



### What are social determinants of health?

Social determinants of health are social and economic factors that influence health; they represent the conditions in which people are born, grow, work, live, and age. This brief examines **educational attainment — the highest degree of education an individual has completed** — as a social determinant of health and provides data on educational attainment for all cities and towns in Massachusetts.<sup>1</sup>



### How does educational attainment impact health?

Research has established a clear link between educational attainment and health in the US. In particular, mortality rates vary significantly by level of educational attainment — for example, men who do not have a high school degree have a mortality rate 4.4 times greater than men with more than 16 years of education. There is a similar trend for women, although it is less pronounced — women without a high school degree have a 3.7-fold increase in mortality compared with women with more than 16 years of education.<sup>2</sup>

One of the most well-studied effects of education on health is the difference in health-related behaviors of individuals with different educational attainment. In a study that clustered “unhealthy behaviors” (smoking, binge drinking, eating fast food, no regular doctor visits) and “healthy behaviors” (regular physicals, moderate exercise), people with lower educational attainment were more likely to exhibit unhealthy behaviors.<sup>3</sup>



The well-documented relationship between education and health is an important consideration in any public health intervention. Education provides individuals with higher income, greater access to resources, and higher levels of social support, all of which improve mortality rates and minimize risky health behaviors. A community’s educational attainment is an important dimension of its overall health, and can help inform the design of health programs and interventions.



### How do we assess educational attainment?

Information on educational attainment is collected through the American Community Survey (ACS) run by the US Census Bureau. The ACS captures levels of educational attainment ranging from elementary school grades through doctoral degrees.

1. Data in this brief comes from: US Census Bureau, 2013-2017 American Community Survey 5-Year Estimates: Table S1501 - Educational Attainment—population 18 to 65 years old and over.

2. Hummer, R.A., & Hernandez, E.M. (2013). The effect of educational attainment on adult mortality in the United States. *Population Bulletin*, 68 (1): 1-14.

3. Skalamera, J., & Hummer, R. A. (2016). Educational attainment and the clustering of health-related behavior among U.S. young adults. *Preventive Medicine*, 84, 83-89. doi:10.1016/j.ypmed.2015.12.011

# LOCAL DATA

Educational attainment in Massachusetts is relatively high when looking at the state as a whole. Based on the most recently available ACS data (2013-2017 estimates), in Massachusetts, 10.5% of the population 18 to 24 years old and 9.7% of the population 25 years old and over does not have a high school degree. However, there are significant geographic disparities in educational attainment, as shown in the maps below.

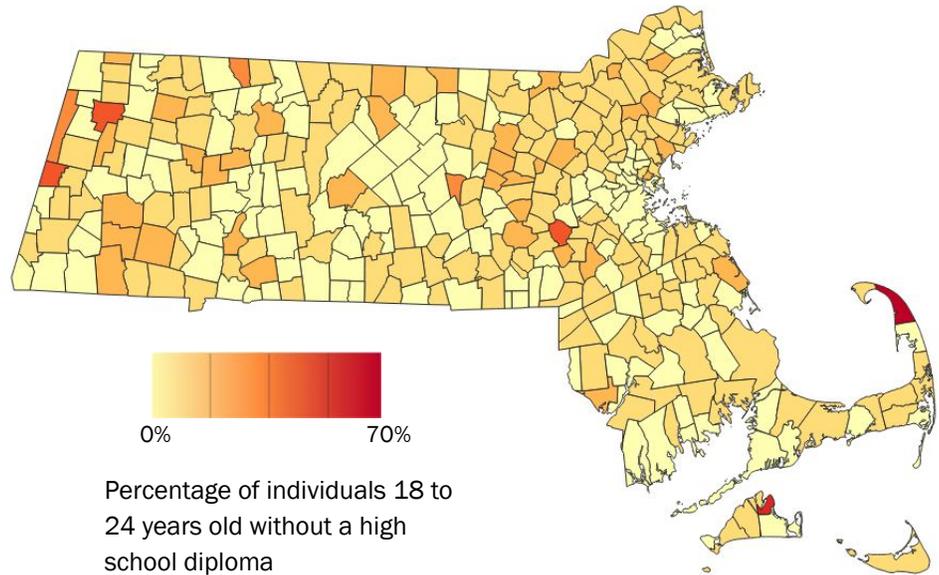
For detailed data at the community level, see ICH's website:

<https://icommunityhealth.org/projects/downloadable-data-briefs-on-social-determinants-of-health/>

## Individuals 18 to 24 years old without a high school diploma

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COMMUNITIES IN WHICH AT LEAST 20% OF INDIVIDUALS 18 TO 24 YEARS OLD DO NOT HAVE A HIGH SCHOOL DIPLOMA (see map)



## Individuals 25 years and over without a high school diploma

# 9

COMMUNITIES IN WHICH AT LEAST 20% OF INDIVIDUALS 25 YEARS AND OVER DO NOT HAVE A HIGH SCHOOL DIPLOMA (see map)

