

Projected Number of People Eligible to Practice as PAs and the Number of PAs in Clinical Practice in 2007 through 2020

Using a variety of scenarios regarding the number of PAs that will graduate in each of the next 14 years, AAPA projects that in the year 2020 there will be between 136,936 and 172,632 people eligible to practice as PAs and between 109,603 and 141,713 clinically practicing PAs.

The process for projecting the number of people eligible to practice as PAs and the number of PAs in clinical practice in each year from 2007 through 2020 involved six steps:

1. Establishing the number of people, by age and sex, eligible to practice in 2005 and the number of new graduates, by age and sex, in 2006.
2. Estimating the number of people in each year from 2007 through 2020, by age and sex, who would have ever graduated from a PA program or been certified by the National Commission on Certification of Physician Assistants (NCCPA).
3. Estimating the proportion of people in clinical practice in each year from 1996 through 2006 by age and sex.
4. Estimating the eleven-year weighted average proportion of people in clinical practice (1996 through 2006) by age and sex.
5. Applying the estimated eleven-year weighted average proportion in practice by age and sex, to the number of people who would have ever graduated from a PA program or been certified by NCCPA from 2007 through 2020.
6. Summing the age-sex cohorts for each year.

Establishing the number of people eligible to practice as PAs in 2005 and 2006

Using the AAPA Masterfile from January 8, 2007, which has a record for every individual known to have graduated from a PA program or to be certified by NCCPA, we created two files with AAPA ID number, sex, and year of birth: one file with a record for each individual eligible to practice as a PA in 2005 and the other file with a record for each individual expected to graduate during 2006. The file for 2006 graduates included people whose graduation had been confirmed and people whose expected date of graduation was in November or December. We dropped all individuals whose expected date of graduation was prior to November and for whom no confirmation of graduation had been received either from the PA program they attended or from NCCPA.

Using a method known as “hotdecking,” we imputed sex and year of birth for individuals for whom no sex and/or year of birth information was present on the Masterfile. By using the hotdecking method within year of graduation from PA school or initial certification, we ensured that the distributions for sex and year of birth for the imputed data were comparable to those for whom sex and year of birth were known.

The file of individuals eligible to practice as PAs in 2005 was used to estimate the number of people by sex and age in 2005. We added the file with 2006 graduates to the 2005 file to estimate the total number of people by sex and age in 2006.

Estimating the number of people eligible to practice in each year from 2007 through 2020

To produce estimates for these years, we added the file with 2006 graduates to the combined file generated for the preceding year. This procedure relies on the assumption that the sex and age distribution of new graduates in each of the subsequent 14 years is not expected to vary significantly from that observed in 2006.

As we built the file of people eligible to practice as PAs in each year, we added one year to each individual's age from the previous year. Recognizing that very few PAs will remain clinically active beyond the age of 75, we removed all individuals from this analysis once the age of 75 was exceeded.

Because we have no way of knowing how many students will graduate from PA programs in future years, we produced estimates for six scenarios with respect to the number and size of PA training programs in each year:

1. No increase in graduates.
2. One percent increase in graduates.
3. Two percent increase in graduates.
4. Three percent increase in graduates.
5. Four percent increase in graduates.
6. Five percent increase in graduates.

Under the first scenario, we assume that the number of new graduates in each year from 2007 through 2020 will equal the number observed during 2006. The subsequent scenarios assume varying percentage increases each year, so that users of this information can choose the scenario that best reflects the growth they expect in the number of new graduates from PA programs. The results of these six scenarios are presented in Table 1 below.

Estimating the proportion of people in clinical practice in each year

Using a longitudinal file with projected practice status for each person eligible to practice as a PA from 1991 through 2006, we calculated the percent in practice by age and sex for each year. This calculation involved summing the number in practice and dividing that sum by the sum of all people eligible to practice within each age-sex cohort.

Estimating the eleven-year weighted average proportion in practice

To estimate the eleven-year weighted average, we multiplied the proportion in practice for each age-sex cohort in each year from 1996 through 2006 by the total eligible to practice for each age-sex cohort in each year. We then summed the results for the eleven year period. Next, we summed the total eligible to practice for this time period and finally, we divided the results of the first summation (number in practice) by the results of the second summation (number eligible to practice) for each age-sex cohort. The result of this process is the eleven-year weighted average proportion in practice by age-sex cohort.

Applying the proportion in practice to the total eligible population

We multiplied the estimated eleven-year weighted average proportion in practice for each age-sex cohort to the total number of people eligible to practice in each year from 2007 to 2020 for each age-sex cohort.

Summing the age-sex cohorts

The final step involved summing all of the age-sex cohorts in each year. The resulting sum is the projected number of people in practice as PAs for each year. The results of this procedure for the six scenarios are presented in Table 2 below.

Table 1. Projected Number of People Eligible to Practice as PAs under Six Growth Scenarios, 2007 through 2020

Year	0% Growth	1% Growth	2% Growth	3% Growth	4% Growth	5% Growth
2007	79,605	79,758	79,892	80,039	80,174	80,333
2008	84,185	84,478	84,756	85,050	85,339	85,647
2009	88,757	89,240	89,712	90,209	90,704	91,230
2010	93,317	94,034	94,758	95,510	96,272	97,075
2011	97,861	98,867	99,888	100,956	102,057	103,199
2012	102,384	103,727	105,104	106,552	108,057	109,617
2013	106,891	108,623	110,416	112,302	114,283	116,353
2014	111,381	113,544	115,816	118,212	120,745	123,405
2015	115,815	118,468	121,272	124,259	127,425	130,779
2016	120,221	123,411	126,814	130,446	134,350	138,498
2017	124,532	128,313	132,378	136,741	141,468	146,522
2018	128,746	133,174	137,964	143,141	148,781	154,865
2019	132,880	138,001	143,580	149,650	156,319	163,545
2020	136,936	142,810	149,249	156,313	164,120	172,632

Table 2. Projected Number of PAs in Clinical Practice under Six Growth Scenarios, 2007 through 2020

Year	0% Growth	1% Growth	2% Growth	3% Growth	4% Growth	5% Growth
2007	67,261	67,399	67,513	67,650	67,766	67,913
2008	70,897	71,166	71,408	71,673	71,930	72,220
2009	74,469	74,907	75,322	75,775	76,210	76,705
2010	77,991	78,643	79,279	79,964	80,651	81,392
2011	81,455	82,364	83,274	84,242	85,242	86,284
2012	84,860	86,074	87,302	88,612	89,981	91,407
2013	88,219	89,789	91,384	93,089	94,893	96,795
2014	91,500	93,467	95,483	97,652	99,957	102,394
2015	94,700	97,088	99,585	102,275	105,163	108,238
2016	97,833	100,698	103,730	107,007	110,557	114,346
2017	100,886	104,287	107,914	111,834	116,134	120,744
2018	103,902	107,871	112,147	116,794	121,918	127,458
2019	106,817	111,390	116,363	121,804	127,859	134,435
2020	109,603	114,834	120,570	126,885	133,966	141,713