Pediatric Physicians Workforce

Methodology Summary

THE AMERICAN BOARD *of* PEDIATRICS

Founded in 1933, the American Board of Pediatrics®. (ABP) is one of twenty-four physician certifying boards of the American Board of Medical Specialties (ABMS). The ABP is an independent, nonprofit organization whose certificate is recognized throughout the world as a credential signifying a high-level of pediatric physician competence.

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Table of Contents

Foreword

Welcome to the *Pediatric Physicians Workforce Methodology Summary*.

With the most recent editions of the *Pediatric Physicians Workforce Data Book* and the introduction of online dynamic visualizations in 2018, we have made numerous changes in the presentation and content of the information provided. Additionally, the ABP's workforce reporting efforts have evolved to incorporate information across the entire span of a pediatrician's career, from training and initial certification through continuing certification (also known as Maintenance of Certification or MOC). With these changes, this summary document seeks to explain the history of the ABP's workforce reporting efforts, the methodology used in our workforce reports, and further details about the ABP's certification, training, and census survey data.

Tracking the pediatric physician workforce is essential for understanding its composition, numbers, distribution, and practice patterns, but it is not just about publishing numbers. Our goal is to disseminate these data through reports and online interactive data visualization platforms that provide valuable information to pediatricians, pediatric residency and subspecialty training program directors, hospital administrators, policy makers, researchers, and others interested in ensuring that we have the skilled workforce necessary to meet the health care needs of children, adolescents, young adults, and their families.

The scope and depth of the ABP's workforce reporting efforts would not be possible without the information provided by trainees, program directors, and pediatricians. Thank you for your commitment to ensuring that every child, adolescent, and young adult, no matter what their background or where they live, has access to quality pediatric care.

Sincerely,

Laurel K. Leslie, MD, MPH
Vice President, Research
American Board of Pediatrics

Methodology

The American Board of Pediatrics (ABP) has a long history of collecting and disseminating data regarding the pediatric physician workforce. Over the years, there have been a number of changes in ABP policy, data sources, data complexity, and analytic and data display techniques. This section describes available data sources, our data collection process, and provides guides for interpretation of the data given these changes.

Data Sources: A Brief Description

This section describes the ABP data sources in brief. Further information about collection processes and analytics are discussed in later sections.

Primary Data Source:

1. **Residency and fellowship training data**: data collected through a combination of in-training exam data and program directors at residency and fellowship training sites for the purposes of training verification. This includes administrative data, e.g., address information, date of birth.
2. **Certification data**: data generated during the examination processes and ongoing certification activities of pediatricians.
3. **Census survey data**: data generated from surveys delivered throughout a pediatrician's training and career to aid the ABP in making operational decisions (see *Pediatric Physician Workforce: Entry and Progression* for more details).

Secondary Data Sources:

1. **ABMS member board certification data**: similar to certification data generated at the ABP, certification data of pediatricians certified at other member boards, e.g., The American Board of Allergy and Immunology, are collected and reported in aggregate.
2. **Population data**: data generated by United States (U.S.) Census Bureau are combined with ABP certification and geographic data to generate ratios of pediatric physicians to child population for various geographic groups, e.g., state and county.
3. **Geospatial shapefile data**: data generated by external organizations, (e.g., Dartmouth Atlas of Health Care), are employed to aid in the geographic understanding of the dynamic nature of U.S. healthcare delivery.
4. **Match data**: data generated by the National Resident Matching Program (NRMP) Match process for trainees matching to U.S. residency and fellowship positions are cross-linked with data available through the ABP regarding final rosters of trainees after the Match process.

Pediatric Physician Workforce: Entry and Progression

For the reader less familiar with medical training and certification processes, understanding the entry into and progression through pediatric residency training, certification, and continuing certification (also known as Maintenance of Certification or MOC) is important for understanding the data presented by the ABP.

The ABP's interactions with trainees begin once a trainee completes medical school either in the United States (U.S.) or internationally and starts his/her/their residency training (see Figure A). In categorical pediatric residency programs, training typically lasts three years. The duration may be longer for individual residents if they are in training programs that are integrated with more than one of the American Board of Medical Specialties (ABMS)-approved specialties; for example, Medicine-Pediatrics (Med-Peds) programs provide training in both adult and pediatric medicine and require four years of training. Alternatively, training may be shorter in certain circumstances, e.g., an international medical graduate with previous training in a non-accredited general pediatrics residency program, trainee participating in an Accelerated Research Pathway.

A General Pediatrics certification is required before one is eligible for a pediatric subspecialty certification.

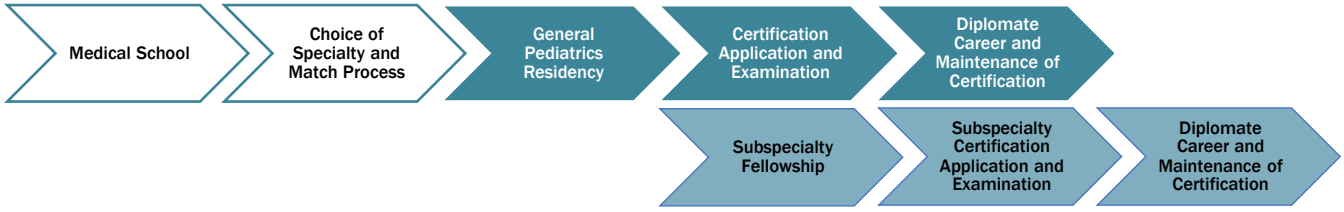
Most individuals choose to obtain board certification upon completion of their General Pediatrics (GP) residency training. Certification is a voluntary process that exceeds requirements beyond those set by state licensing boards for practicing medicine. Residents seeking initial certification in GP through the ABP must: 1) complete an Accreditation Council of Graduate Medical Education (ACGME)-accredited training program in pediatrics, 2) receive an attestation from their program director of satisfactory performance during residency in each of six domains specified by the ACGME, and 3) obtain a valid, unrestricted medical license through the medical board in one or more states.

Upon passing the GP Certifying Examination, a pediatrician becomes an ABP diplomate, i.e., certified pediatrician, and is automatically enrolled in Continuing certification. Pediatricians may voluntarily elect to maintain their certification by participating in continuing certification. If a pediatrician participates in continuing certification, s/he chooses to meet standards of excellence with respect to lifelong learning, assessment, and practice improvement. The ABP continues to track diplomates who participate in continuing certification throughout their careers.

Pediatricians who have successfully completed their GP residency may choose to pursue subspecialty certification (e.g., pediatric nephrology, pediatric cardiology, developmental-behavioral pediatrics) by beginning a pediatric subspecialty fellowship program (see Figure A: second pathway), even if they have not yet taken their GP Certifying Examination. However, GP certification is required before one is eligible to apply for pediatric subspecialty certification through the ABP.

Subspecialty fellowship training typically follows a path similar to the GP certification pathway. Depending on the subspecialty, certification may be administered by the ABP or administered by one of the other ABMS boards, e.g., American Board of Internal Medicine. In the case of co-sponsored subspecialties, certifying examinations may be administered to the other member boards' diplomates, but certification is awarded by the "parent" board, e.g., ABP to ABP diplomates, ABIM to ABIM diplomates.

Figure A. Workforce Entry & Progression



Description of Data Collection Points

The information presented in the ABP workforce reports and dashboards are a consolidation of data collected for normal business operations at the ABP through the residency and fellowship data, certification data, administrative data, and census survey data.

Residency program directors submit basic **training data** annually to the ABP that includes demographics of their current pediatric residents as well as information about whether an individual resident is meeting standards of clinical and professional performance set by the ABP**.** This information informs the ABP regarding the number and demographics of residents who qualify to "sit for," or "take," the GP Certifying Examination upon completion of their GP residency training. These training data are collected annually and entered into the ABP's internal Certification Management System (CMS).

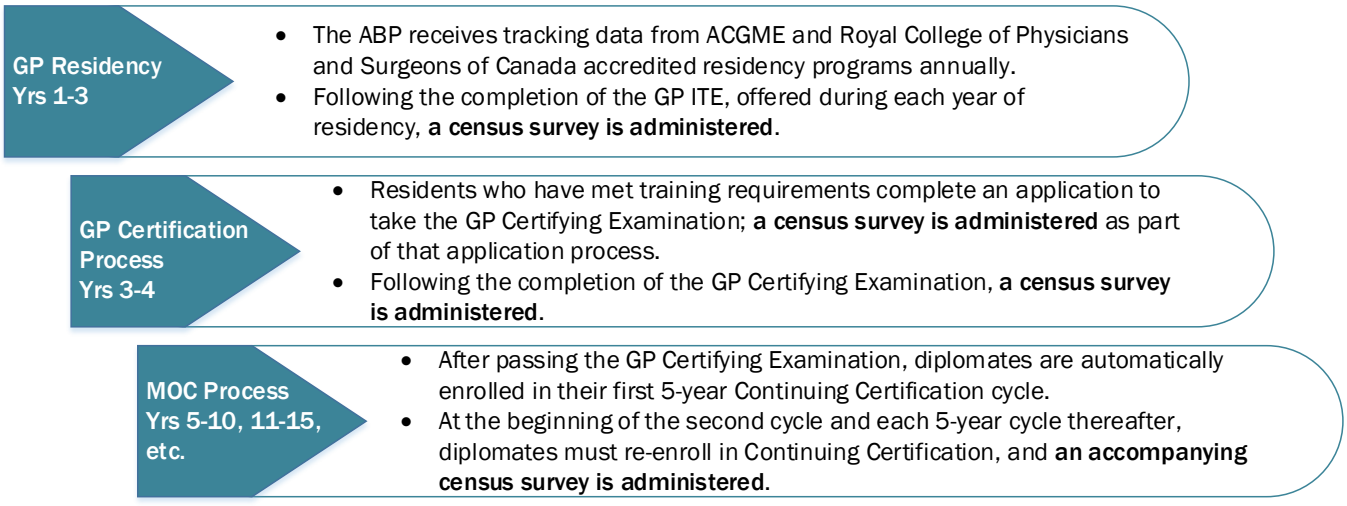
As a trainee progresses through residency, GP certification, subspecialty certification, and ultimately into participation in continuing certification, the ABP collects and stores information through its **census surveys**. These surveys ask about current work setting, hours, work profile, and other data that guide the ABP's planning around its certification processes.

Figure B illustrates a standard example of a trainee in a categorical general pediatrics residency.

Data collection begins in the first year of residency with residency training data provided by residency program directors at the time of the GP In-Training Examination (GP ITE). The ABP offers the GP ITE to pediatric residents each year during their residency training and the exam is intended to be used for educational purposes only. An individual trainee, in concert with his/her/their program director, may use the ITE scores to identify possible knowledge gaps. Program directors may also use exam scores in the aggregate to identify possible gaps in knowledge across trainees at their program.

A post-examination census survey is offered with the GP ITE in each year of training.

Figure B. Workforce Data Collection for a Resident Completing a Categorical General Pediatrics Residency



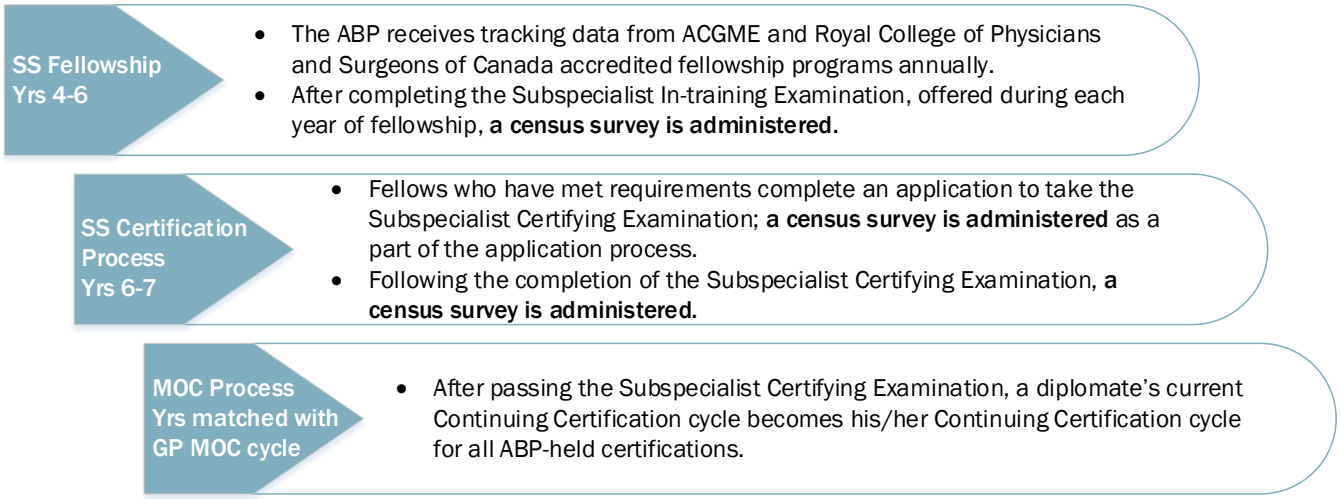
Before residency is completed, usually in the third year of training, residents can apply to take the GP Certifying Examination. Workforce census surveys are typically administered during the application process and, again, at the time a resident sits for the GP Certifying Examination. After passing the GP Certifying Examination, a resident is considered a certified pediatrician, or diplomate, and is automatically enrolled in his/her first five-year continuing certification cycle in the following year. At the end of that five-year cycle, a diplomate must complete a continuing certification application to enter a second, five-year continuing certification cycle in the following year. A workforce census survey is associated with each opportunity for re-

Certified pediatricians may choose to exit the Maintenance of Certification process at any time by not re-enrolling in MOC, although most pediatricians do maintain certification.

enrollment in continuing certification. For the most part, there are at least five years between when a diplomate takes the initial certifying examination and re-enrolls in continuing certification. While most diplomates do meet these requirements and keep up with continuing certification on the regular five-year cycle, some allow their certifications to lapse by not completing all continuing certification requirements, thereby extending the time between census surveys to greater than five years.

The text above details data collection points from the viewpoint of a GP diplomate; many of the same data collection points are relevant for individuals participating in a pediatric subspecialty fellowship program and pursuing subspecialty certification. Program directors share information about the numbers and demographics of individuals participating in their training programs. Pediatric subspecialty fellows apply for and take Subspecialty In-Training Examinations (SITE). Subspecialty fellows may be asked to complete a census survey with their initial subspecialty certification application and following their Subspecialty (SS) Certifying Examination. Figure C, below, depicts the experience of the standard subspecialty fellowship participant.

Figure C. **Workforce Data Collection for Diplomates Completing a Standard Subspecialist Fellowship**



It should be noted that certified pediatricians may choose to exit the continuing certification process at any time by not re-enrolling, although most pediatricians do maintain certification. Also, some diplomates were certified prior to the institution of requirement for participation in continuing certification, see Certification Status in *Key Definitions* for more details. These individuals may voluntarily choose to participate in continuing certification. Thus, some workforce reports or data dashboards may not capture all practicing pediatricians, particularly the *Continuing Certification Enrollment Census Survey*.

To take these exceptions into account, analyses tables and figures in the ABP workforce reports and dashboards are notated with the corresponding sample information and any critical considerations for interpretation.

Guide to Data Interpretation for Complex Issues

Individuals using the information in the ABP's workforce reports should be aware of several considerations for data interpretation, both for the data presented in this report and if trends are calculated comparing these data with data presented in previous reports.

Evolution of certification over time

- Certification is a complex process that is continually evolving. The types and characteristics of residency and subspecialty programs and policies regarding certification have changed over time. For example, several ABP-administered pediatric subspecialty certification programs did not exist when the first workforce data book was published in 1992, like Developmental Behavioral Pediatrics. Others have changed in important but subtle ways. See *Pediatric Subspecialty Types* in key definitions for more information and *Timeline of Certification and Events Impacting Workforce Reporting* for start dates for all certifications.
- Continuing certification has also evolved. Prior to 1980, a formalized, systematic mechanism to re-assess a pediatrician's knowledge or skills over time did not exist. Voluntary recertification began in 1980 and continued to evolve to the continuing certification program of today. Currently, individuals who obtained their initial certification on or after May 1, 1988 and who wish to maintain certification must participate in continuing certification. See Maintenance of Certification and Certification Status in *Key Definitions* for more details.

Current reports in 2020 and beyond account for changes and may be slightly different in counts than reports from prior years.

Data collection and analyses has changed over time

- Data quality have improved over time. Where possible, data are corrected in current reports and dashboards, even for those that include retrospective data, e.g., last 15 years of data. However, old reports have not been updated with newer data queries.
    - For example, in 2020, residency and training data were overhauled with updated queries allowing a more accurate accounting of current and past training where changes were made in the middle of training. Current reports in 2020 and beyond account for changes and may be slightly different in counts than reports from prior years.
- Data elements have been dropped. For example, residents serving a fourth year as a chief resident are currently included in program directors' reports to the ABP and were previously included in reports regarding trainees. Since 2019, they have been excluded so that the training data collection reverts to its primary mission: to track individuals who are seeking certification.
- Data elements have been added.
    - Reporting of residency and fellowship training data now include program region, program complement size, and other information.
    - Race/Ethnicity. To understand pediatric workforce diversity and test examinations for biases, the ABP added questions on race/ethnicity and languages spoken with patients to census surveys in 2018. See the *Appendix* for more details.
- Inclusion of only ACGME-accredited programs. Prior to the *Pediatric Physician Workforce Data Book, 2016-17,* Canadian residency programs were included in the training data for residency and subspecialty fellowship programs. This led to some confusion, as the requirements for Canadian programs accredited by the Royal College of Physicians and Surgeons of Canada (RCPSC) differ from those for U.S. and Puerto Rican programs accredited through the ACGME. We made the decision in 2017 to only display data for residency and subspecialty fellowship programs in ACGME-accredited programs. When data from previous years are reported in future reports, those numbers will have been recalculated under this framework for ease of comparison, but older reports have not been

updated. When using online visualizations of the training data, Canadian residency programs are not included by default but may be viewed by modifying available filters.

- Sample Restriction in Some Tables to "Ever Certified, Age 70 and below." Prior to 2015, the ABP was able to access the U.S. Social Security Administration's Death Master File. Due to changes in federal regulations, we are no longer able to access these data and cannot determine which diplomates have deceased. The ABP is also unable to identify all diplomates who are retired. For those reasons, a proxy measure is now used to limit the sample for some analyses to those diplomates ever certified and age 70 and under. These limitations should be considered in any use of the data for workforce forecasting purposes. When using online visualizations, filtering may be used to go beyond this age limit based on user preference.
- The content, timing, and processes of the ABP's census surveys have changed over time. Accordingly, newer reporting of census surveys are entered into their own reporting mechanism for clarification and standardization purposes.
- SS Certifying Examinations are typically offered every other year. Regardless of when training ends, a recently graduated fellow may have to wait anywhere from a few months to more than a year to take the certifying examination. This also affects how frequently census survey information is collected for each subspecialty, as the survey is administered after the SS Certifying Examination. Accordingly, data included in reports of census surveys may come from odd or even years.

Data consistency with other sources

- ABP reports may not fully match ABMS reports or other sources of similar information.
    - These inconsistences result primarily from data being pulled from different timepoints. One report may simply include newer data than another. Where possible, data access dates have been added to reports/dashboards for clarity.
    - While not common, public data reported by ABMS may not include every diplomate as data sent to ABMS for those residing in the European Economic Area are not included due to General Data Protection Regulation (GDPR) requirements.

The ABP data may not align with the NRMP Match data. Numbers provided in the NRMP Match are often close to the numbers for of active individuals in residency and fellowship positions captured by the ABP. However, the Match data may not fully capture the number of residents and fellows that enter training in an academic year since not all programs participate in the match and not all positions for participating programs are filled during the match. Thus, some trainees enter into programs outside of the match or after the match is completed.

Limitations to ABP data which have an impact on the workforce

- ABP Data only represents certified pediatricians. ABP data does not take into account those practicing in pediatrics without a ABP certificate. This may include adult practitioners certified in other disciplines, advanced practice providers, and those who participated in pediatric residency and/or fellowships but may not have been certified for whatever reason.
- ABP data do not track 100% of residents and fellows. To our knowledge, ABP data captures the vast majority of all in training in pediatrics, however, in some rare instances training may not be reported until later in one's progression into training. This is especially true in some combined training programs where a trainee may leave pediatrics training after a brief stint to train in other disciplines. Similarly, for those whose training does not fit into a typical academic year (eg, spans only a few months due leave of absences), the ABP may choose to not report those data. Typically, anyone with training of eight or more months for a given academic year is reported, which accounts for more than 99% of all trainees.
- Clinical activity of the pediatric workforce is complex to measure. The workforce reports and dashboards present information on all pediatricians ever certified over time. In addition, estimates are provided for the number of pediatric physicians by state. However, the ABP is unable to report on

whether individual pediatric physicians included in these tables are clinically active and whether they are full-time or part-time. Any data used for workforce estimates should attempt to control for rates of clinical inactivity and part-time employment or state these clearly in the limitations.

- Geographic location may not represent clinical practice location. Locations presented in the workforce reports and dashboards are based on the latest mailing address on file at the ABP. Individuals have the flexibility to provide either their personal or primary work setting address. Personal addresses may serve as an appropriate proxy for practice location as county and state are the smallest area of analysis, however, this may not be suitable for all use cases and may lead to categorization issues, particularly at smaller levels of analysis.

Changes to Tables, Figures, and Maps in Reports:

- Inclusion of Data Source, Sample, Response Rate, Missing Data, and Considerations for Interpretation. Where possible, and particularly in published reports, footnotes have been added to most tables and figures to aid the reader in data interpretation. These include:
    - *Source of Data*. Data presented vary in their source and may be drawn from training data entered into the ABP's Certification Management System, results from census surveys described previously, or another source, such as U.S. Census Data.
    - *Sample*. The samples for the tables published vary within reports. Please use the Key Definitions found later in this summary for explanations of the samples where necessary.
    - *Response Rate*. For all census survey data reported, the response rate has been calculated to provide the reader an indication of the completeness of the data collected.
    - *Missing Data.* Missing data may occur with both administrative and survey data. Causes for missing data are numerous and include missing by design (e.g., skip pattern in a survey), missing by respondent choice (e.g., information of a sensitive nature), missing due to measurement error (e.g., data entry or survey error), and missing due to other factors. Where data are missing, the cause(s) and description of the missing data are provided.
    - *Considerations for Interpretation.* When relevant, there is a description of definition changes or nuances of the data that should be considered when interpreting the data in the table, map, or figure.

Timeline of Certification and Events Impacting Workforce Reporting

Year	Year Certification First Offered	Policy/Program Changes	Reporting/Dashboard Changes
1934	General Pediatrics		
1961	Pediatric Cardiology		
1971	*Allergy and Immunology		
1974	Pediatric Hematology-Oncology		
1974	Pediatric Nephrology		
1975	Neonatal-Perinatal Medicine		
1978	Pediatric Endocrinology		
1980		Recertification was implemented by the ABP from 1980 through 2002, Initially beginning with a voluntary process from 1980 through 1995. From 1996 through 2002, an open book examination was required for recertification for those whose certifications were up for renewal.	
1986	Pediatric Pulmonology		
1987	Pediatric Critical Care Medicine		
1988		The ABP issued the first time-limited certificates in General Pediatrics in May 1988. See *Impact of Policies and Operational Decisions on ABP Certifications* for more information.	
1989		The ABP offered the last oral exam in General Pediatrics in 1989, opting to move to a longer written certifying exam (two days in length at that time). See *Impact of Policies and Operational Decisions on ABP Certifications* for more information.	
1990	Pediatric Gastroenterology		
1992	(1) Pediatric Emergency Medicine; (2) Pediatric Rheumatology	First year of residency training data collected.	First annual workforce data report published by the ABP.
1993	†Sports Medicine		
1994	(1) Adolescent Medicine; (2) †Medical Toxicology		
1994	Pediatric Infectious Diseases		
1995		First year of fellowship training data collected.	
2001	*Neurodevelopmental Disabilities		
2002	Developmental-Behavioral Pediatrics		
2003		Continuing certification (also known as Maintenance of Certification or MOC) began in 2003 and was adopted by all 24 American Board of Medical Specialty (ABMS) boards. Cycle lengths have also varied since 1980 and are currently at five years.	
2006	†Pediatric Transplant Hepatology		
2007	†Sleep Medicine		
2007		Since 2007, all first-time applicants have been required to apply directly to the American Board of Psychiatry and Neurology (ABPN) for Neurodevelopmental Disabilities certification and not apply through the ABP.	
2008	†Hospice and Palliative Medicine		
2009	Child Abuse Pediatrics	Comprehensive approach to delivering census surveys began	
2012		The ABP approved its time-limited eligibility policy (seven years allowed to retake the examination) for initial certification in 2012,	

Year	Year Certification First Offered	Policy/Program Changes	Reporting/Dashboard Changes
		beginning with examinations administered in 2014. See *Impact of Policies and Operational Decisions on ABP Certifications* for more information.	
2015	*Adult Congenital Heart Disease		
2016		Access to the Death Master File removed due to federal law changes, and the ABP was no longer able to use this data source to determine a physician's deceased status.	Moved most sample limits to pediatricians 70 and under. Prior to 2016, data we reported for those 65 and under.
2017			Census survey data removed temporarily to adjust presentations.
2018		To understand pediatric workforce diversity and test examinations for biases, the ABP added questions on race/ethnicity and languages spoken with patients to census surveys. See the *Appendix* for more details.	(1) First Dashboards launched; (2) ACGME only programs and not programs certified through the Canadian system in published reports; Canadian data can be filtered in dashboards; (3) Archived PDF reports added to ABP website.
2019	Pediatric Hospital Medicine		(1) Added comparison of NRMP data; (2) Added pediatricians by state historical views; (3) Added geography by county; (4) Added ABMS data to ABP certification reporting; and (5) moved to a fall reporting time frame to permit more complete data.
2020			(1) Chief residents no longer reported; (2) Added distinctions in training data for Neurology and Neurodevelopmental Disabilities; and (3) Census survey data added back into reporting.
2021		Moved from a binary gender question to male, female, non-binary, and I prefer not to say. Reporting using new taxonomy may be delayed due to low sample sizes and privacy implications.	(1) Census surveys added to data dashboards, (2) Some aggregated raw data made available for download.

*Non-ABP Subspecialties (See Pediatric Subspecialty Types in *Key Definitions for more details)*

†Co-sponsored Subspecialties (also known as Joint Board Subspecialties)

Impact of Policies and Operational Decisions on ABP Certifications

Over time, the ABP has made several operational decisions and/or approved numerous policies that have impacted certification, and ultimately aggregated certification counts. The decisions and policies below are notable because of their impact on certification.

Year	Policy/Operational Decision and Implication
1988	The ABP issued the first time-limited certificates in General Pediatrics in May 1988. After this date, to be considered as "maintaining certification," diplomates had to pass a secure examination and renew their certificate every seven to ten years through participation in required Maintenance of Certification activities. (See Certification Status in *Key Definitions* for more details on the types of certificates that have resulted from this decision). There was no immediate shift in the number of initial certifications in that year.
1989	The ABP offered the last oral exam in General Pediatrics in 1989, opting to move to a longer written certifying exam (two days in length at that time). Both oral and written examinations were offered that year, opening more slots to take the examination than had been previously given. This led to a spike in certifications in 1989, with more than 5,000 General Pediatrics certifications that year, up from approximately 2,000 the year prior.
2012	The ABP approved its time-limited eligibility policy for initial certification in 2012, beginning with examinations administered in 2014. As a result, the ABP began to require applicants to have completed the training required to sit for their initial Certifying Examination within the previous seven years; any gap beyond seven years now requires additional training before one is eligible to sit for the Certifying Examination. The increase in general pediatric certifications awarded in 2012 is most likely due to the implementation of this policy. More details can be found here.

Additional Resources

Most of the ABP's workforce reporting efforts only include information on pediatric physicians using training, certification, and survey data available to the ABP. Conducting research about the pediatric workforce requires knowledge of both the demand (e.g., health needs of children, adolescents, young adults, and their families in the United States) and supply (i.e., all child-serving current and future providers, including trainees).

The U.S. Department of Health and Human Services, Health Resources & Services Administration (HRSA) supports data collection and analyses that may inform pediatric workforce research efforts. For additional information, the following websites may be of use:

- **National Survey Publications and Chartbooks**
  Publications from the Maternal and Child Health Bureau's National Surveys as well as chartbooks that describe historical and current trends in child and maternal health, accessible at https://www.census.gov/programs-surveys/nsch.html

- **National Center for Health Workforce Analysis (NCHWA)**
  Data analyses on workforce (the NCHWA also administers all HRSA-funded workforce center), accessible at https://bhw.hrsa.gov/health-workforce-analysis/about

- **HRSA-Funded Workforce Centers**
  HRSA funds several centers that support workforce research, accessible at https://bhw.hrsa.gov/health-workforce-analysis/research/research-centers

The following sites may be useful for additional information on the medical workforce and on pediatric training programs:

- **Association of American Medical Colleges (AAMC) Workforce Studies**, accessible at https://www.aamc.org/data-reports

- **Accreditation Council for Graduate Medical Education (ACGME) Data Collection Systems**, accessible at https://www.acgme.org/Data-Collection-Systems/Overview

- **National Commission on Certification of Physician Assistants Reports**, accessible at http://www.nccpa.net/Research

- **American Association of Nurse Practitioners Reports**, accessible at https://www.aanp.org/research/reports#nurse-practitioner-facts

- **Children's Hospital Association Survey**, accessible at https://www.childrenshospitals.org/Issues-and-Advocacy/Graduate-Medical-Education/Fact-Sheets/2018/Pediatric-Workforce-Shortages-Persist

History of the ABP's Pediatric Physicians Workforce Reporting Efforts

The ABP was founded in 1933 and is one of 24 boards that comprise the American Board of Medical Specialties (ABMS). These boards set standards for the various medical specialties that the public relies upon to provide high-quality health care. The ABP certifies general pediatricians and pediatric subspecialists based on standards of excellence that lead to high-quality health care during infancy, childhood, adolescence, and the transition into adulthood. Its certifying examinations and assessment processes are an important mechanism through which the profession of pediatrics sets expectations regarding professionalism, pediatric practice, continuous learning, and ongoing practice improvement.

The ABP has a long-standing history of gathering data regarding the pediatric physician workforce to inform both graduate medical education policy and workforce planning. The ABP's workforce data have been used by program directors, hospital administrators, researchers, policy makers, and others. These data have provided a comprehensive view of the pediatric physician workforce, from trainees in their first year of a medical residency through physicians engaged in retirement planning. These data also permit tracking of trends over time.

Under the leadership of James A. Stockman III, MD, President and CEO of the ABP from 1992 to 2012, the first workforce data book was published in 1992, with initial oversight provided by Robert Guerin, PhD, Vice President. The 1992 report included responses to census surveys administered at the time of application to take the General Pediatrics Examination, as well as training data for first-year pediatric trainees (Level 1) in Categorical General Pediatrics (GP) residency training programs.

Since 1992, the ABP has published its workforce data on an annual basis; however, the content and format of the report have changed over the last two decades. Changes to the training data reported in the workforce data book have reflected:

- Changes in Data Collected from Program Directors as well as in the Composition and Content of Pediatric Resident and Fellowship Training Programs. Training data on second- and third-year trainees (Levels 2 and 3) were first collected and reported in the workforce data book in 1993 and 1994, respectively. In 1995, the ABP began collecting training data on first-year subspecialty fellows, but the data were not considered sufficiently robust to include in the workforce book until the early 2000s.
- The Addition of New Subspecialties**.** The ABP has added certifying examinations in several new subspecialties, including Developmental-Behavioral Pediatrics (2002) and Child Abuse/Pediatrics (2009), Pediatric Hospital Medicine (2019), as well as in several areas in concert with one or more of the other boards within ABMS, e.g., Hospice and Palliative Medicine (2008).
- An Expanded Approach to the ABP's Census Surveys. Pursued under the leadership of Dr. Stockman; Gail A. McGuinness, MD, ABP Executive Vice President (2002 to date); Linda Althouse, PhD, Vice President of Psychometrics & Assessment Services (2008 to date); and Gary L. Freed, MD, MPH, then Director of the Child Health Evaluation and Research Center (CHEAR) at the University of Michigan, initiated ABP'S census surveys in response to specific projects undertaken by the ABP. For example, in 2009, the ABP, in concert with CHEAR, began collecting census survey data at the time of the resident in-training examinations (ITE) to inform the ABP's Residency Review and Redesign Project (R3P). In 2009, the ABP launched its Continuing Certification (also known as Maintenance of Certification or MOC) Enrollment Application Census Survey to include census survey data on practicing pediatricians; early analyses focused on clinically inactive pediatricians. Additional data collection with subspecialty fellows began as part of the Subspecialty Clinical Training and Certification (SCTC) Task Force (2010-2013) efforts, which examined the clinical training aspects of subspecialty pediatric training.

To read more about changes to recent reports, please see the subsection entitled *Guide to Data Interpretation for Complex Issues.*

Key Definitions

(In alphabetical order)

Accreditation: Voluntary process whereby residency and training programs and their sponsoring institutions are reviewed and recognized for meeting standards of excellence. Programs in the U.S. and Puerto Rico are accredited by the Accreditation Council for Graduate Medical Education (ACGME). Programs in Canada are accredited by the Royal College of Physicians and Surgeons of Canada (RCPSC).

Accreditation Council for Graduate Medical Education (ACGME): The ACGME is a private, not-for-profit organization that sets standards for graduate medical education programs, both residency and fellowships, in the U.S. and Puerto Rico and the institutions that sponsor them. The ACGME also certifies some programs outside the U.S. and Puerto Rico through its ACGME-International certification program. The ABP does not collect training data on individuals in these international training programs.

Commonly Used Acronyms	
ABMS	American Board of Medical Specialties
ABP	American Board of Pediatrics
ACGME	Accreditation Council for Graduate Medical Education
AMG	American Medical Graduate
CMS	Certification Management System
GP	General Pediatrics
GP ITE	General Pediatrics In-Training Examination
IMG	International Medical Graduate
MOC	Maintenance of Certification
SITE	Subspecialty In-Training Examination
SS	Subspecialty
RCPSC	Royal College of Physicians and Surgeons of Canada

American Board of Medical Specialties (ABMS): The ABMS is a private, not-for-profit organization that was established in 1933 to provide a national system for recognizing that specialists have met standards. ABMS acts as the umbrella organization for twenty-four member boards of various medical specialties, of which the ABP is one. More information on the ABMS and other member boards can be found by visiting www.abms.org.

Candidate: Term used to designate an applicant who is eligible to sit for a certifying examination.

Census Surveys: Census surveys seek to collect information from all participants in a population. The ABP collects data at different "touchpoints" with residents, fellows, and diplomates maintaining certification. These data are used primarily for operational business purposes, but may be used secondarily for research purposes. Typical questions ask about practice patterns, e.g., average hours worked, area of work.

Certification: Board certification is a voluntary process that goes beyond state licensing requirements for practicing medicine. After completion of residency and, if applicable, fellowship, a trainee's program director must verify to the ABP that the trainee is competent in the practice of pediatrics and is eligible to sit for the initial certifying examination. Upon passing this examination, the candidate is then designated as "board-certified" and referred to as a "diplomate" of the ABP. Pediatric board certification is a testament to a physician's expertise in the pediatric field and/or a subspecialty of the pediatric field.

Certification Management System (CMS): ABP database that stores demographic, training program, and certification information on all trainees, diplomates, and training programs.

Certification Status:

- **Permanent:** Prior to May 1, 1988, certification by the ABP was granted on a permanent basis. Permanent certificate holders, regardless of whether they participate in continuing certification, retain their designation as an ABP certified diplomate. However, they are strongly encouraged to participate in continuing certification activities to ensure maintenance of clinical competency. Exceptions to the May 1, 1988 date include certificates for Pediatric Pulmonology and Pediatric Critical Care Medicine, which were administered for the first time in 1986 and 1987, respectively.

While administered before May 1, 1988, these certificates were first awarded on a time-limited basis.

- **Time-limited:** After May 1, 1988, the ABP, in recognition of the ever-changing world of medicine, began issuing time-limited certificates to pediatricians who passed the board examination. Time-limited certificates are valid for seven to ten years, at which point the diplomate must recertify by completing the required continuing certification activities prior to the expiration date.
- **No end date:** In 2010, the Maintenance of Certification process was revised to a more continuous model and the ABP began issuing certificates with no end dates. Diplomates who hold certificates with no end dates must recertify by completing the required continuing certification activities prior to the end of their five-year cycle, including the continuing certification recertifying examination, which is required every ten years.
- **Lapsed:** If a physician fails to complete any of the required continuing certification activities prior to his or her certification expiration date (i.e., lifelong learning (Part 2), assessment (Part 3), or practice improvement (Part 4)), s/he will, at the end of his or her five-year cycle, have a certificate that is considered "lapsed." The physician will need to re-enroll in continuing certification and complete the necessary requirements to regain certification. Similarly, if a diplomate is in a five-year cycle and is due to pass a continuing certification examination prior to the end of the cycle and fails to do so, s/he is considered "lapsed." Pediatricians who are lapsed may regain certification by passing their examination and completing any other required continuing certification activities.
- **Revoked:** Certificates issued by the ABP are subject to revocation due to disciplinary action or if one of the following occurs:
    - The issuance of the certificate has been contrary to or in violation of provisions of the ABP's articles of incorporation or bylaws;
    - The physician was ineligible to receive such certificate, irrespective of whether the facts constituting his/her ineligibility were known to any or all the members of the ABP at the time of the issuance of the certificate;
    - The physician made any misstatement of fact in his/her application for certification or in other statements or representations to the ABP, its members, representatives, or agents;
    - The physician is not in compliance with the ABP licensure policy.

Certification Types: The ABP offers two general certification types, as described below:

- **General Pediatrics Certification** is awarded to pediatricians who complete a general pediatrics residency program and pass their general pediatrics certifying examination. A physician with this certification is commonly referred to as a **general pediatrician** (**GP**).
- **Subspecialty Certifications** are awarded to pediatricians who attain their general pediatrics certification and then pursue more extensive training in at least one pediatric subspecialty fellowship program. The certification is given in one of the ABP's subspecialty areas (see *Pediatric Subspecialty Types*) following completion of a fellowship program and passing a subspecialty certifying examination in that subspecialty. A physician with an ABP subspecialty certification is commonly referred to as a **pediatric subspecialist** (**SS**).

Certifying Examination: Examinations completed following training to demonstrate expertise in the pediatric field and/or a subspecialty of the pediatric field.

- Candidates who plan to take the **General Pediatrics** (**GP**) **Certifying Examination** must have completed an ACGME-accredited training program in pediatrics within the previous seven years, received an attestation from their training program director of satisfactory performance, and obtained a valid, unrestricted medical license from a state medical board. Applicants may apply for any of the ABP's examinations numerous times because of multiple situations, e.g., previous examination date missed, failure to pass a previous examination. For additional requirements, please see the ABP website.

- Candidates who plan to take a **Subspecialty (SS) Certifying Examination** must have achieved initial certification in general pediatrics and continue to maintain certification, as well as have received an attestation from their training program director of satisfactory performance. They must have completed an ACGME-approved fellowship. For additional requirements, please see the ABP website.

Chief Resident: A Chief Resident is selected by Training Program leadership based on his/her abilities in patient care, teaching, and leadership to perform additional teaching and administrative duties related to the residency training program. Typically, Chief Residents have completed residency training but continue at the program for an extra year or two and are classified as at a Pediatric Level-4 (PL-4) or PL-5.

Continuing Certification: Continuing certification (also known as Maintenance of Certification or MOC) is a process that began in 2003 and was adopted by all twenty-four American Board of Medical Specialty (ABMS) boards to continuously assess the six core physician competencies outlined by the ABMS and the Accreditation Council for Graduate Medical Education (ACGME). The six competencies that have been identified as important to deliver quality care are interpersonal and communication skills, professionalism, medical knowledge, patient care, and practice-based learning and improvement (which includes the ability to measure and improve quality of care and systems-based practice). Participation in continuing certification indicates that a pediatrician is committed to an ongoing process of lifelong learning and self-assessment to continuously improve knowledge and clinical performance. Continuing certification is increasingly recognized by the public as the "gold standard" of physician quality.

Continuing certification in pediatrics has evolved over the years and is currently conducted on a five-year schedule with a few exceptions extending the schedule. Continuing certification is composed of four parts (see the ABP website for additional information). Diplomates who received permanent certificates prior to 1980 are not required to participate in continuing certification, although many do so. Diplomates with time-limited certification who chose not to participate in recertification or who now choose not to participate in continuing certification are no longer certified by the ABP.

Diplomate: A pediatrician who has passed his or her board certification examination is designated as board-certified and awarded the title "Diplomate of the American Board of Pediatrics." Other certification boards use this term for those holding their certifications. This is equivalent to "certificants."

Ever Certified: Includes all pediatricians who have ever been certified by the American Board of Pediatrics. The "ever certified" data presented in ABP reports includes physicians who are deceased, as well as physicians whose certifications may have lapsed and/or been revoked.

Fellows: Individuals who have completed a residency training program and are pursuing advanced training in a subspecialty or similar, e.g., Academic General Pediatrics Fellowship, through a fellowship program.

First-Time Applicant: Individual applying for their certification examination for the first time.

First-Time Taker: Individuals sitting for any of their certifying examination for the first time.

In-Training Examination (ITE): The ABP offers two types of voluntary in-training examinations to pediatric trainees, one for general pediatrics residents (GP ITE) and one for subspecialty fellows (SS ITE). These examinations are designed to provide residents and fellows with an opportunity to assess their strengths and weaknesses in current knowledge at the time of examination, assess their progress from year to year, and to compare their performance with national peer groups. In addition, program directors can use results from these examinations to provide counseling and remediation to residents and subspecialty fellows. Directors can also accumulate and analyze results over several years to evaluate the quality of training their program has provided.

Maintenance of Certification: The prior name for continuing certification (see above).

Medical School Graduate Type or **Medical School Location**: Medical school graduates are often classified as American Medical Graduates (AMGs) or International Medical Graduates (IMGs). These are defined as follows:

- **AMG:** An individual who has graduated from a medical school within the United States, Puerto Rico, or Canada, regardless of citizenship.
- **IMG:** An individual who has graduated from a medical school outside the United States, Puerto Rico, or Canada, regardless of citizenship. This designation includes U.S. citizens who have completed their medical education outside the United States, Puerto Rico, or Canada. The ABP is unable to determine the status of an IMG's citizenship.

Pediatric Fellowship Trainee Types: Fellowship trainees can be categorized into three types:

- **ABP Fellowship Trainee:** Fellows who are enrolled in a standard fellowship program of one of the ABP subspecialty types. See *Pediatric Subspecialty Types*. This typically is a three-year program.
- **Dual Fellowship Trainee:** Fellows who have been approved to combine training from two ABP pediatric subspecialty fellowships. This typically is a four- to five-year program (e.g., Pediatric Cardiology and Pediatric Critical Care Medicine), combining the scholarly activity requirement from both subspecialties.
- **Combined Fellowship Trainee:** Fellows who have been approved to combine training from one ABP pediatric subspecialty fellowship and a subspecialty from the American Board of Internal Medicine (ABIM). This is for Med-Peds fellows only, where a pediatric subspecialty and adult subspecialty from ABIM is combined, e.g., Pediatric Rheumatology and Adult Rheumatology. This typically is a five-year program, combining the scholarly activity requirement from both subspecialties.

Pediatric Residency Program Types: Residency training programs can be classified into three types:

- **Categorical Pediatrics Programs:** Programs in which pediatricians pursue training in general, i.e., Categorical, pediatrics. Categorical pediatric residencies typically consist of three years (Level 1 to Level 3) of core pediatrics experiences and elective rotations. Upon completion of the program, residents are eligible to apply to sit for the General Pediatrics board certification examination.
- **Medicine-Pediatrics (Med-Peds) Programs:** Residency programs in which pediatricians pursue training in Internal Medicine and General Pediatrics. Unlike other three-year residency programs, Med-Peds programs include four years (Level 1 to Level 4) of training in the two specialties. Upon completion of the program, Med-Peds residents are eligible to apply to sit for board certification examinations in both Internal Medicine and Pediatrics.
- **Other Combined Programs:** Residency programs in which pediatricians pursue combined training in two or more closely related specialty programs. Like Med-Peds, the duration of combined training is longer than any one of its component specialty programs standing alone and at the end of the program, residents will have the option to apply to sit for board certification examinations in both specialties. A common combined program is Pediatrics/Anesthesiology (Level 1 to Level 5).

Pediatric Subspecialty Types: There are four types of subspecialties in which a pediatrician may become certified; the type is based on which boards administer the Subspecialty Certification Examination. These are:

- **ABP Subspecialties:** Subspecialty disciplines that offer certification examinations administered by the ABP. Both Adolescent Medicine (co-sponsored through the American Board of Family Medicine and American Board of Internal Medicine) and Pediatric Emergency Medicine (co-sponsored through the American Board of Emergency Medicine) may also be considered co-sponsored subspecialties however, the examinations for these two subspecialties are delivered through the ABP. The majority of diplomates for these subspecialties completed their initial certification in General Pediatrics from the ABP.
    - Adolescent Medicine – *co-sponsored by the American Board of Family Medicine and the American Board of Internal Medicine*
    - Pediatric Cardiology
    - Child Abuse Pediatrics

- Pediatric Critical Care Medicine
- Developmental-Behavioral Pediatrics
- Pediatric Emergency Medicine – *co-sponsored by the American Board of Emergency Medicine*
- Pediatric Endocrinology
- Pediatric Gastroenterology
- Pediatric Hematology-Oncology
- Pediatric Infectious Diseases
- Neonatal-Perinatal Medicine
- Pediatric Nephrology
- Pediatric Pulmonology
- Pediatric Rheumatology
- Pediatric Hospital Medicine

- **Co-sponsored Subspecialties (also known as Joint Board Subspecialties):** The following subspecialties have examinations that are administered by one of the co-sponsoring boards:
  - Hospice and Palliative Medicine
  - Medical Toxicology
  - Sleep Medicine
  - Sports Medicine
  - Pediatric Transplant Hepatology
- **Non-ABP Subspecialties:** Pediatric-related subspecialties/specialty certifications that are offered by other Boards within the American Board of Medical Specialties, where training in pediatrics is credited to these certification requirements. There are currently three subspecialty/specialty certifications that fall into this category.
  - Adult Congenital Heart Disease (ACHD)
  - Allergy and Immunology – certification in General Pediatrics is one pathway to becoming board eligible for American Board of Allergy/Immunology certification
  - Neurodevelopmental Disabilities (NDD) - *From 2001 to 2007, the NDD certification was awarded by the ABP and the* American Board of Psychiatry and Neurology *(ABPN) to their respective diplomates. Since 2007, all first-time applicants have been required to apply directly to the ABPN for NDD certification, but applicants whose examination application had been approved previously (between 2001-2007) by the ABP could still take the examination through 2013. Since 2014, initial NDD certification has been offered only by the ABPN. However, individuals initially certified from 2001 through 2009 in NDD by the ABP may still maintain their certification through the ABP.*
- **Multi-Specialty Subspecialties:** Certain subspecialty certifications may be obtained by physicians certified by any Member Board of the ABMS. Examples of multi-specialty subspecialties include addiction medicine and clinical informatics. Multi-Specialty Subspecialties typically are not reviewed in the ABP's workforce reports.

Pediatric Training Level: The level of training at the time of data collection. Level 1 through level 5 are commonly used in this report to indicate the training level in residency and in subspecialty fellowships. For the purposes of this report, trainees participating in fellowship programs restart the level of training at level 1 when entering fellowship. Other designations may be used in other external literature including PL-1 through PL-5 (Pediatric Training Level Years 1-5), PGY-1 through PGY-5 (Post-Medical School Graduate Years 1-5), R1-R5 (Residency Years 1-5), or F1-F5 (Fellowship Training Years 1-5). Pediatric training levels employed in this report are described below:

- **Level 1:**
  - **Residency:** The first year of pediatric residency training.
  - **Fellowship:** The first year of pediatric subspecialty fellowship.
- **Level 2:**

- **Residency:** The second year of pediatric residency training, with increased responsibility for patient care and for the supervision of junior house staff (e.g., other residents) and medical students.
- **Fellowship**: The second year of pediatric subspecialty fellowship, with increased responsibility for patient care in the subspecialty and for the supervision of junior house staff (e.g., other fellows), residents, and medical students.

- **Level 3:**
  - **Residency:** The third year of pediatric residency training, with further increased responsibility. Most residents in a categorical pediatric program will complete their training in level 3.
  - **Fellowship**: The third year of pediatric subspecialty fellowship, with further increased responsibility. Most fellows will complete their subspecialty training in level 3.
- **Level 4 – Typically for Trainees in Combined Programs:**
  - **Residency:** The fourth year of pediatric residency is for individuals participating as a Chief Resident or for individuals participating in a four- or five-year combined training program, such as Med-Peds.
  - **Fellowship**: The fourth year of pediatric subspecialty fellowship is most often for individuals participating in a five-year combined training specialization.
- **Level 5 – Typically for Trainees in Combined Programs:**
  - **Residency**: The fifth year of pediatric residency for individuals participating in a five-year combined training program, such as Peds-Anesthesiology.
  - **Fellowship**: The fifth year of pediatric subspecialty fellowship is most often for individuals participating in a five-year combined training specialization.

Program Complement: ACMGE requirements for residency and fellowship programs are often dependent upon a program complement, or the number of residents or fellows withing a given training type, e.g., categorical pediatrics. At the time of writing the complements were broken into the ranges shown here. Other types of training may differ from these groupings.

Categorical pediatrics:	**Fellowship**:
▪ 1-11 residents	▪ 1-3 fellows
▪ 12-30 residents	▪ 4-6 fellows
▪ 31-60 residents	▪ 7-9 fellows
▪ 61-90 residents	▪ ≥ 10 fellows
▪ 91-120 residents	
▪ > 120 residents	

Program Directors: Directors of pediatric residency or subspecialty fellowship training programs responsible for the educational experience of the trainees in their program. Program directors submit training data to the ABP on an annual basis.

Recertification: Recertification was implemented by the ABP from 1980 through 2002. It provided pediatricians a way to periodically evaluate their knowledge, medical problem solving, and record keeping. It also encouraged continued professional education and self-assessment. Recertification evolved throughout the years it was implemented, initially beginning with a voluntary process from 1980 through 1995. Beginning in 1996 through 2002, a seven-year open book examination was required for recertification for those whose certifications were up for renewal. This recertification process was required to remain certified
except for permanent certificate holders (those initially certified before May 1, 1988). Diplomates with permanent certificates were not required to participate in recertification to maintain certification, although many did so. Beginning in 2003, Continuing certification replaced the recertification process. Nonetheless, the word "recertification" is commonly used to refer to both recertification processes from 1980 through 2002 and continuing certification.

Resident: A trainee who has completed undergraduate medical education and is engaged in graduate medical education at a residency training program.

Royal College of Physicians and Surgeons of Canada (RCPSC): Accrediting and certifying organization for training programs in Canada. Conversely, the U.S. system separates accreditation from certification.

Specialty: An area of training in which an individual physician may be initially certified and maintain certification through one of the member boards of the American Board of Medical Specialties (ABMS). Examples include Pediatrics, Family Medicine, Internal Medicine, Emergency Medicine, Surgery.

Time-limited Eligibility Policy: Beginning in 2014, the ABP requires that applicants for certifying examinations have completed the required training for initial certification within the previous seven years. Approval of this policy by the ABP Board of Directors occurred in 2012.

Training Data: Data collected annually by the ABP from pediatric residency and subspecialty fellowship training program directors and entered into the ABP's Certification Management System (CMS). The data includes counts of trainees, their gender, and date of birth and also measures of trainees' clinical competence and professionalism throughout residency. This information is then used to help evaluate readiness to sit for the GP Certifying Examination.

Trainee: When used by the ABP, this term typically indicates a resident or subspecialty fellow.

Unduplicated: In some tables, figures, or maps in workforce reports, individuals may fall into more than one category. When this occurs and where possible, individuals are counted in only one category to avoid duplicate counts.

Work Status: Diplomates may be identified as "clinically active" or "clinically inactive" as defined below:

- **Clinically Active:** Diplomate engaged in some level of clinical practice, even if only supervising trainees.
- **Clinically Inactive:** Diplomate not involved in clinical practice. This status can be associated with pediatricians who are retired from medical practice or may be employed in academic, administrative, research, or other non-clinical capacities.

Appendix: Race/Ethnicity and Language

To understand pediatric workforce diversity and test examinations for biases, the ABP added questions on race/ethnicity and languages spoken with patients to our census surveys in 2018. These questions were developed in tandem with the ABP's Research Advisory Committee and approved by the ABP's Board of Directors in late 2017.

Race/Ethnicity

The race/ethnicity question we ask was based on the United States Census Bureau's 2015 National Content Test Race and Ethnicity Analysis Report, which reviews their research examining different variations of race/ethnicity questions and how accurately they perform. While this newer model was proposed for the 2020 US Census by the Census Bureau, it did not move forward under the White House's Administration of Office of Management and Budget at that time. Given the ABP had already started using a variation of the proposed 2020 Census question—and believing it to be the best question version per the Census Bureau's findings—the ABP has continued to ask the question as shown below.

The ABP's race/ethnicity question version:

Which of the following describes your race/ethnicity? *(Please select all that apply.)*

a. **White**
   For example: German, Irish, English, Italian, Polish, French, etc.
b. **Hispanic, Latino, or Spanish origin**
   For example: Mexican, or Mexican American, Puerto Rican, Cuban, Salvadoran, Dominican, Colombian, etc.
c. **Black or African American**
   For example: African American, Jamaican, Haitian, Nigerian, Ethiopian, Somalian, etc.
d. **Asian**
   For example: Chinese, Filipino, Asian Indian, Vietnamese, Korean, Japanese, etc.
e. **American Indian or Alaska Native**
   For example: Navajo Nation, Blackfeet Tribe, Mayan, Aztec, Native Village of Barrow Inupiat Traditional Government, Nome Eskimo Community, etc.
f. **Middle Eastern or North African**
   For example: Lebanese, Iranian, Egyptian, Syrian, Moroccan, Algerian, etc.
g. **Native Hawaiian or Other Pacific Islander**
   For example: Native Hawaiian, Samoan, Chamorro, Tongan, Fijian, Marshallese, etc.
h. **Some other race, ethnicity, or origin (please specify): _____**
i. **I prefer to not answer**

Major changes to this question from common variations seen include:

1. One can select all that apply. This is an important variation in that many people are not 100% of a particular race/ethnicity. The 2010 Census Survey already allowed for this.
2. The options regarding "Hispanic, Latino, and/or Spanish origin" ethnicities were moved into the above question instead of being a separate question. This was empirically proven by the Census Bureau to decrease confusion for those who find themselves in this category and find it difficult to secondarily choose another race. Completion of the two-question option was found to be lower than the single question option.
3. The "Middle Eastern or North African" options were historically included in the "White" category and are broken apart here to reflect unique distinctions among these groups.
4. Unlike the Census Bureau's version, we include an opt-out option in "I prefer to not answer." This is an exclusive option.

Analyses and reporting planned with this information:

While not reported externally due to the sensitive nature of exams, the race/ethnicity data are used by the ABP exam development and psychometrics teams to strategically flag any items that may be biased. These items are then presented to a committee for further review.

Due to the sensitive nature of the race/ethnicity question itself and needing to ensure anonymity when reporting data, the ABP is taking caution when reporting these data. The first report is planned for 2022 and will likely include information for those in-training or recently completed with training. The time frame for data collection on race/ethnicity for certified pediatricians is spread out over several years since it is asked with the Continuing Certification Enrollment Survey; therefore, the ABP wants to be confident the data obtained on practicing pediatricians is representative of the pediatric workforce before publication, particularly for the smaller subspecialties. When sufficient data are obtained, further reports and analysis are planned.

Language

In the same time frame of 2017/2018, the ABP began to offer a question about **languages spoken** with patients to better understand diversity of the pediatric workforce. The questions the ABP uses were taken from manuscript publications by the American Academy of Pediatrics.

The ABP's languages spoken question version:

Are you proficient in communicating with patients and their families in any language(s) other than English? *(Please select all that apply.)*

a. No
b. Yes, Spanish
c. Yes, Other (please specify): _____
d. I prefer to not answer

Both "No" and "I prefer not to answer" are exclusive options.

Analyses and reporting planned with this information:

Given this data are less sensitive than race/ethnicity data, when appropriate, the ABP aims to report on this aggregated data when reporting ABP's the Census Survey data.