



The Data You Need and That Others Want

Strategies for Collecting, Using, and Sharing Important Workforce Data

Adam Turner | American Board of Pediatrics

Sheila Mauldin | National Commission on Certification of Physician Assistants

Hannah Maxey | Veritas Health Solutions

Cindy Nalls | National Commission on Certification of Physician Assistants

#CLEAR2023AEC



Why is accurate and current workforce data important?

- Helps to determine if there is a sufficient and capable workforce to meet societal needs
- Provides information on training/education, diversity, geographical distribution
- Provides evidence needed to appropriate funding (training, recruitment, retention)
- Informs policy decision



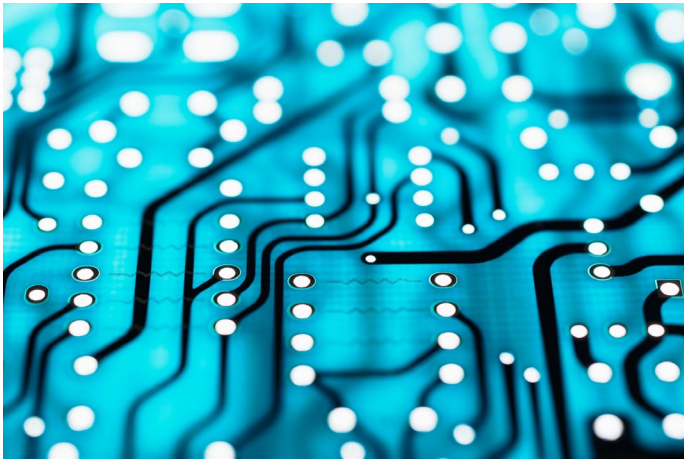
What are potential issues without accurate and current workforce data?

- Maldistribution of workers
- Surprised by surpluses or shortages
- Insufficient preparation for national emergencies
- Decreased access to care, services, etc.



Let's look at.....

Strategies for
collecting data



Strategies for
sharing data



Opportunities to Collect Data

Routine operations (initial or renewal applications, exams, etc.)

- ✓ Contact information (address, email address, phone)
- ✓ Age
- ✓ Education/training
- ✓ Disciplinary history



Opportunities to Collect Data

Special projects or strategic initiatives

- ✓ Ad hoc surveys or focus groups
 - Emerging issues, new products/services, time-sensitive issues, etc.
- ✓ Practice analysis

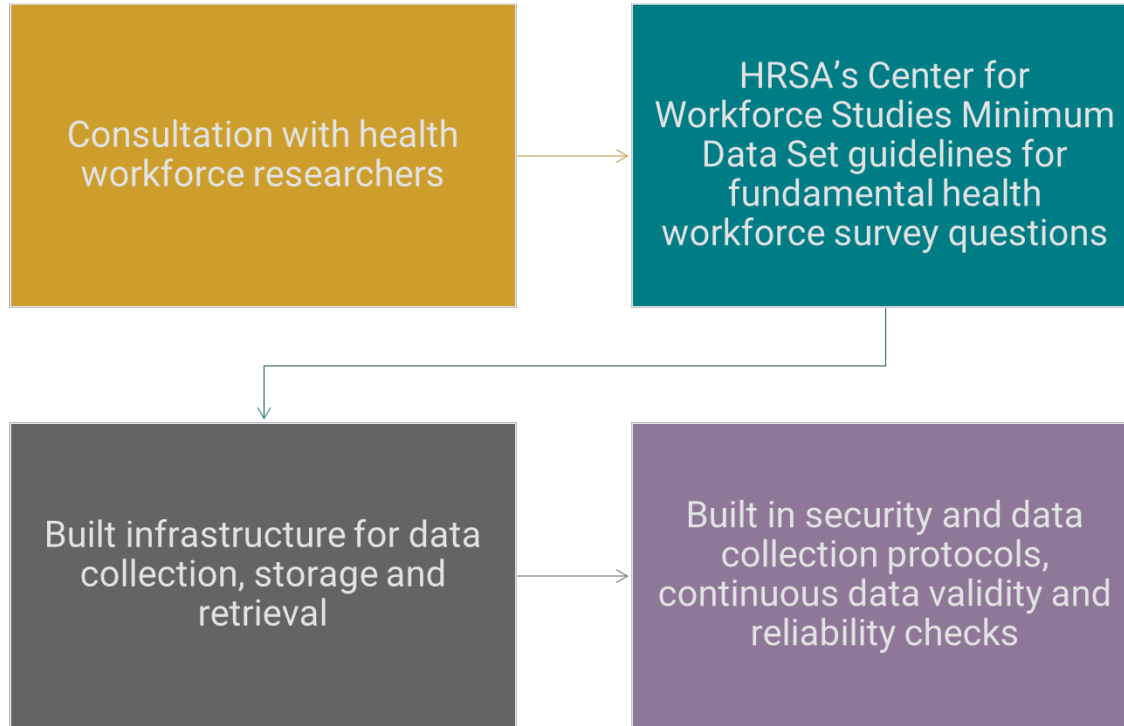


Opportunities to Collect Data – PA Professional Profile

- Comprehensive collection of workforce data
- Launched in 2012; voluntary, online format
- 3 modules
 - Recently Certified
 - About Me
 - About My Practice
- Annually reviewed and updated



Opportunities to Collect Data – PA Professional Profile



Opportunities to Collect Data – PA Professional Profile

- Race, ethnicity
- Education (degrees, postgraduate programs, etc.)
- Military status
- Specialty (all throughout career, principal and secondary) and years in each
- Practice setting
- Academic positions
- Retirement plans
- Burnout, job satisfaction
- Telemedicine practice
- Patient panels
- Job search, opportunities
- Educational debt
- Salary



PA Professional Profile

The Professional Profile will help demonstrate the measurable impact that you and your PA colleagues have on health care, inform NCCPA's exam development efforts, and help us evaluate the relevance and impact of certification and the new certification maintenance process. By participating you will also be able to have access to reports that compare your profile responses to other Certified PAs. These reports are available from your portal on the My Professional Profile tab. The information you provide here will be treated confidentially.

You should review, update and confirm your Profile is up to date at least once during every two-year CME cycle.

Completing the Profile should take less than 10 minutes.

NEW Effective 2/28/2023, new questions have been added.

It's easy!

Intriguing!

My Professional Profile

99%

99 Percent Complete

About Me (100% Complete)

Last Accessed 04/15/2020, Last Updated 04/15/2020, Last Confirmed 04/15/2020, 0 Unanswered Questions, 0 New Questions

My Practice (98% Complete)

Last Accessed 05/17/2023, Last Updated 05/17/2023, Last Confirmed 05/17/2023, 1 Unanswered Questions, 0 New Questions



Incentive for PAs to Update Their Profile

Free personalized reports updated in real time

PAs can compare their Profile responses to:

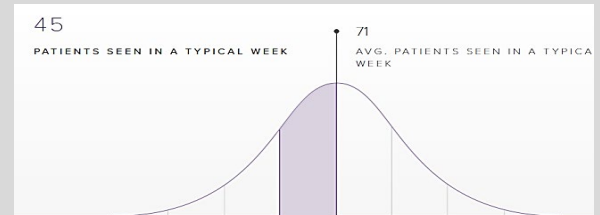
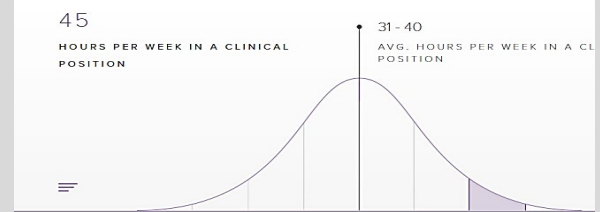
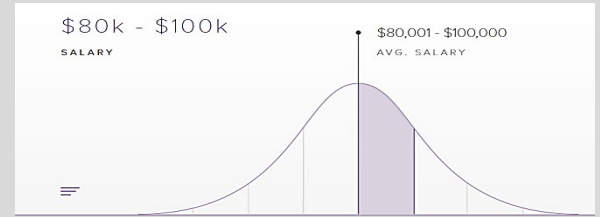
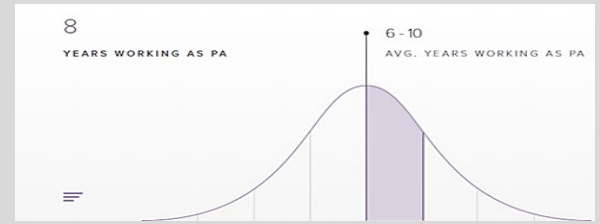
All other Certified PAs

PAs in their state

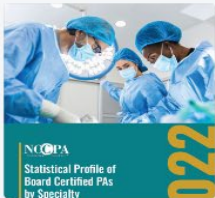
PAs in their specialty

PAs in both their state and specialty

~84% of PAs have current Profiles (updated within past 3 years)

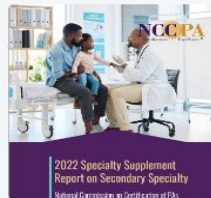


Uses of the Workforce Data – Statistical Reports



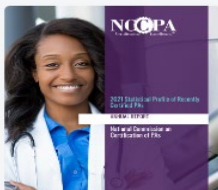
2022 Statistical Profile of Board Certified PAs by Specialty

[DOWNLOAD](#)



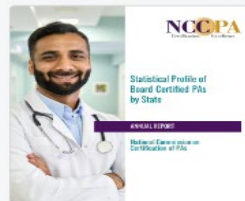
2022 Specialty Supplement Report on Secondary Specialty

[DOWNLOAD](#)



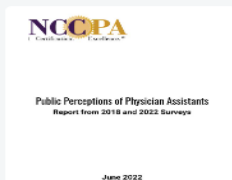
2021 Statistical Profile of Recently Certified PAs

[DOWNLOAD](#)



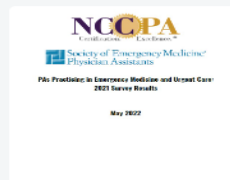
2021 Statistical Profile of Certified PAs by State

[DOWNLOAD](#)



Public Perceptions of Physician Assistants Report from 2018 and 2022 Surveys

[DOWNLOAD](#)



PAs Practicing in Emergency Medicine and Urgent Care: 2021 Survey Results

[DOWNLOAD](#)



Use of Profile Data – National Research Conference Presentations



INTERNATIONAL ASSOCIATION OF
MEDICAL REGULATORY AUTHORITIES



2023 CLEAR ANNUAL EDUCATIONAL CONFERENCE



#CLEAR2023AEC

Use of Workforce Data – Peer Reviewed Research Publications

The association of physician assistant/physician associate demographic and practice characteristics with perceptions of value of certification
A Kozikowski, D Morton-Rias...BMC Medical Education...,2023 – Springer

Characteristics of physician associates/assistants in dermatology
C Griffith, P Young...Archives of Dermatological Research...,2023 – Springer

Physician assistant/associate retirement intent: seeking the exit ramp
RS Hooker, A Kozikowski, JF Cawley...BMD Health Services...,2022 – Springer

The role of PAs in providing mental health care
SG Mauldin, D Morton-Rias, G Barnhill, A Kozikowski, RS Hooker...JAAPA, 2020 – Wolters Kluwer



Use of Workforce Data – External Researchers

- Policies allow sharing data to further advance the health and safety of the public, to inform health care policy or useful research related to the PA profession
- Process in place for NCCPA to consider requests for data from external researchers
- Only aggregated, non-identifiable data is shared





The Data You Need and That Others Want

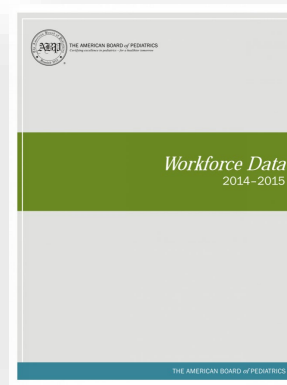
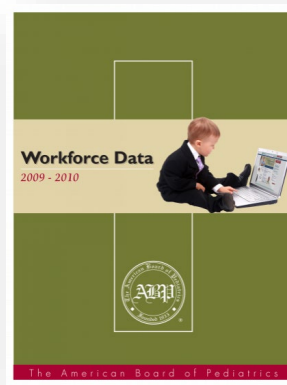
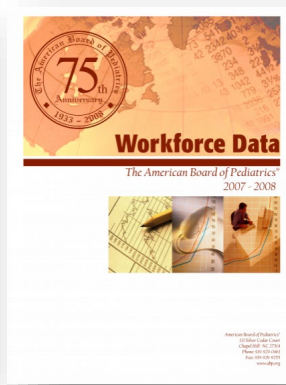
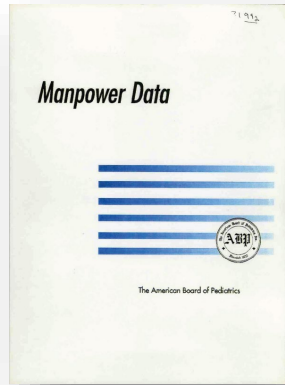
Strategies for Collecting, Using, and Sharing Important Workforce Data

Adam Turner | American Board of Pediatrics

#CLEAR2023AEC



31 Years of Published Workforce Data



Interactive ABP Workforce Data

The ABP collects data on trends in the pediatric workforce and is pleased to offer many interactive dashboards. Click on any image to view and explore the data.

- Certification Statistics and Demographics Since 1934
- U.S. State and County Distributions of General Pediatricians and Subspecialists
- Subspecialty Fellowship Statistics
- General Pediatric Residency Statistics
- Survey Data about the Pediatric Workforce
- Recent Publications, Annual Workforce Data Book, and Archived Data
- Pediatric Physicians Workforce Technology Summary

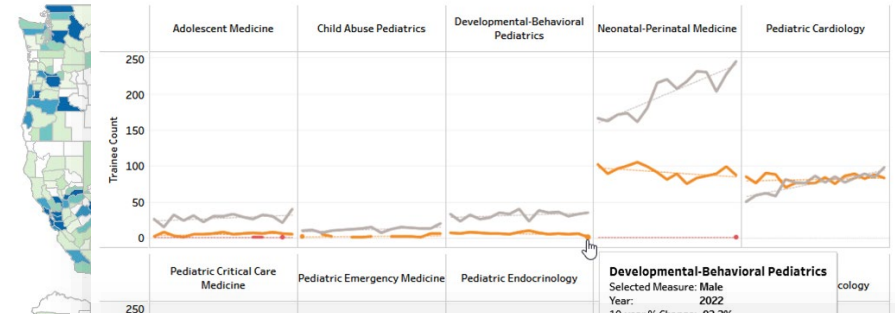
About the ABP's Data, Workforce Efforts, and Methods



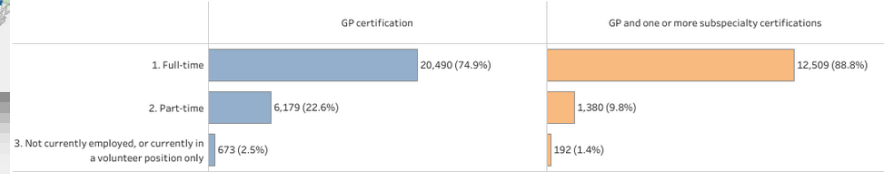
Background

- Track the supply of pediatricians in the US
- Track the growth and decline of our trainees
- Understand work dynamics
- Inform programs at the ABP
- Provide national information to the pediatric, health, and policy communities

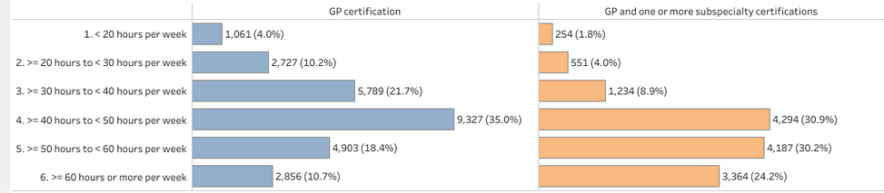
Distribution of the combination of those certified in General Pediatrics (alone) and those certified in both General Pediatrics and in another ABMS specialty by pediatricians per 100,000 Children (0-17)



Please indicate whether you are employed full- or part-time



On average, over the past 6 months, approximately how many hours did you work each week? Please include ALL time spent in administrative tasks, professional activities, research, medical education, and direct patient care. Exclude time on call when not actually working.)

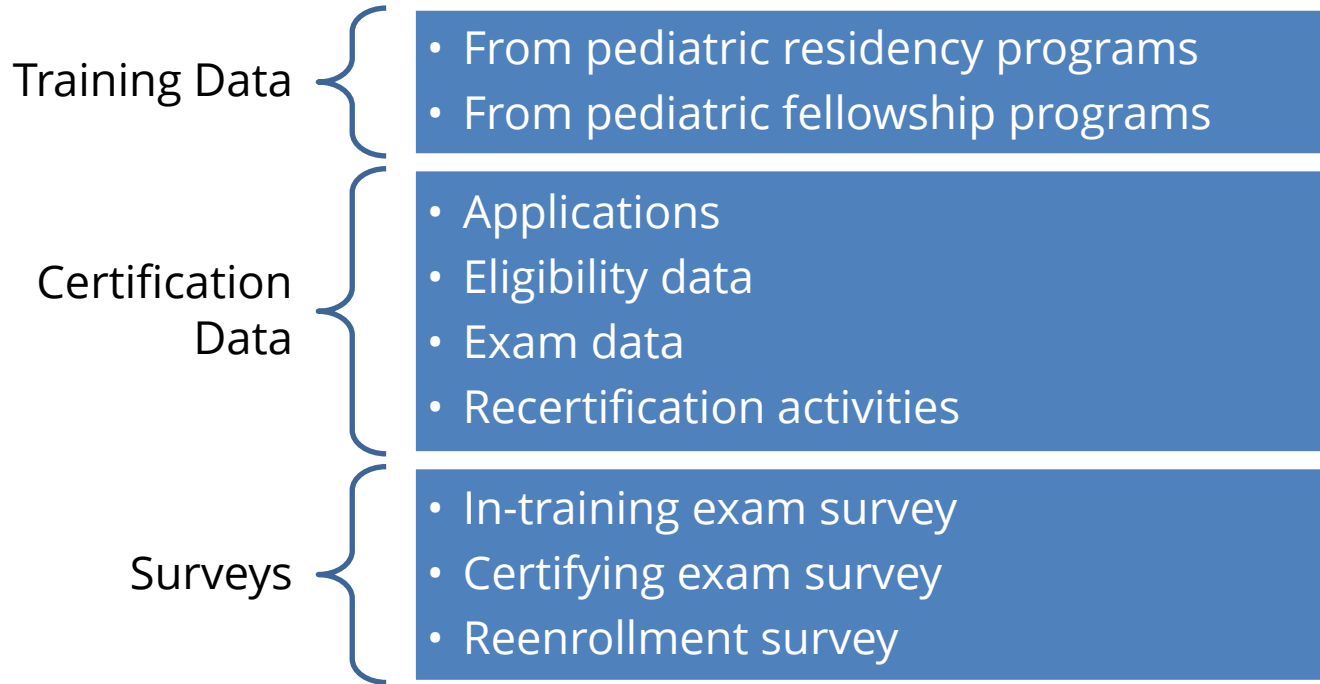


Opportunities to Collect Data – Pediatrics

- Demographics
 - Medical degree
 - Medical school location
 - Gender
 - Age
 - Race and ethnicity
- Training Information
 - Program/place and attributes
 - Debt accrued
- Certification Information
 - Specialty (all throughout career, principal and secondary) and years in each
- Practice setting
 - Geographic place and setting
 - Academic positions
 - Full/part-time, hours
 - Setting, place of practice (eg, private practice, hospital, industry)
 - Percent time in clinical/research settings
- Retirement plans
- Survey data
 - Standard data
 - Survey modules for topics of interest



Workforce Data – 3 Main Sources



Data Strategies

- Collection
 - Exam platforms
 - Qualtrics
- Storage
 - Database for training and certification data
 - Survey either in database or flat files
- Analysis
 - Clean survey data
 - Uses SAS to query, clean, transform, export data, and run models
 - Tableau used for analysis, reporting, or dashboarding (private and publicly)

qualtrics^{XM}

Microsoft[®]
SQL Server[™]

Excel

SAS

Tableau



Dissemination Strategies We Have Used

- Dashboards
 - This has replaced our standard 150+ page PDF report
- Manuscripts
 - Still key place for dissemination with longevity
- Excel tables
 - Supplements dashboard as a source for the end-user
- Online model
 - New for us; big input = big output; similar to dashboard but parameters precomputed for microsimulation
- Infographics
 - When dashboards aren't ideal; print is needed





A Few Examples

<https://www.abp.org/content/data-and-workforce>

#CLEAR2023AEC



Certification Counts

Pediatricians Ever Certified by the ABP Since 1934

Last Updated on 6/14/2023



137,975

Individual pediatricians certified in General Pediatrics since 1934



38,126

Pediatric subspecialists certified since 1934



39,502

Unique subspecialty certifications granted since 1961

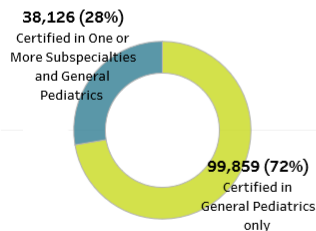


177,477

Unique General Pediatric and subspecialty certifications granted since 1934

All certified pediatricians must be certified in General Pediatrics first. Pediatricians may become certified in one or more ABP subspecialties following their General Pediatrics certification. Over 15,000 pediatricians have also pursued certifications at other American Board of Medical Specialties (ABMS) members boards and data on those certifications can be [explored in our separate analysis](#).

Overall Certification Breakdown

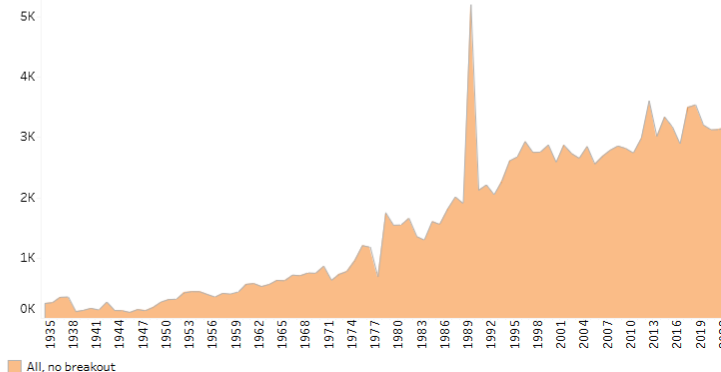


General Pediatric Certification Counts

based on initial year of certification

Select to analyze by...

All, no breakout



Race and Ethnicity Data

Is your organization the only one with the data?

Estimated Percentages of Race and Ethnicity Groups by GP/Subspecialty

	Asian	Middle Eastern or North African	URIM	White	Other	Two or more selected (non-URIM)
Not yet GP certified	21.8%	4.5%	18.7%	51.8%	0.7%	2.5%
General Pediatrics (only)	18.9%	2.4%	15.8%	60.5%	0.8%	1.6%
More than 1 Subspecialty	17.3%	4.4%	11.7%	63.4%	1.4%	1.9%
Neonatal-Perinatal Medicine	26					
Pediatric Emergency Medicine	17					
Pediatric Hematology-Oncology	20					
Pediatric Cardiology	23					
Pediatric Critical Care Medicine	18					

PEDIATRICS' PERSPECTIVES

Race and Ethnicity of Pediatric Trainees and the Board-Certified Pediatric Workforce

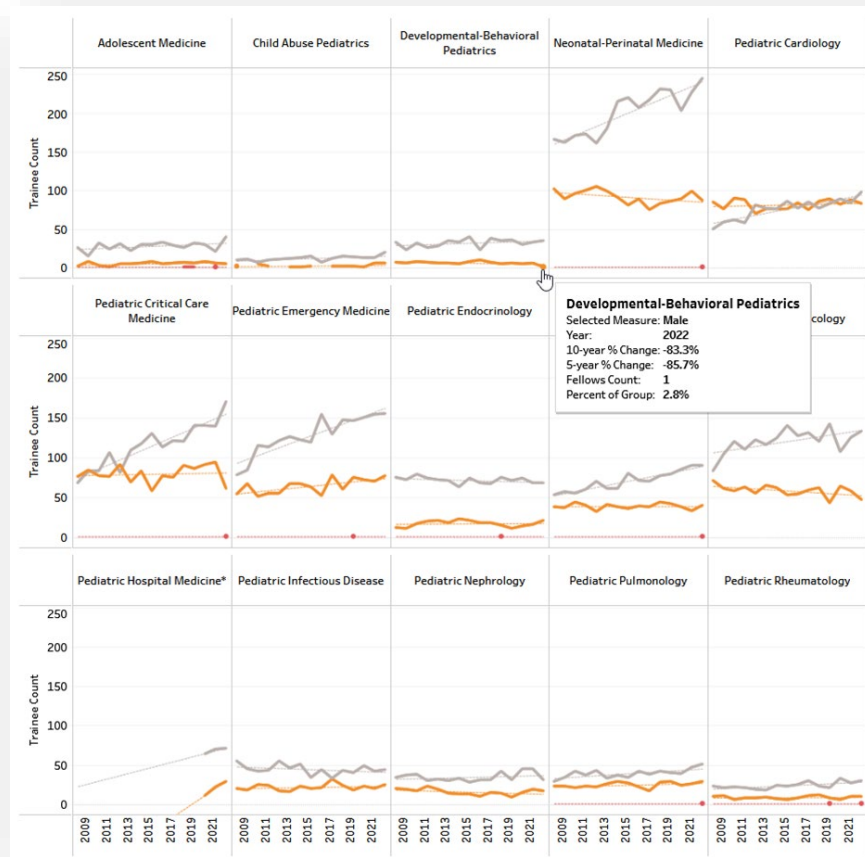
Adam L. Turner, MPH,* Crista J. Gregg, MR,* Laurel K. Leslie, MD, MPH*

In 1934, the first year the American Board of Pediatrics (ABP) began certifying pediatricians, the ABP certified its first African American pediatrician, Dr. Alonzo deGrate Smith. It was not without controversy, due to a series of policy barriers regarding board eligibility and membership in medical associations.¹ Over 85 years and more than 131,000 pediatricians later, the ABP is committed to continuing to address systemic barriers to racial and ethnic equity. As part of this effort, the ABP began collecting, analyzing, and reporting on race and ethnicity data for pediatric trainees and certified pediatricians in 2018. This commentary provides an introduction to the ABP's data collection efforts, its newly released data, and implications for the ABP and pediatric community.

*The American Board of Pediatrics, Chapel Hill, North Carolina



Subspecialty Trainees in the Pipeline



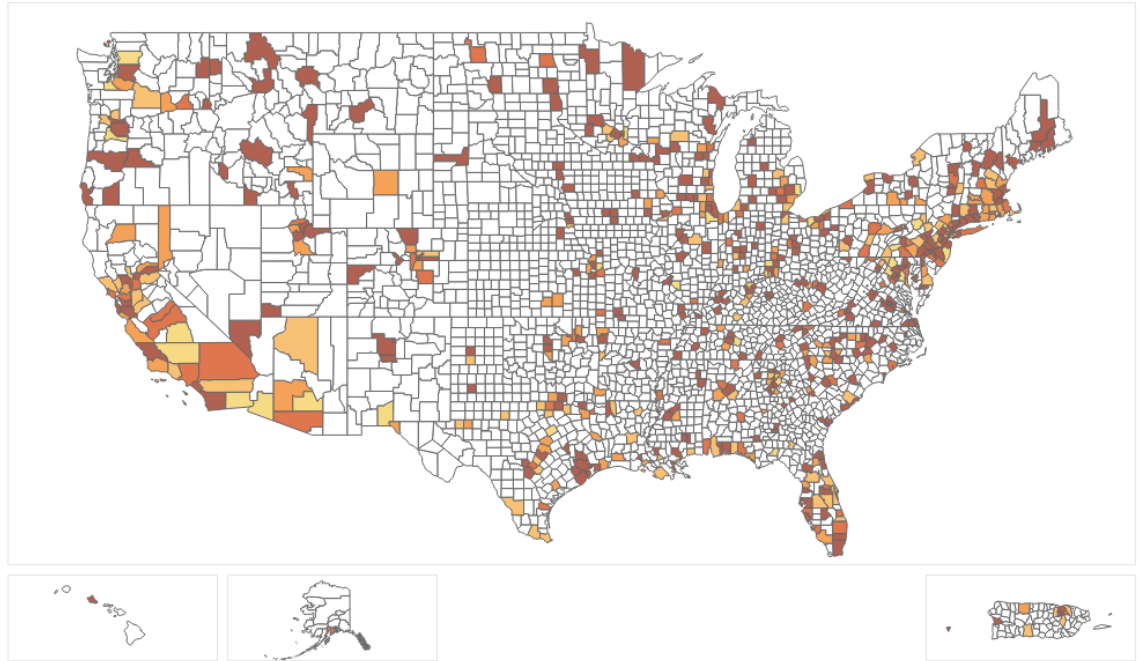
State & County Distributions

US-Based Pediatricians Ever Certified in Neonatal-Perinatal Medicine
5,285

Average # Per County
1.64*

Average # per 100,000 Children by County
2.07

Pediatricians Certified in Neonatal-Perinatal Medicine per 100,000 Children

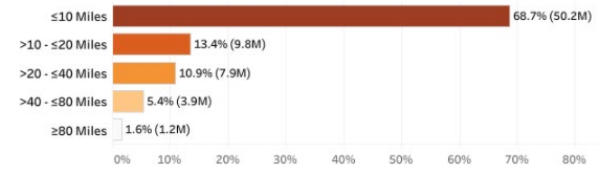


Driving Distance Calculations

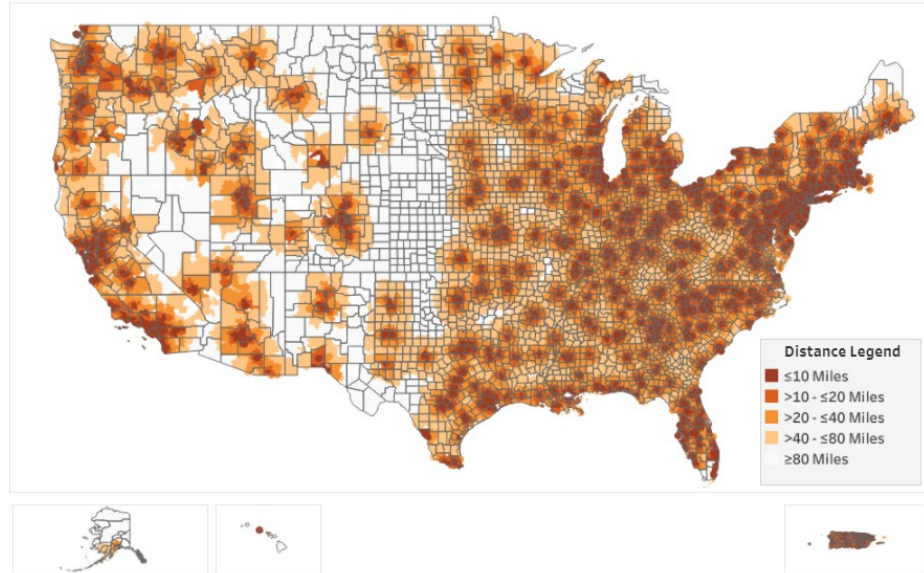
Pediatric Subspecialty
Neonatal-Perinatal Medicine

2019 Mean Driving Distance to Care:
11.8 miles

Percent (%) of Children and Millions of Children in the US by Distance

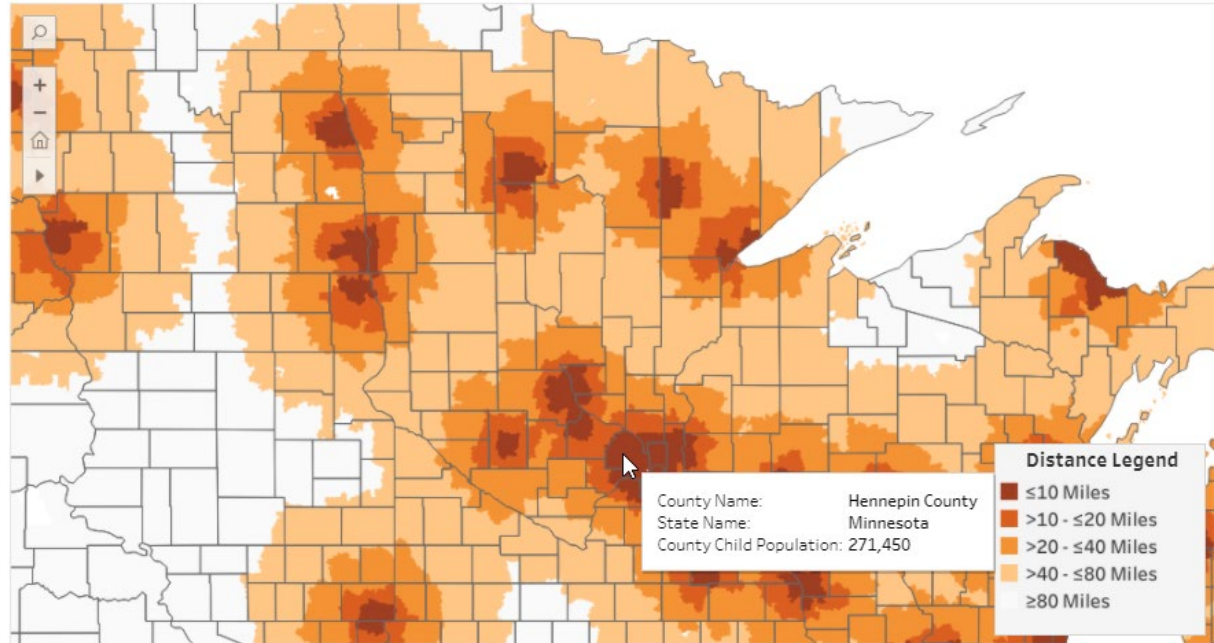


Distance to Those Currently Certified in Neonatal-Perinatal Medicine



Driving Distance Calculations

Distance to Those Currently Certified in Neonatal-Perinatal Medicine



Driving Distance Calculations

Research

JAMA Pediatrics | [Original Investigation](#)

Comparison of Number and Geographic Distribution of Pediatric Subspecialists and Patient Proximity to Specialized Care in the US Between 2003 and 2019

Adam Turner, MPH; Thomas Ricketts, PhD; Laurel K. Leslie, MD, MPH

[+ Supplemental content](#)

IMPORTANCE Geographic proximity to a pediatric subspecialist is a key factor in obtaining specialized care. However, comparative data regarding the number of pediatric subspecialists, distribution of subspecialists, and patient proximity to subspecialists in the United States between 2003 and 2019 have not been explored; the last known national analysis was published in 2006 and used data from 2003.

OBJECTIVE To compare the number and distribution of pediatric subspecialists and patient proximity to pediatric subspecialists in the United States between 2003 and 2019 and to assess whether the increase in the number of pediatric subspecialists is associated with improvements in patient proximity to specialized care and the geographic distribution of pediatric subspecialists.





What does it look like to combine these data into one model?

#CLEAR2023AEC



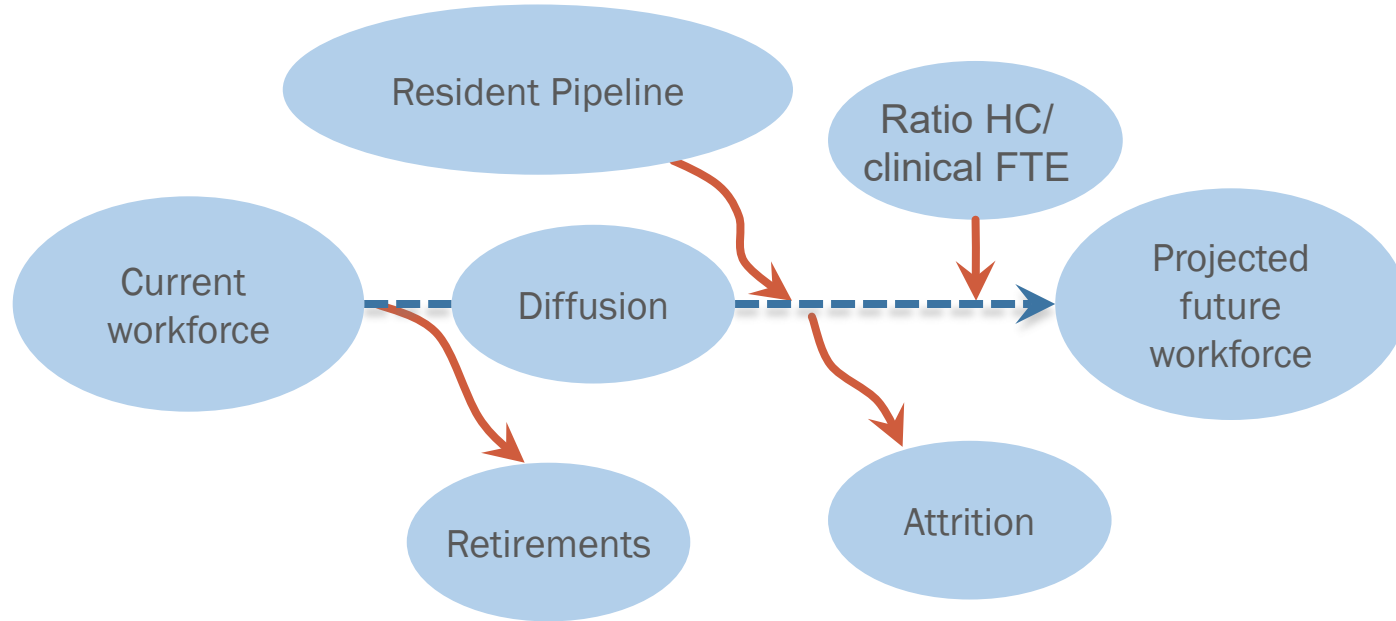
Subspecialty Modeling Project

In collaboration with
 | THE CECIL G. SHEPS CENTER FOR
HEALTH SERVICES RESEARCH

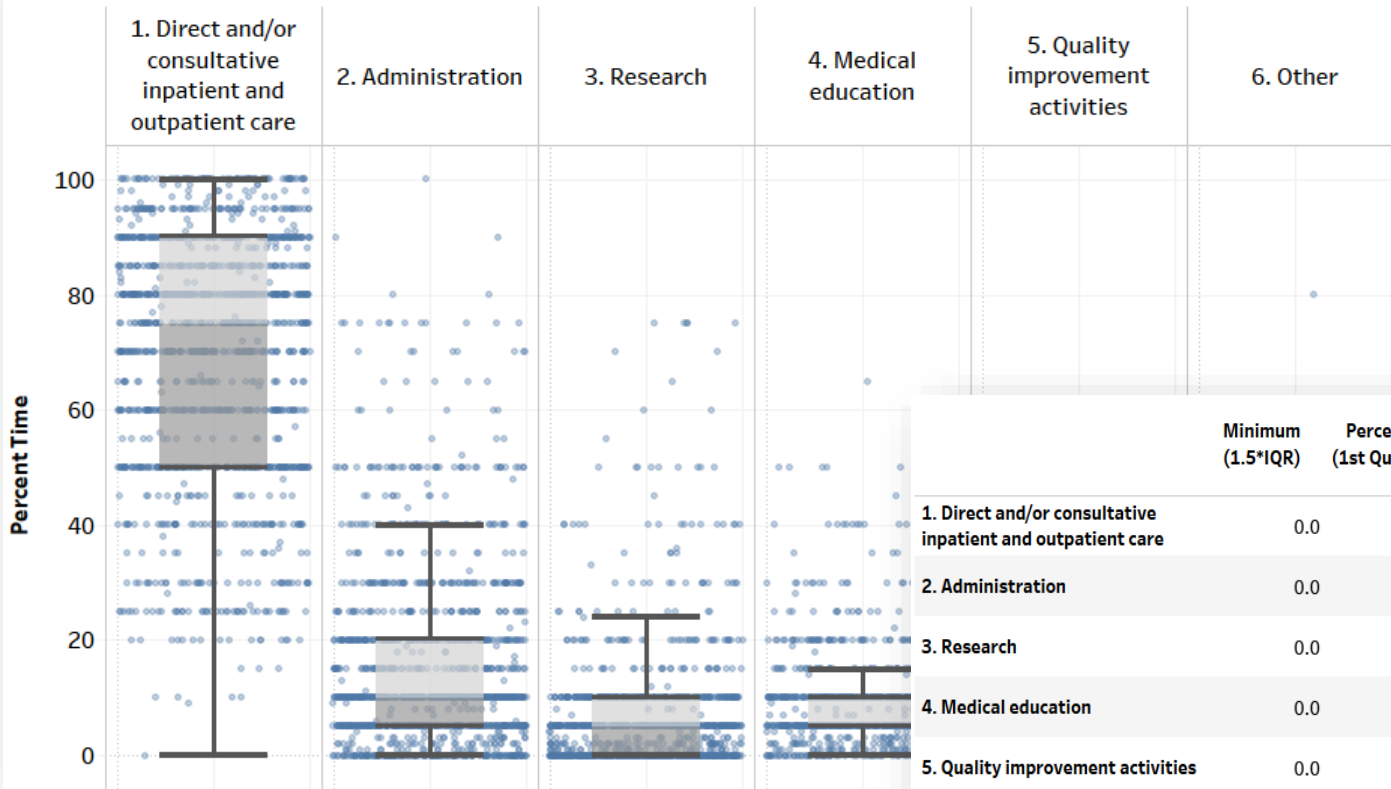
- Provide regional and national estimates of the clinical headcount and full-time equivalents (FTEs) of physicians in each subspecialty.
- Develop scenarios to estimate how potential changes (e.g., changes in retirement and attrition from the workforce, clinical hours worked, numbers of physicians in subspecialty training, length of training, other factors) may affect the future supply of pediatric subspecialties physicians.



Modeling the future supply of pediatric subspecialists



What proportion of your total professional time is spent performing each of the following tasks?



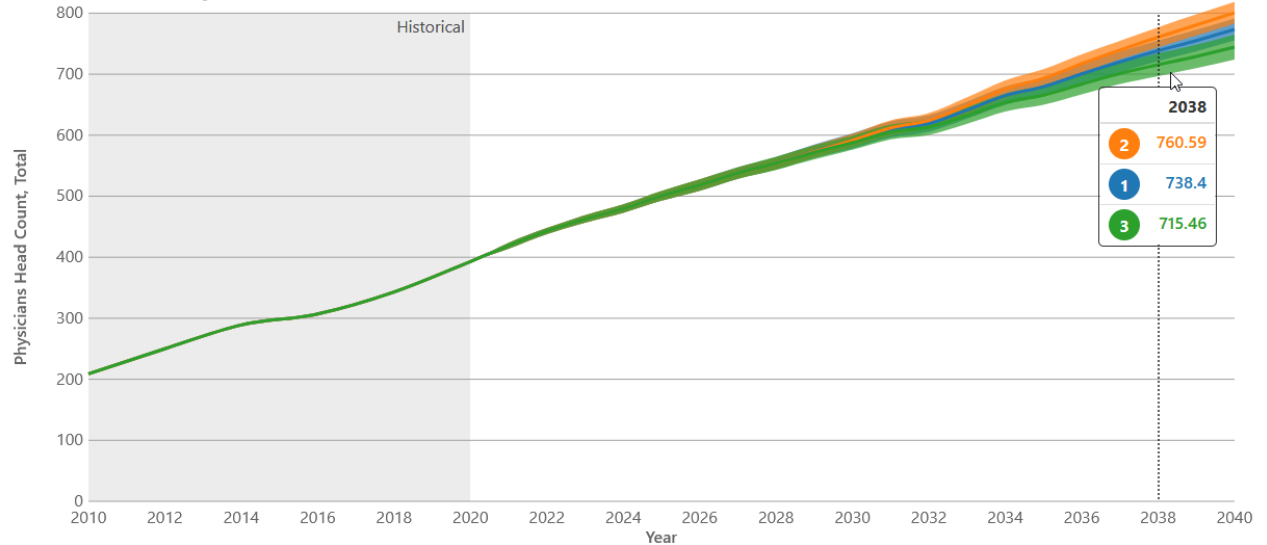
	Minimum (1.5*IQR)	Percentile (1st Quartile)	Percentile (Median)	Percentile (3rd Quartile)	Max (1.5*IQR)
1. Direct and/or consultative inpatient and outpatient care	0.0	50.0	75.0	90.0	100.0
2. Administration	0.0	5.0	10.0	20.0	42.5
3. Research	0.0	0.0	5.0	10.0	25.0
4. Medical education	0.0	5.0	5.0	10.0	17.5
5. Quality improvement activities	0.0	0.0	5.0	5.0	12.5
6. Other	0.0	0.0	0.0	0.0	0.0



National Supply Estimates

	Subspecialty	Total or Subspecialists per 100k Children	Head Count or Clinical Work Equivalent	Region/Division	Scenario	2020 - 2040 (% Change)
1	Pediatric Rheumatology	Total	Head Count	United States	Baseline	393 - 773.37 (+97%)
2	Pediatric Rheumatology	Total	Head Count	United States	Increase in Fellows by 12.5% by 2030	393 - 800.65 (+104%)
3	Pediatric Rheumatology	Total	Head Count	United States	Decrease in Fellows by 12.5% by 2030	393 - 744.33 (+89%)

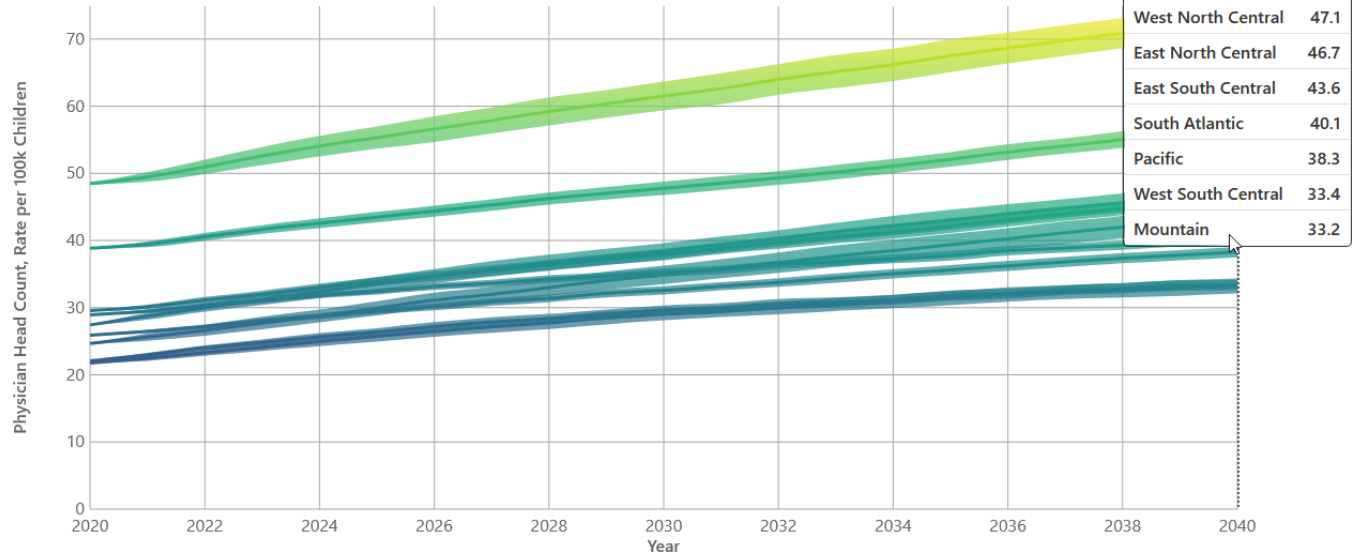
Interactive Projections Based on Selected Model Parameters



Regional Supply Estimates

Projection of Workforce Supply for All Pediatric Subspecialties (Combined)

Model Parameters: Census Division, Head Count, Subspecialists per 100k Children, Baseline





In Summary

#CLEAR2023AEC



- Training data and demographic data collected:
 - To credential/qualify for exam? Are requirements met?
- Administrative data generated
 - Exam data
 - Grant certification with recertification requirements
- Additional survey data greatly expands use cases internally/externally

Data Consumed



- Define pipeline of practitioners (trainees)
- Define current workforce estimates
- Data source for projecting future supply
- Where are they now?
- Survey data + Admin data = high value
- Placing data back in the hands of users with enhanced value

Alternate Data Use



Q/A: Questions for Reflection

- Where are you already collecting valuable data?
 - Who else has that data?
 - Who else may want that data?
- Do you have a defined strategy for analyzing and sharing the results?
 - Are there organizations/societies you can partner with to guide collection, reporting, and dissemination?
 - Can you give personalized results back to individuals to entice future participation?



Speaker Contact Information

Adam Turner
aturner@abpeds.org

Sheila Mauldin
sheilam@nccpa.net

#CLEAR2023AEC





Thank You

#CLEAR2023AEC

