

Redefining public health in New York City

New York City's life expectancy is rising faster than anywhere else in the USA, as its health department pioneers tactics that could transform the practice of public health. Ted Alcorn reports.

"If you want to live longer and healthier than the average American, come to New York City", pronounced New York City's Mayor Michael Bloomberg as he released updated data on the city's life expectancy last December. The numbers gave him reason to crow: from a nadir in 1990, when life expectancy in the city trailed the US average by 3 years, it had lengthened by 8 years to 80.6 years, surpassing the country.

In the national context, the increase in New York City's life expectancy stands out (figure). The Institute for Health Metrics and Evaluation recently estimated the life expectancy for each of the USA's 3147 independent cities and counties. Manhattan's life expectancy rose 10 years between 1987 and 2009, the largest increase of any county, and the other four counties that make up New York City were all in the top percentile.

By contrast, national life expectancy lengthened only 1.7 years per decade, and the USA—already trailing the world's longest lived countries—dropped back further. "What we see in the United States sends an alarming, alarming message", says Ali Mokdad, who led the research. "We are not catching up with what everyone else is achieving. And in many counties in the United States, we are falling behind: our life expectancy is going backward." In this context it is all the more urgent to understand the improvements witnessed in New York City, and the lessons that can be applied elsewhere.

The picture is muddled somewhat because the New York City of today is not the same city to which it is being compared in the past. Each decade, several million people migrate to the city or emigrate away, and over time this constant churning of human

beings alters the character of the population. Consequently, some of the increase in life expectancy reflects the health of the people the city attracts rather than any change it has wrought on them. "Whenever you see that people are different in different places, you have to ask whether it's because people are different in different places, or whether the places cause them to be different", says Matthew Turner, an economist at the University of Toronto, Canada, who has researched the relationship between location and health. "It's really hard to sort out."

"We have really the nation's first and maybe the world's first public health mayor, who has made clear that he is willing to take controversial positions if they're going to improve the health of his citizens."

Nor are all the gains New York City made in the 1990s replicable elsewhere. At the beginning of that decade, the population's life expectancy was sinking under a heavy burden of HIV/AIDS-related mortality and a wave of homicides. But over the next 10 years, as murders plummeted 75% and new antiretroviral therapies radically improved outcomes for people living with HIV/AIDS, the population's life expectancy rebounded. The city can be credited with reducing crime and making HIV treatment accessible, but those changes can't drive further increases in life expectancy once homicide and AIDS mortality are low.

But the continuous increase in life expectancy the city experienced after 2000 reflects a different set of processes. Injuries and infectious

disease have a disproportionate effect on young people, but 87% of deaths in the city are attributable to non-communicable diseases, and mortality data show that they are beginning to fall. More than 60% of the increase in life expectancy since 2000 can be attributed to reductions in heart disease, cancer, diabetes, and stroke. In the past decade, death rates for heart disease alone fell by some 25%.

The most influential factor in this decline, says Mokdad, is the city's health department and their aggressive efforts to reshape New York's social environment. "They raised awareness that health is not only your job personally. If you decide to live healthier, the system and the people around you should encourage you, and make it easier for you to do so in your community."

Beginning under Health Commissioner Thomas Frieden and continuing under his successor, Thomas Farley, the city introduced a series of measures to alter the choices available to its residents. The health department mandated

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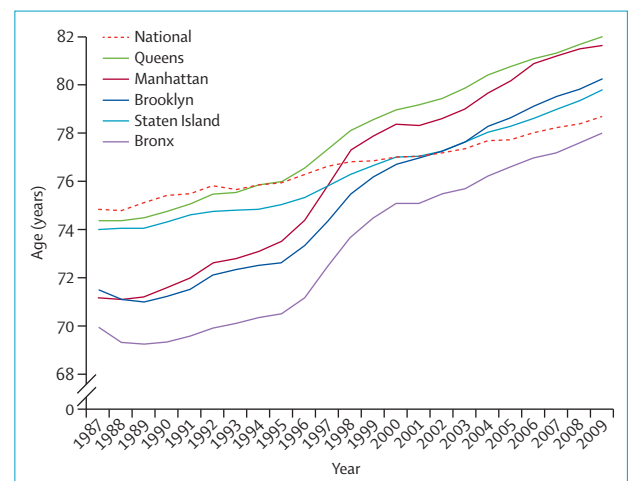


Figure: Estimated life expectancy at birth in the boroughs of New York City
Source: Institute of Health Metrics and Evaluation, University of Washington.



Ted Alcorn

calorie labels for food sold in chain restaurants and banned trans fats. It prohibited smoking in public spaces and ratcheted up taxes on cigarettes. It rolled out hundreds of miles of new bicycle lanes and papered subways with information campaigns about the risks of obesity and the benefits of preventive health services.

“For way too long, public health departments have defined their responsibilities as essentially infectious disease control rather than improvement of health of the population”, Farley told *The Lancet*. The scourges of New York City in the 21st century are tobacco and poor nutrition and inactivity, he says, so the health department has made them their new focus. “It’s not a given that we’re going to continue to have high rates of smoking and high rates of [non-communicable] diseases; those are as preventable as infectious diseases were 150 years ago.”

But making healthy choices still isn’t easy for all New Yorkers. Low-income residents have limited access to healthy foods, spaces to exercise, and quality health care, and this is reflected in large disparities in health across income quintiles and ethnicities. Residents of the city’s poorest neighbourhoods live 4 years less, on average, than do residents of the richest. And the life expectancy of black New Yorkers lags 3 to 4 years behind their white cohabitants. Nowhere is this clearer than the Bronx, the poorest county in the USA, where 30% residents live below the federal poverty line and 75% are black or Hispanic. Its life expectancy is the lowest of any borough in the city, and since it has risen the least since 2000, the gap between it and the other counties has also been widening.

It is Jane Bedell’s job to close this divide. She is the Assistant Commissioner of the Bronx District Public Health Office, one of three satellite offices established in 2002 in high-poverty areas of the city to reduce health inequities. Like many of her staff she is a longtime resident

of the borough, where she practised clinical medicine prior to joining the health department in 2002, and where she came to appreciate how much her patients’ health depended not on what happened in her doctor’s office but what happened outside of it.

With an annual budget of US\$1 million, her staff pilots a number of innovative programmes to make healthy choices easier for the residents of the South Bronx—whether by attracting fresh fruit and vegetable vendors to the area, improving asthma management through the school system, or providing information and services to reduce teen pregnancy. Far from feeling disconnected from the rest of the health department, she says that colleagues from headquarters frequently consult with her office about their work. “We’re not off in a dark corner here.”

And occasionally, in the big pond that is New York City, those connections can transform a small ripple from a local community into something much more powerful. 8 years ago, in response to the high incidence of childhood obesity in the community, Public School 28 in the Bronx’s Mount Hope neighbourhood decided to remove whole milk from its cafeteria and replace it with low-fat or non-fat. The District Public Health Office had been mobilising the community about the issue and helped evaluate the change in 53 pilot schools the next fall. The city took notice and—with results showing a substantial reduction in calories and no adverse effect on overall milk consumption—whole milk was phased out of the entire public school system in 2006, cutting an annual average of 3484 calories and 382 g of fat from the diet of each student. Then in a final stroke this January, the US Department of Agriculture unveiled new rules that will remove whole milk from schools nationwide. 32 million children will benefit.

It seems remarkable that a change instituted by a local health

department in the Bronx could alter national nutrition policy, but maybe it shouldn’t. Ed Glaeser, an urban theorist who grew up in Manhattan, says that cities have always made outsized contributions to shaping humanity’s destiny. “The track record of cities enabling human beings to connect with each other and learn from one another and achieve miraculous things is really remarkable. From Athenian philosophy to Renaissance art to Facebook, we are a social species: very few of our greatest innovations occur in isolation. And even in terms of health, it’s remarkable how often cities have been essentially the laboratories in which people have uncovered major truths about health.” When John Snow traced the aetiology of cholera, London was his uncredited assistant in aggregating information about its spread. More than a century later, the city of Paris played an instrumental part in early research identifying HIV. And today, where New York City has led, cities across the USA have followed: adopting its labelling practices, its ban on smoking and trans fats, and its proactive approach to prevention.

More than just demonstrating that these programmes are good for health, New York City has also proven that they are good politics. Commissioner Farley underscores that while most public health practitioners know which interventions are effective, few have had the level of political support to implement them that Mayor Bloomberg has provided. “We have really the nation’s first and maybe the world’s first public health mayor, who has made clear that he is willing to take controversial positions if they’re going to improve the health of his citizens.” Of all Bloomberg’s legacies to New York, lending his support to the gradual extension of human life may well prove the most meaningful of all.

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