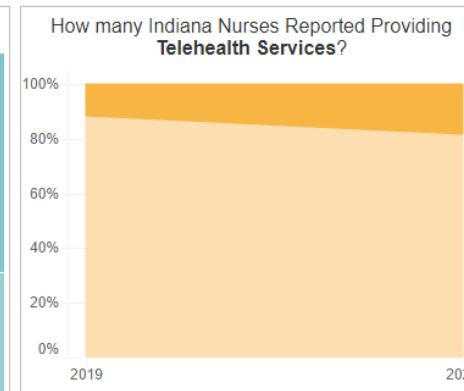
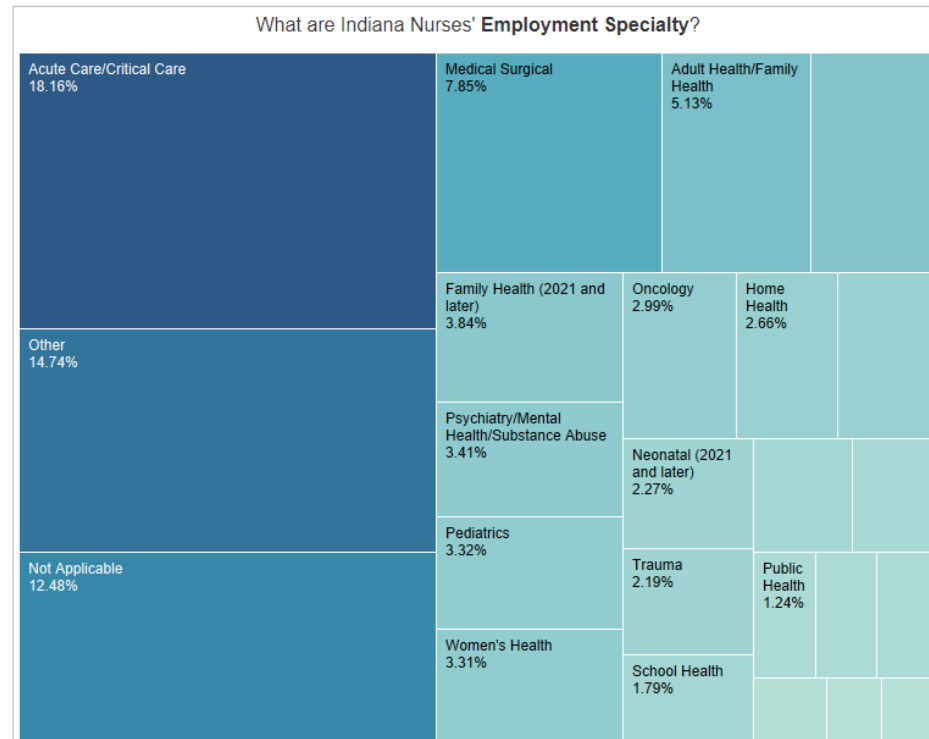
Source: 2019 Physicians Licenses and Supplemental Survey Data.
Note: Physicians included on this map indicated they provide Buprenorphine Medication Assisted Treatment services on question 8 of the physician license renewal survey.



Data Visualizations

Report Year 2021	Select a Nursing Type (All)	Select an Employment Specialty (All)	Select a Practice Setting (All)
Populations Served (2019 or later) Any Population		Services Provided (2019 or later) Any Service	

Total Nurses Represented in the Charts Below:
81,254



Health Workforce Research

ARTICLE | AUGUST 01 2018

Frequency of Pediatric Emergencies in Ambulatory Practices

Matthew L. Yuknis
Tom Arkins, BS; Bl

Address correspon
Indiana University
myuknis@iupui.edu

POTENTIAL I
disclose.

FINANCIAL I
article to disc

Pediatrics (2018) 1
<https://doi.org/10.>



[J Behav Health Se](#)

Published online 2

Scratching th
Indiana Asse

[Steven Moberly, 1](#)

[Author informati](#)

[Inquiry](#). 2024 Jan-Dec; 61: 00469580241237144.

Published online 2024 Mar 25. doi: [10.1177/00469580241237144](https://doi.org/10.1177/00469580241237144)

PMCID: PMC10964454

PMID: [38528773](https://pubmed.ncbi.nlm.nih.gov/38528773/)

Exploring the Demographic and Professional Characteristics of Physicians and Nurse Practitioners Associated With Providing Medication-Assisted Treatment: A Retrospective Observational Study

[Hannah L. Maxey](#), PhD, MPH, RDH,¹ [Sierra X. Vaughn](#), MPH,¹ [Analyse Dickinson](#), MPH,¹ and [Robin Newhouse](#), PhD, RN, NEA-BC, FAAN²





Measurable Impacts

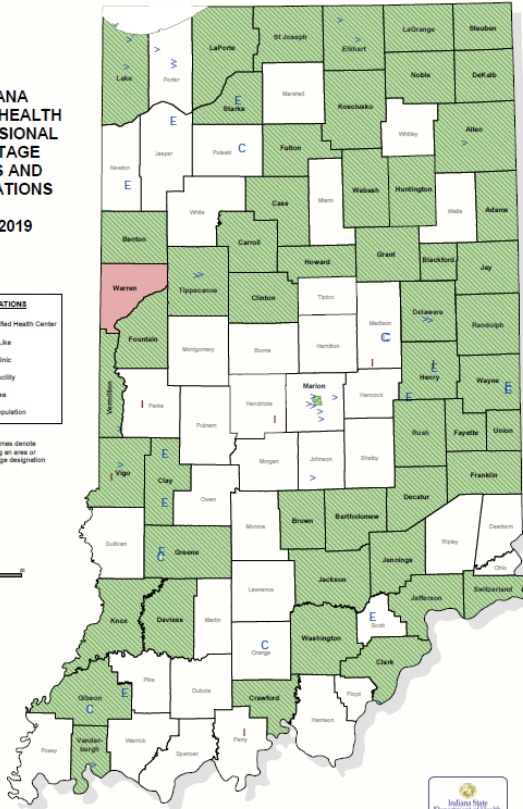
Health Professional Shortage Areas

INDIANA DENTAL HEALTH PROFESSIONAL SHORTAGE AREAS AND POPULATIONS

May, 2019

DESIGNATIONS	
>	Federally Qualified Health Center
C	FGHC Look A Like
E	Rural Health Clinic
I	Correctional Facility
■	Geographic Area
■	Low Income Population

Bold county names denote counties having an area or population shortage designation



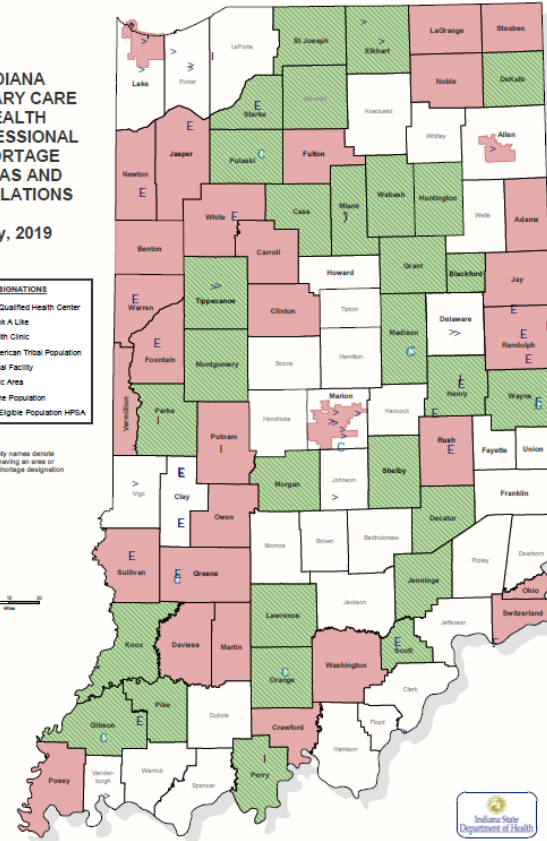
Indiana State Department of Health
Source: Shortage Designation Branch, HRSA, U.S. Department of Health and Human Services

INDIANA PRIMARY CARE HEALTH PROFESSIONAL SHORTAGE AREAS AND POPULATIONS

May, 2019

DESIGNATIONS	
>	Federally Qualified Health Center
C	FGHC Look A Like
E	Rural Health Clinic
J	Native American Tribal Population
I	Correctional Facility
■	Geographic Area
■	Low Income Population
■	Medicaid Eligible Population HPSA

Bold county names denote counties having an area or population shortage designation



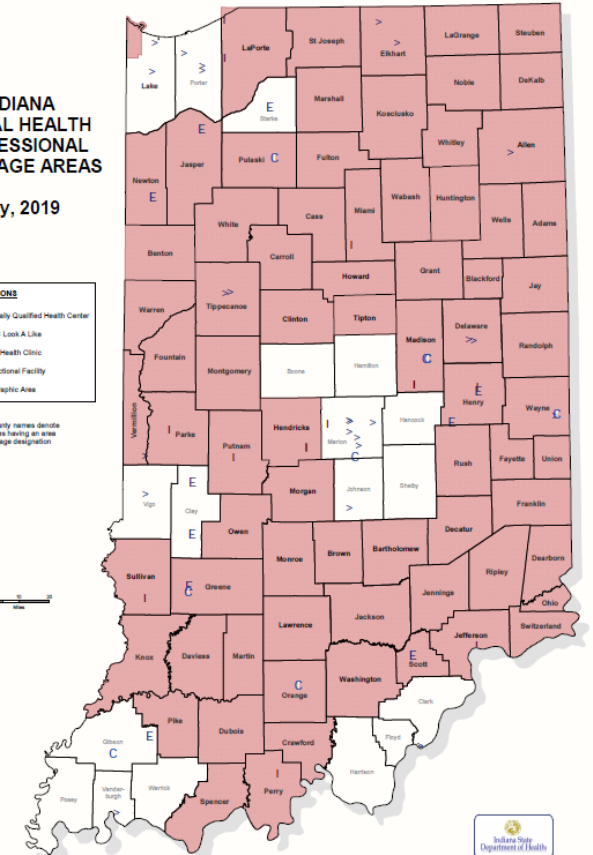
Indiana State Department of Health
Source: Shortage Designation Branch, HRSA, U.S. Department of Health and Human Services

INDIANA MENTAL HEALTH PROFESSIONAL SHORTAGE AREAS

May, 2019

DESIGNATIONS	
>	Federally Qualified Health Center
C	FGHC Look A Like
E	Rural Health Clinic
I	Correctional Facility
■	Geographic Area

Bold county names denote counties having an area shortage designation



Indiana State Department of Health
Source: Shortage Designation Branch, HRSA, U.S. Department of Health and Human Services



Maternity Care Workforce

2023

Division of Fatality Review and Prevention



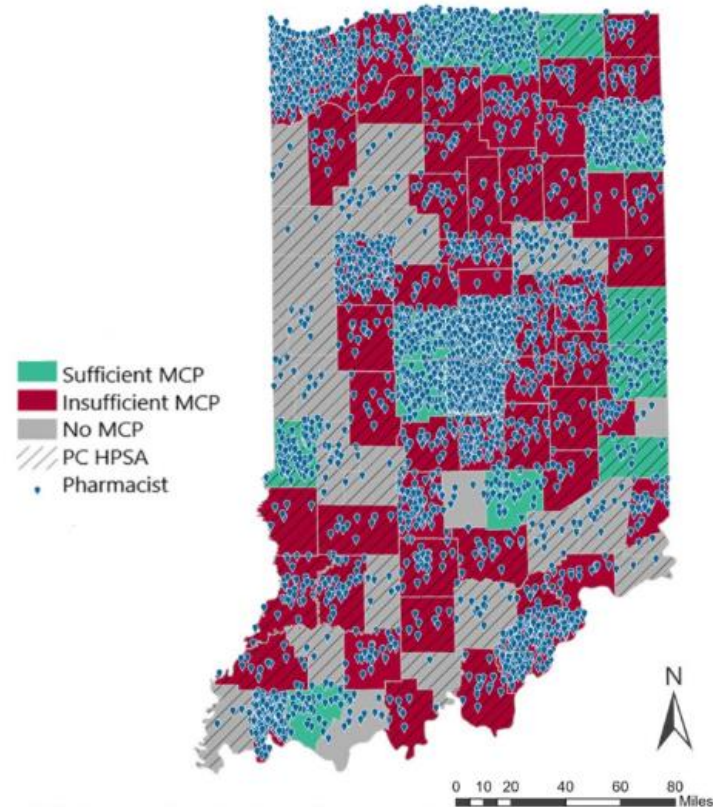
Indiana Maternal
Mortality Review
Committee



2023 Annual Report



Indiana Primary Care Health Professional Shortage Areas (PC HPSA), Maternity Care Practitioner (MCP) Capacity, and Pharmacist Distribution



Source: 2021 Indiana Physician License and Supplemental Survey Data, Indiana RN License and Supplemental Data 2021, full survey administered to all Indiana physicians and nurses online can be found at <https://hi.healthcare.net/1805/21008>. The Indiana RN survey can be found at: <https://indianaworkslipsum.edu/indian/1805/18431>. The Indiana Pharmacist survey can be found at <https://hi.healthcare.net/1805/22412>. More information about Maternity Care Target Areas (MCTA) can be found at: <https://www.govinfo.gov/content/pkg/FR-2022-05-19/pdf/2022-10783.pdf>. Note: The county level distribution of pharmacists primary and secondary practice setting was used to display practice location.

HOUSE ENROLLED ACT No. 1568

AN ACT to amend the Indiana Code concerning health.

Be it enacted by the General Assembly of the State of Indiana:

SECTION 1. IC 12-15-1.3-6.5 IS ADDED TO THE INDIANA CODE AS A NEW SECTION TO READ AS FOLLOWS [EFFECTIVE UPON PASSAGE]: **Sec. 6.5. Before July 1, 2023, the office shall apply to the United States Department of Health and Human Services to amend the state plan to reimburse a pharmacist for services and prescriptions provided under IC 25-26-25 to an eligible Medicaid recipient.**

SECTION 2. IC 16-19-4-12 IS ADDED TO THE INDIANA CODE AS A NEW SECTION TO READ AS FOLLOWS [EFFECTIVE JULY 1, 2023]: **Sec. 12. (a) Subject to IC 25-26-25, before September 1, 2023, the state health commissioner or the commissioner's designated public health authority who is a licensed prescriber shall, as part of the individual's official capacity, issue a standing order that allows a pharmacist to prescribe and dispense a hormonal contraceptive patch (as defined in IC 25-26-25-2) and a self-administered hormonal contraceptive (as defined in IC 25-26-25-3).**

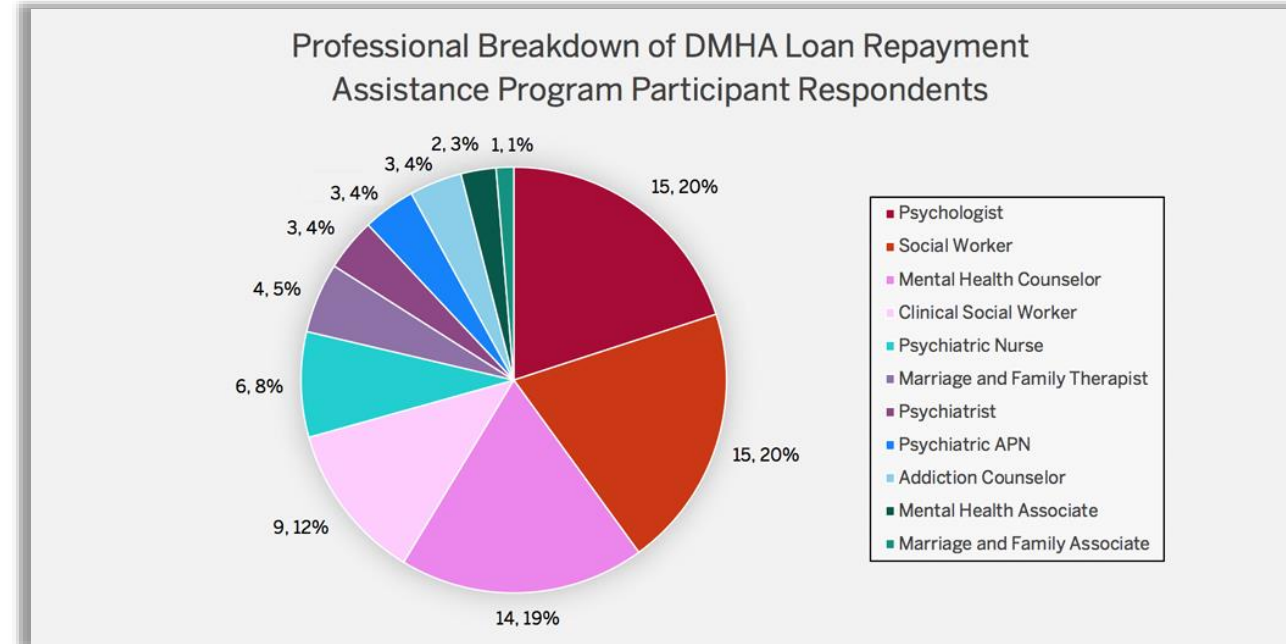
(b) A standing order described in subsection (a) must comply with the requirements set forth under IC 25-26-25.

(c) The state health commissioner or designated public health authority who issues a standing order under subsection (a) is immune from civil liability related to the issuing of the standing

HEA 1568

Program Evaluation: State Loan Repayment Program

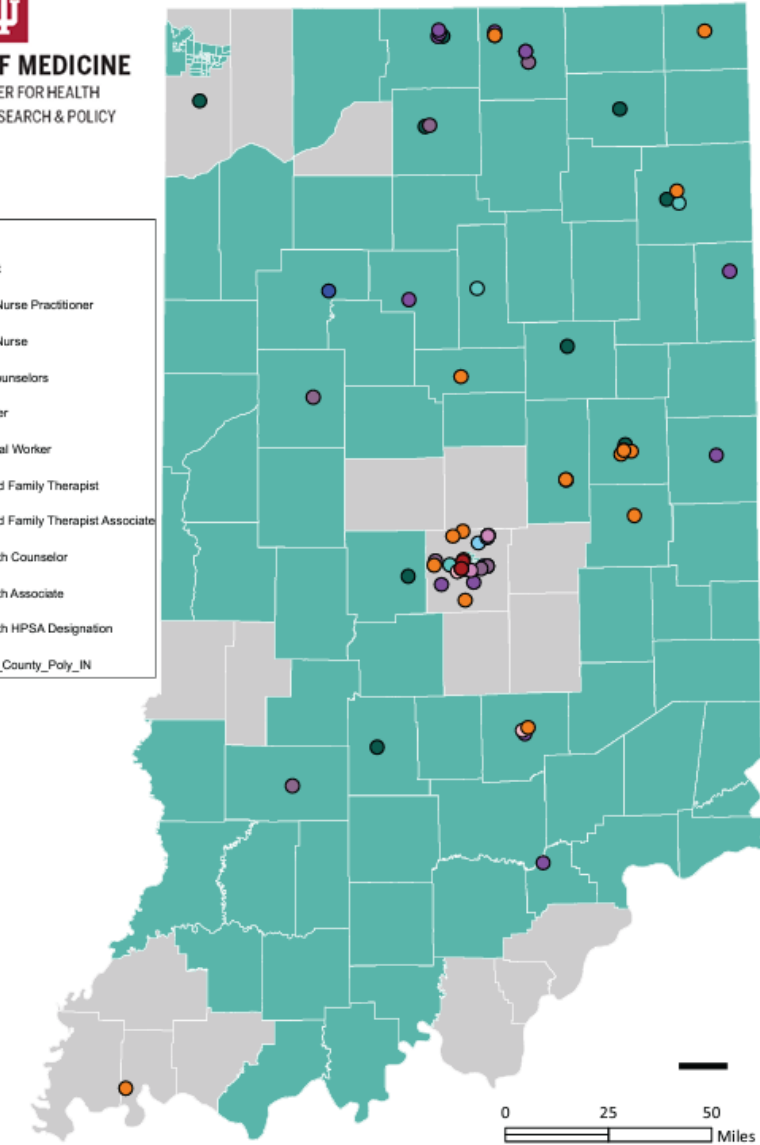
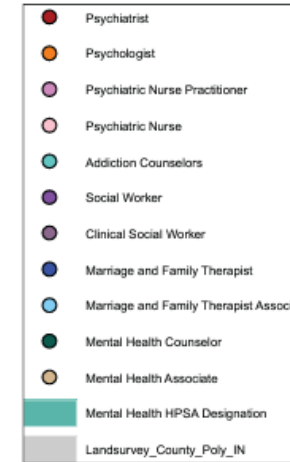
- Collaboration with FSSA Division of Mental Health and Addiction
- Analyzing the incentive program for behavioral professionals
 - Capture data from previous participants
 - Identify successes
 - Provide recommendations



Program Evaluation: State Loan Repayment Program

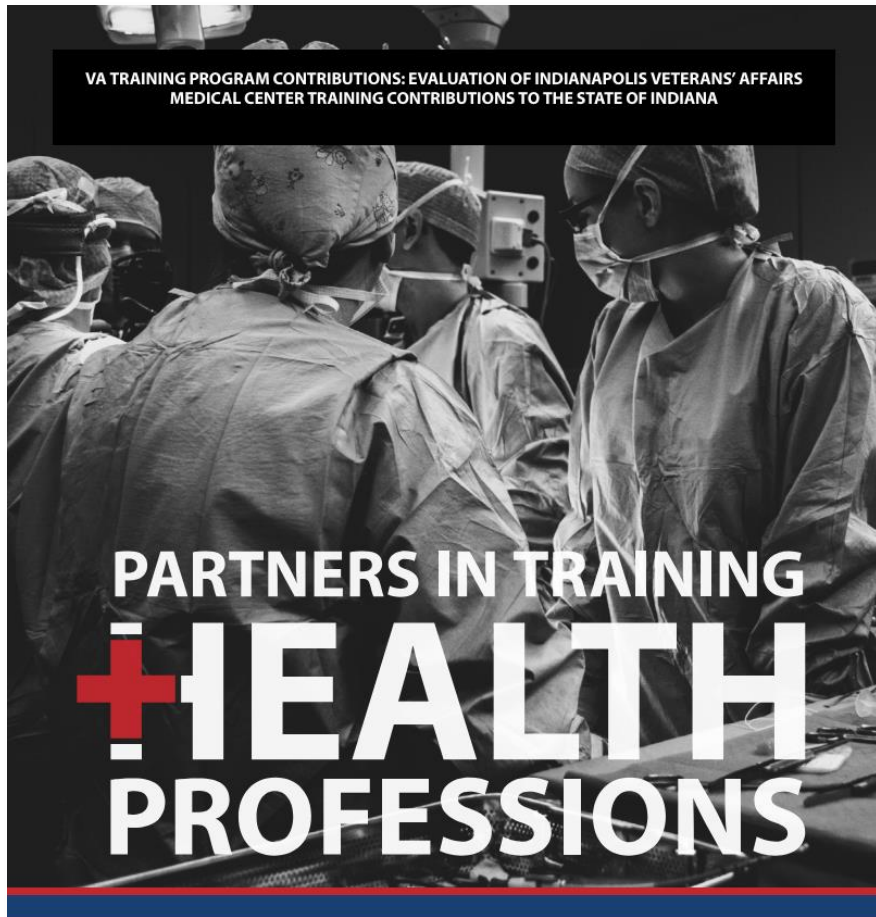
Table 1.10 Administrative changes to the loan repayment application process, 2015-2017

Year	Application Process	Professional Disciplines Not Included	Scoring Matrix/ Maximum Points	Documents Required	Maximum Award
2015	Paper	Psychiatric Nurse Practitioner	25	9 documents	\$25,000
2016	Paper	None	28 (3 bonus points for current award recipients)	9 documents uploaded	\$25,000
2017	Online	None	28 (3 bonus points for current award recipients)	9 documents uploaded	\$25,000



Source: DMHA Loan Repayment Assistance Program Participant Data (2015-2017); DMHA Loan Repayment Assistance Program Evaluation Survey (2018).

Program Evaluation: VA Clinical Training of Health Care Professionals

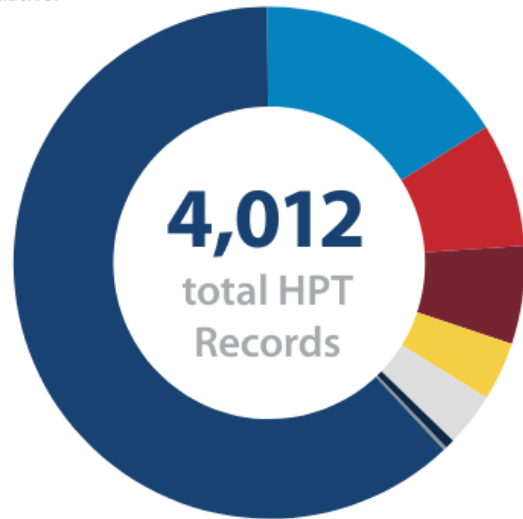


- Inform request for appropriations for a new/enhanced facility
- Analysis of VAMC Training Investments
 - VAMC as contributed over \$90M *annually* to health professional education
- Impact of VAMC on Indiana's Health Workforce
 - Quantifying the proportion of Indiana's health professionals who received training at VAMC
 - Data matching of trainee data to health professions data



Program Evaluation: VA Clinical Training of Health Care Professionals

Figure 6: Breakdown of total HPTs by health profession training initiative.



- 61.84% Physician Resident / Fellow (M.D. or D.O.)
- 16.25% Nursing (Nurse Practitioner and Licensed Practical Nursing)
- 7.83% Pharmacy
- 6.18% Medical Student
- 3.71% Other HPT Training Initiatives
- 3.39% Physician Assistants
- 0.60% Behavioral Health
- 0.20% Dentistry or Dental Auxiliary Program

4,012 VAMC HPTs records

47.0% Matched

1,895 out of 4,012

53.0% Unmatched

2,117 out of 4,012

1,042 out of 2,729
Medical Trainees
(Students, Residents, Fellows)



405 out of 652
Nursing



62 out of 136
Physician Assistant



169 out of 314
Pharmacy



4 out of 8
Dental



7 out of 24
Behavioral Health

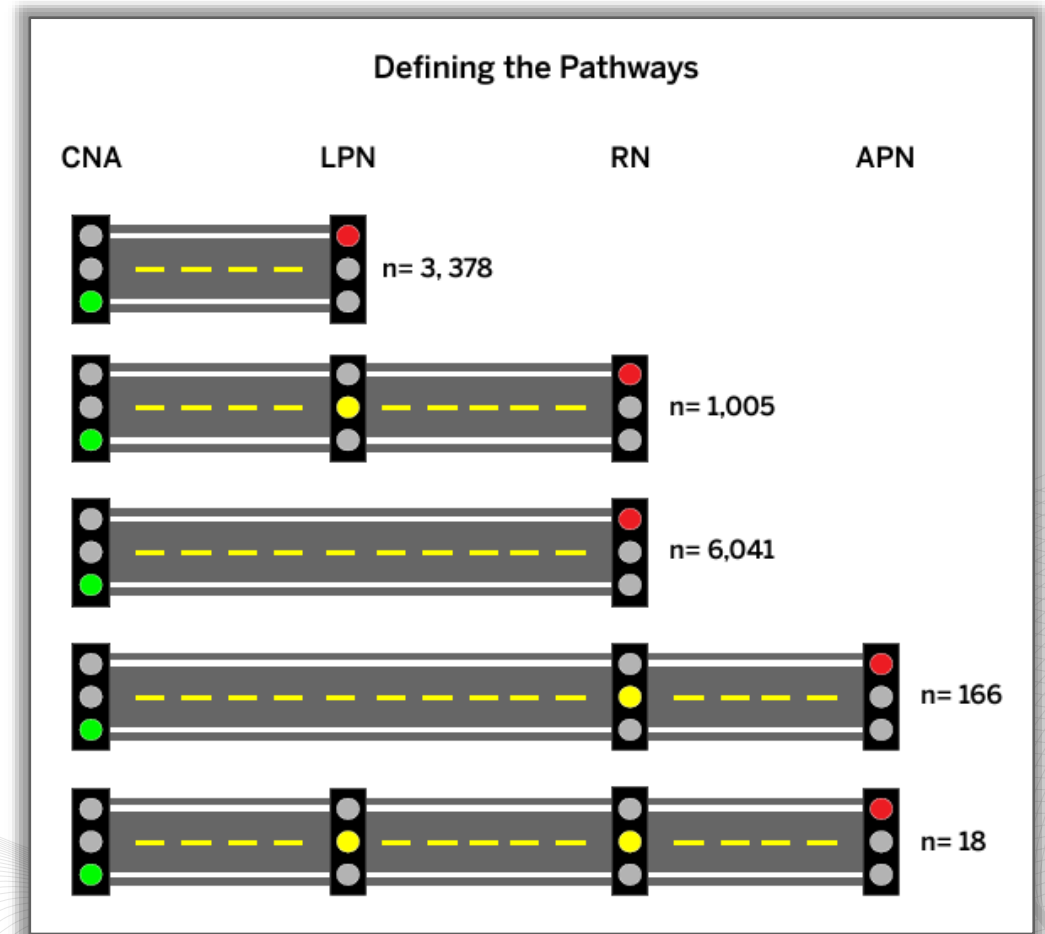


53 out of 149
Other Health
Professionals



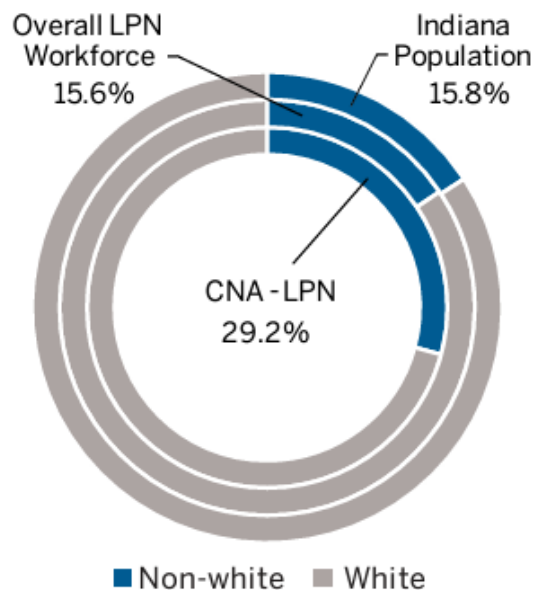
Nursing Career Pathways

- Collaborative Data Analysis
 - Data Matching through IPLA
 - Identifying CNAs who have obtained nursing licensure
- Implications for Nursing Education
 - Ivy Tech Community College Bridge Programs
 - CNA courses qualify as credit for nursing degree

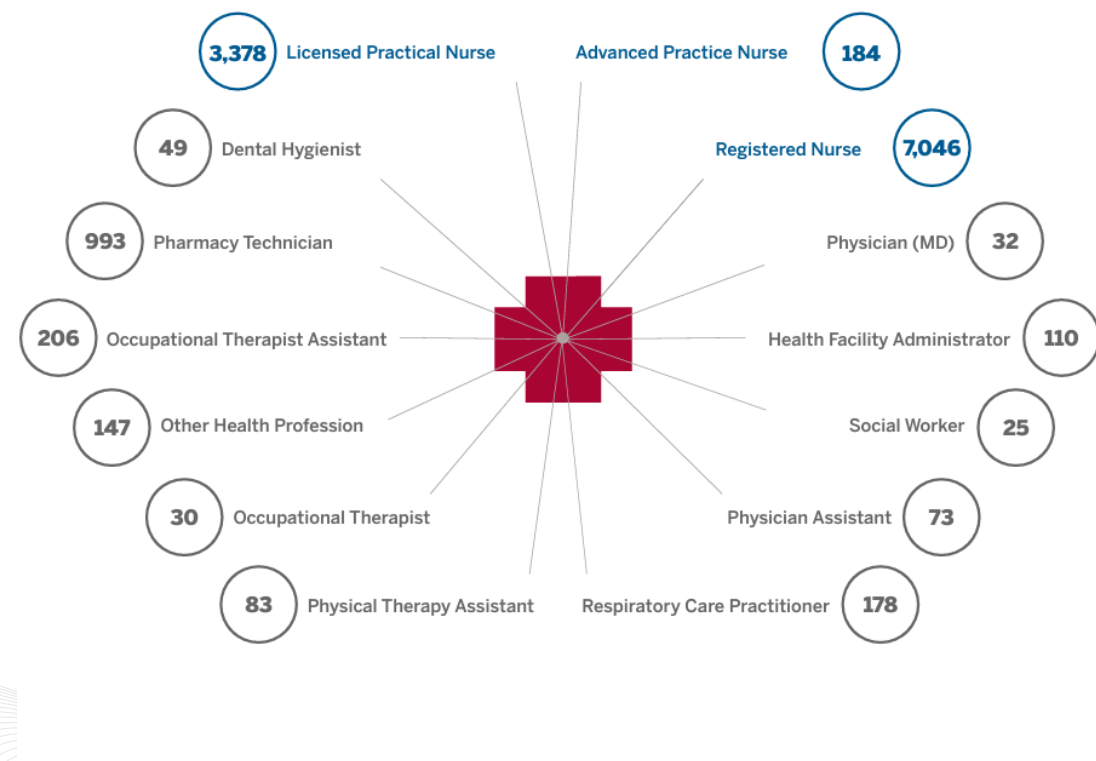
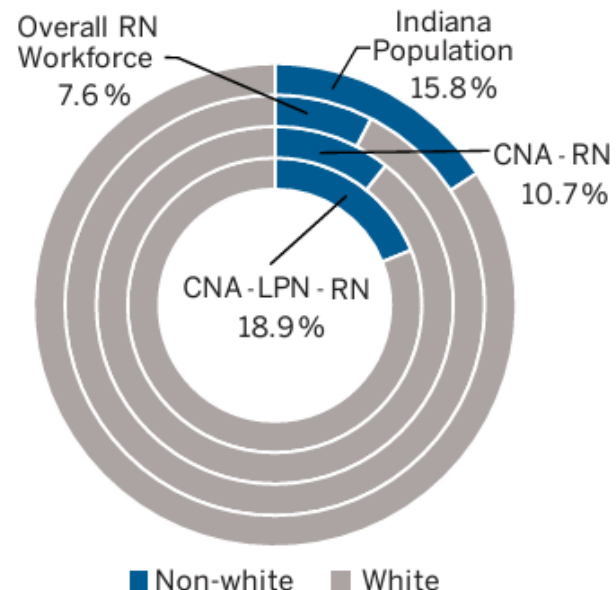


Nursing Career Pathways


Diversity: CNA - LPN Pathway⁷




Diversity: CNA - RN Pathway⁷





 sxvaughn@iupui.edu
bowenctr@iu.edu

 317.278.0316

 <https://bowenportal.org/contact-us/>

