

Key Findings:

- 33.2% of PA youths identify as non-white, compared to 21.1% of adults
- The proportion of non-white youth has increased across all counties between 2000-2018
- Diversity is not evenly distributed within counties and urban areas are seeing the greatest increases overall.
- Even rural counties have experienced increases in diversity over time – a trend that is likely to continue.

The racial and ethnic composition of the United States has changed considerably over the past half century with changes most visible among younger cohorts. Similarly, the racial/ethnic composition of the Commonwealth of Pennsylvania has been shifting and will likely continue to diversify, again particularly among the young.

Following the nationwide study of youth demographic change by Johnson and Lichter (2010), we explore diversification among youth in Pennsylvania (2000-2018) using data from the 2000 and 2010 Decennial Census Summary Files and the 2018 Population Estimates Program.

Table 1. Population by Race/Ethnicity and Broad Age Group, PA, 2018

	Youth (Under <20 Years)		Adults (20+ Years)	
	Number	Percent	Number	Percent
White	2,000,450	66.8	7,741,181	78.9
Black	388,692	13.0	999,852	10.2
Hispanic	367,662	12.3	608,481	6.2
Other	237,340	7.9	463,402	4.7
Total	2,994,144	100.0	9,812,916	100.0

Table 1 highlights the current (2018) population in Pennsylvania by race/ethnicity among those under age 20 and adults 20 years and older. Racial and ethnic groups are collapsed into non-Hispanic White only, Black or African American only, Hispanic ancestry (any race) and 'Other'. Unfortunately, it is difficult to disaggregate further due to small group size for individuals who identify as Asian, Pacific Islander, Native American, or two or more races. Asians comprised the majority of this category. Approximately 33% of the youth population in Pennsylvania are non-white. The adult population is approximately 20% non-white.

In Table 2, we present the same analysis from the beginning of the millennium (2000). At that time, two decades ago, only 21.4% of the population younger than 20 years were non-white and fewer than 15% of those aged 20 and over identified as non-white in Pennsylvania as a whole.

Table 2. Population by Race/Ethnicity and Broad Age Group, PA, 2000

	Youth (Under <20 Years)		Adults (20+ Years)	
	Number	Percent	Number	Percent
White	2,567,966	78.6	7,771,268	86.2
Black	412,734	12.6	800,868	8.9
Hispanic	166,283	5.1	232,091	2.6
Other	120,221	3.7	212,742	2.4
Total	3,267,204	100	9,016,969	100.0

Youth diversity is not even across the Commonwealth:

The most and least diverse counties, 2000-2018

Table 3. Top 5 Counties with Highest Percent Minority Youth, 2000-2018

2000		2010		2018	
County	Minority	County	Minority	County	Minority
Philadelphia	69.4%	Philadelphia	75.9%	Philadelphia	77.3%
Dauphin	34.7%	Lehigh	43.7%	Lehigh	52.4%
Lehigh	26.6%	Dauphin	43.4%	Dauphin	49.4%
Delaware	26.3%	Monroe	40.9%	Monroe	46.7%
Berks	23.6%	Delaware	38.3%	Berks	44.0%

The distribution of the youth population varies considerably across the Commonwealth of Pennsylvania. Table 3 displays the top 5 counties with the highest proportions of non-white residents in the years 2000, 2010, and 2018. Philadelphia county has been a majority-minority county throughout the period of analysis, meaning the majority of the county is comprised of individuals who identify as a racial/ethnic minority. Lehigh County began in the Top-3 with regards to diversity in the younger age-group with 26.3% of this group identifying as non-white in 2000. In less than 20 years, it has become a majority-minority county with just over 52% of the persons in this age-group being non-white. We can also see overall growth in the proportions of these counties with the top 5 counties ranging from 23.6% - 69.4% in 2000 and 44.0% - 77.3% in 2018.

Table 4. Top 5 Counties with Lowest Percent Youth Minority, 2000-2018

2000		2010		2018	
County	Minority	County	Minority	County	Minority
Somerset	1.8%	Elk	3.3%	Elk	4.7%
Jefferson	1.9%	Somerset	3.5%	Somerset	4.8%
Warren	2.0%	Jefferson	3.7%	Jefferson	5.0%
Elk	2.1%	Clearfield	3.7%	Clearfield	5.2%
Susquehanna	2.5%	Warren	3.9%	Warren	4.7%

In contrast, Table 4 displays the counties with the lowest percentages of non-white residents. Roughly the same five counties remain the least diverse over the period (Elk, Somerset, Warren, Jefferson), with Elk county having the smallest proportion of young, non-white residents in both 2010 and 2018. However, we still see a diversification of the younger age groups across time, with the minority youth population ranging from 1.83% to 2.46% in 2000 increasing to 4.72% to 5.25% in 2018. In other words, even counties where a small proportion of the population identifies as non-white, the younger age groups in these counties are still diversifying.

Where does diversity increase?

In order to determine how diverse a county was during each of these time periods, diversity indices were calculated for whites, Hispanics, blacks, and other non-white racial/ethnic minorities. This measure tells us what the likelihood that two youths from the same county are of a different race/ethnicity.

Diversity indices range from 0, indicating that a county is all one race/ethnicity to .75, indicating that each group is evenly distributed and accounts for one quarter of the population in that county.

2000

Figure 1 displays the county diversity indices for individuals under the age of 20 in 2000. The indices ranged from 0.068 in Somerset County to 0.631 in Philadelphia county. The diversity index maps show a similar pattern to the minority population percentages highlighted in tables 3 and 4. Counties in Southeastern Pennsylvania, such as Dauphin (0.515) and Lehigh (0.427), had higher diversity indices. Diversity was quite low elsewhere such as Somerset (0.041) and Jefferson (0.037)

Figure 1 Youth Diversity Indices by PA County, 2000

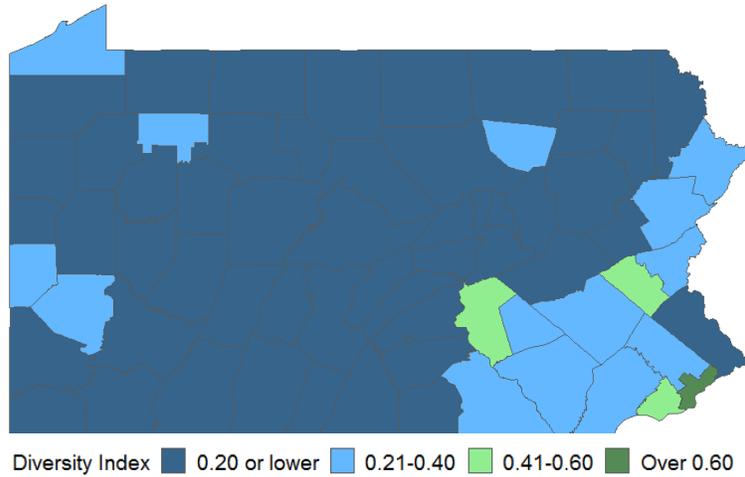


Figure 2 Youth Diversity Indices by PA County, 2010

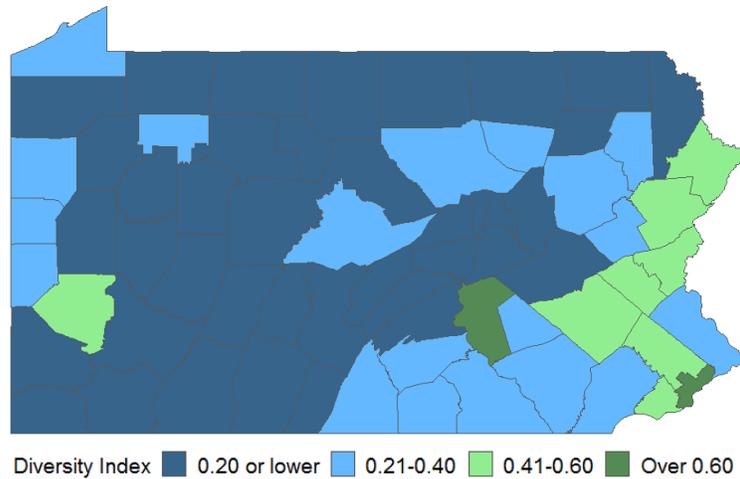
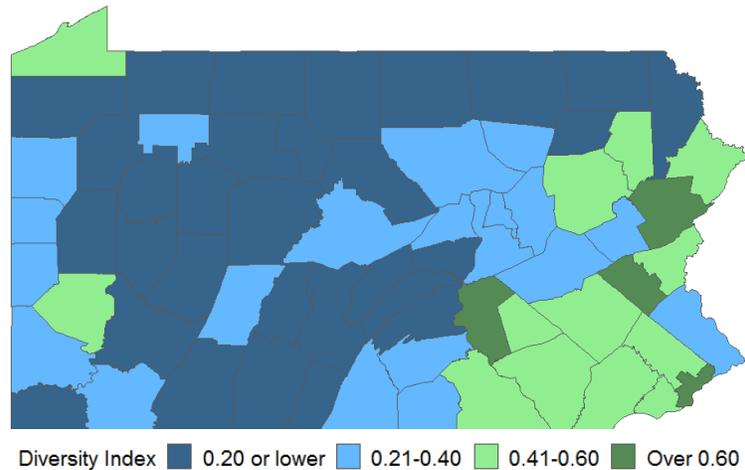


Figure 3 Youth Diversity Indices by PA County, 2018



2010

Figure 2 displays the county youth diversity indices for in 2010. Elk county was the least diverse (0.065) and Philadelphia was the most diverse (0.662). In comparing figures 1 and 2 we see that there is an overall shift across the map, with growing diversity in the south eastern counties such as Dauphin and Monroe (0.606 and 0.584 respectively)

The largest growth in diversity between 2000 and 2010 occurred in Luzerne, Monroe, and Lackawanna counties with increases of 0.245, 0.223 and 0.184 respectively.

2018

Figure 3 shows the most recent (2018) youth diversity indices. Again, the patterns continue with Elk county being the least diverse and Philadelphia county being the most. However, the range continues to increase, now starting at 0.091 and ending at 0.689. Similar to 2010, the largest growth occurs in Luzerne, Lackawanna, and Sullivan counties.

Urban areas are more diverse: Sub-county diversity, 2017

Finally, using data from the 2017 American Community Survey, we investigate the diversity of the entire population of Pennsylvania (all ages) at sub-county levels. Our findings indicate that although the counties are diversifying, such diversity is not evenly distributed within county boundaries.

Figure 4 shows that even among counties experiencing population-level diversification, the distribution of groups is not even throughout and diversity is concentrated in certain areas. Urban populations tend to be more diverse than those rural areas even within the same county boundaries.

Figure 4. Sub County Diversity Indices, All Ages

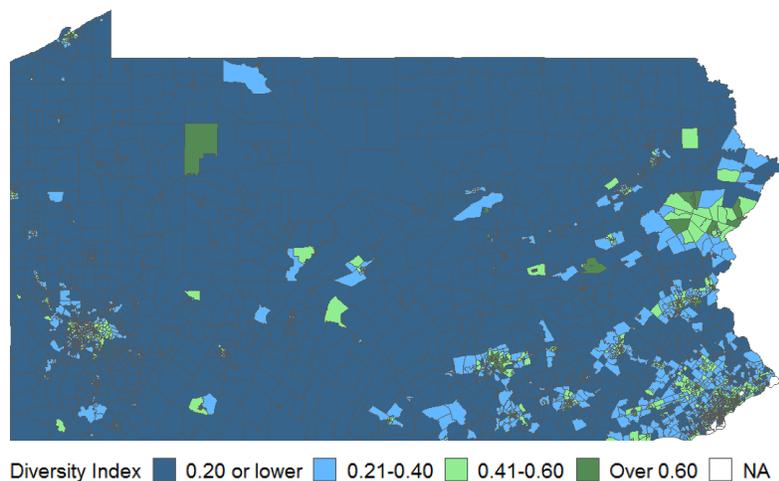


Figure 5 explores this sub-county diversity more closely. Looking at diverging diversity indices (DI) at the sub county level, we focus on four of the more populous Pennsylvania Counties: Philadelphia County, Lehigh County (Allentown), Allegheny County (Pittsburgh) and Dauphin County (Harrisburg).

The majority of census-tracts in Philadelphia County have high DIs, but tracts with the lowest values are found bordering Montgomery County and Delaware County.

On the other hand, higher DI tracts for Lehigh County are found in the central area of the county, in the cities of Allentown, Fullerton and Bethlehem.

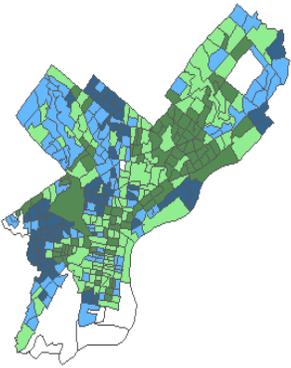
In the case of Allegheny County the most diverse areas are concentrated around the city of Pittsburgh, whereas most of the other areas of the county have diversity levels below 0.40.

Similarly, in Dauphin County we see that tracts with higher DI values are concentrated in the area surrounding the county seat and state capital, Harrisburg.

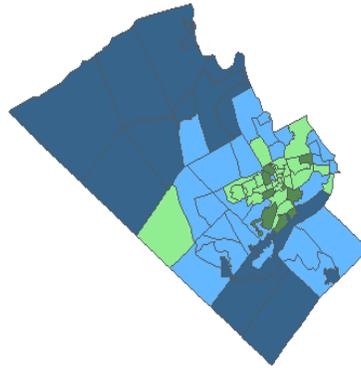
In comparing these maps, we are able to see that some counties are much more evenly diverse (Philadelphia), whereas the diversity of others are highly concentrated around major cities.

Figure 5 County Specific Diversity Indices, All Ages

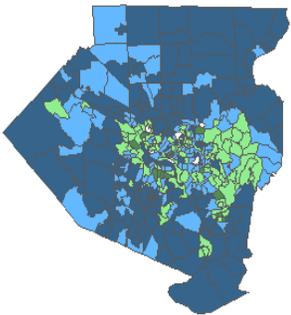
Philadelphia County



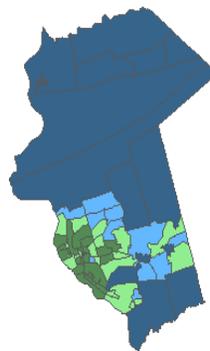
Lehigh County



Allegheny County (includes Pittsburgh)



Dauphin County (includes Harrisburg)



Diversity Index ■ 0.20 or lower ■ 0.21-0.40 ■ 0.41-0.60 ■ Over 0.60 □ NA

Policy Implications

Our findings highlight an increase in youth diversity across Pennsylvania, even in counties with very small proportions of racial/ethnic minorities. This diversity is likely to grow in the coming decades. Although diversity is increasing overall, some counties, particularly those with more urban and growing populations, are seeing larger increases.

As the most diverse group, children and youth in Pennsylvania will have important impacts on our educational and healthcare systems and become key contributors to the workforce. Their ultimate outcomes will be dependent on how these institutions adapt to meet the changing needs of a diverse population. Policy makers, educators and health professionals are urged to recognize the changes among the youth and look ahead to plan for future needs and demands.

Positive strategies to address such changes include recruiting professionals in these fields who reflect the racial/ethnic diversity of the communities. Services that meet the needs of youth from diverse backgrounds, including new immigrant groups arriving in the Commonwealth, will continue to be needed. Employers who recognize the unique benefits of a diverse workforce are also needed to ensure new workers are welcome and choose to remain in Pennsylvania.

About the Network:

The Pennsylvania Population Network (PPN) is a visible program of demographic and health research, application, and outreach focusing on population characteristics and change in Pennsylvania, the United States and the world.

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