**2012-2020 Partial Results**

<table>
<thead>
<tr>
<th>Date</th>
<th>Black Life</th>
<th>Result</th>
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</thead>
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<tr>
<td>Feb. 26, 2012</td>
<td>Trayvon Martin</td>
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<tr>
<td>July 14, 2014</td>
<td>Eric Garner</td>
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</tr>
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<td>Aug. 9, 2014</td>
<td>Michael Brown</td>
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<td>Nov. 22, 2014</td>
<td>Tamir Rice</td>
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<td>April 4, 2015</td>
<td>Walter Scott</td>
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<td>July 5, 2015</td>
<td>Alton Sterling</td>
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<td>July 6, 2016</td>
<td>Philando Castile</td>
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<td>Mar. 18, 2018</td>
<td>Stephon Clark</td>
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<td>June 2, 2019</td>
<td>Miles Hall</td>
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<tr>
<td>Mar. 13, 2020</td>
<td>Breonna Taylor</td>
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</tr>
<tr>
<td>April 18, 2020</td>
<td>Steven Demarco Taylor</td>
<td>Deceased</td>
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<tr>
<td>May 6, 2020</td>
<td>Sean Reed</td>
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<td>May 25, 2020</td>
<td>George Floyd</td>
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<td>June 2, 2020</td>
<td>Sean Monterrosa</td>
<td>Deceased</td>
</tr>
<tr>
<td>June 5, 2020</td>
<td>Jamel Floyd</td>
<td>Deceased</td>
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**SHOOTING OF BREONNA TAYLOR * **

Breonna Taylor

**EMT June 5, 1993—March 13, 2020**

Shortly after midnight on March 13, 2020, Louisville police entered the apartment of Breonna Taylor and Kenneth Walker using a battering ram to force open the door. The police were investigating two men they believed were selling drugs.

Breonna Taylor

**EMT June 5, 1993—March 13, 2020**

The suspected drug dealer had allegedly been seen walking into Taylor’s apartment one January afternoon with a USPS package before leaving and driving to a known drug house, and the warrant said a US Postal Inspector confirmed that the man had been receiving packages at the apartment.

Breonna Taylor

**EMT June 5, 1993—March 13, 2020**

Neighbors and Taylor’s family dispute this, saying there was no announcement and that Walker and Taylor believed someone was breaking in, causing Walker to act in self-defense. Walker said in his police interrogation that Taylor yelled multiple times, “Who is it?” after hearing a loud bang at the door, but

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received no answer, and that he then armed himself. Walker, a licensed firearm carrier, shot first, striking a police officer in the leg; in response, the officers opened fire with more than 20 rounds, hitting objects in the living room, dining room, kitchen, hallway, bathroom, and both bedrooms. Taylor was shot at least eight times and pronounced dead at the scene. No drugs were found in the apartment. According to anonymous sources who spoke to WAVE3 News, one of the three officers allegedly fired blindly from the exterior of the residence, through a window with closed blinds and curtains; the sources said they do not believe Taylor was struck by any of the bullets fired by the officer who was outside.

* Source — Wikipedia
Inaccurate police incident report
The police filed an incident report that stated that Taylor had no injuries and that no forced entry occurred. The police department said that technical errors led to a nearly entirely blank malformed report.

Investigations into the three police officers
All three officers involved in the shooting were placed on administrative reassignment pending the outcome of an investigation by the police department’s internal Professional Integrity Unit.

On May 20, 2020, the investigation’s findings were given to Kentucky Attorney General Daniel Cameron to determine whether any officer should be criminally charged. Louisville Mayor Greg Fischer also asked the FBI and U.S. Attorney’s Office to review the findings. The FBI is also conducting its own independent investigation, announced by the Bureau’s Louisville field office on May 21, 2020.

In early June, Fischer called for Officer Hankison to be removed from the Louisville Police Merit Board, which reviews appeals from police offices in departmental disciplinary matters. Hankison was one of five members of the board, which consists of three civilians and two police officers selected by the River City Fraternal Order of Police.

On June 19, 2020, three months after Taylor’s killing, Louisville Metro Police interim chief Robert Schroeder sent Hankison a letter notifying him that Schroeder had begun termination proceedings against him.

The letter accused Hankison of violating departmental policies on the use of deadly force by “wantonly and blindly” firing into Taylor’s apartment without determining whether any person presented “an immediate threat” or whether there were “any innocent persons present”.

Kenneth Walker
Walker initially faced criminal charges of first-degree assault and attempted murder of a police officer. The LMPD officers said they announced themselves before entering the home and were immediately met with gunfire from Walker. According to their statement, Walker discharged his firearm first, injuring an officer.

Walker’s lawyer said Walker thought that someone was entering the residence illegally and that Walker acted only in self-defense. The 911 calls were later released to the public, with Walker recorded telling the 911 operator, “somebody kicked in the door and shot my girlfriend”.

Walker was later released from jail due to coronavirus concerns, which drew criticism from Louisville Metro Police Department Chief Steve Conrad.

Judge Olu Stevens released Walker from home incarceration on May 22. Commonwealth’s Attorney Tom Wine moved to dismiss all charges against Walker in late May. The case could be presented to a grand jury again after reviewing the results of the FBI’s and the Kentucky Attorney General’s Office’s investigations.

Wine dropped the charges because the officers never mentioned Taylor by name to the grand jury or that they shot her. Walker’s close friends said that his job was to protect Taylor at any cost.

Rob Eggert, an attorney representing Walker, released a statement saying, “he just wanted to resume his life”. At the
same time, his attorney said that he could be charged again later as more facts come out of the shooting.

On June 16, Eggert filed a motion to permanently dismiss the indictment charging Walker with attempted murder and assault. The motion asked Stevens to grant Walker immunity because he was within his rights to defend himself and Taylor under Kentucky’s stand-your-ground law.

Taylor’s family
On May 15, Taylor’s family filed a wrongful death lawsuit. It states that Taylor and Walker were sleeping in their bedroom before the incident happened, and that the police officers were in unmarked vehicles. None of the officers were wearing body cameras, as all three were plain-clothes narcotics officers.

Taylor and Walker thought their home had been broken into by criminals and that “they were in significant, imminent danger.” The lawsuit alleges that “the officers then entered Breonna’s home without knocking and without announcing themselves as police officers. The Defendants then proceeded to spray gunfire into the residence with a total disregard for the value of human life.”

Release of photos of the scene
On May 14, photos were released to the public in The Courier-Journal by Sam Aguiar, an attorney representing Taylor’s family. The photos show bullet damage in their apartment and the apartment next door.

Changes to police department policy and firing of police chief
On May 21, Police Chief Steve Conrad announced his retirement after intense local and national criticism for the department’s handling of the case, to be effective June 30.

Conrad was fired on June 1 after the fatal shooting of black business owner David McAtee.

Louisville Mayor Greg Fischer indefinitely suspended the use of “no knock” warrants on May 29.

The LMPD has also announced on June 10 that it will require all sworn officers to wear body cameras, and will change how it carries out search warrants.

Protests and public reaction
For months after the shooting, there were demands from Taylor’s family, some members of the local community, and protesters worldwide that the officers involved in the shooting be fired and criminally charged.

Multiple protesters, including friends and family of Taylor, protested outside Mayor Fischer’s office on May 26, 2020, and demanded the three officers be arrested and charged with murder.

On May 28, 500 to 600 demonstrators marched in Downtown Louisville, chanting, “No justice, no peace, prosecute police!” and “Breonna, Breonna, Breonna!”

The protests continued into the early morning of May 29, when seven people were shot; one was in critical condition.

At the same time, Taylor’s sister, Juniyah Palmer, posted on her Facebook page, “At this point y’all are no longer doing this for my sister! You guys are just vandalizing stuff for NO reason, I had a friend ask people why they are there most didn’t even know the ‘protest’ was for my sister.”

These protests and demonstrations were part of the nationwide reaction to the killing of George Floyd, an African-American man who was killed in police custody on May 25, 2020.
On May 27, one Louisville police sergeant said that “The comment section is full of ‘All cops need to die’ and ‘Kill pigs’ and things like that” and that several days earlier, while responding to a 911 call near Taylor’s apartment, multiple people threw pieces of concrete at police officers (who were uninjured) and then ran away.

On June 27, Steven Lopez was arrested after firing shots on the crowd of protestors gathered at Louisville’s Jefferson Square Park, killing one and injuring another.

Lopez had previously taken part in the Breonna Taylor protests before the incident took place as well, but later got into arguments with other Jefferson Park protestors which resulted in at least three reported physical confrontations.

Lopez was also among a group of 17 Louisville protestors who had been arrested on June 17 for inciting a riot, disorderly conduct, harassment and possession of drug paraphernalia.

On July 14, the national social justice organization Until Freedom organized a march of over 100 people to the house of Kentucky Attorney General Daniel Cameron, where protestors occupied his lawn, demanding charges against the officers involved in the killing.

Police officers and a police helicopter were present as 87 protestors, including Houston Texans wide receiver Kenny Stills and The Real Housewives of Atlanta star Porsha Williams, were arrested and removed from the lawn.

As of mid-July 2020 there have been about 50 days of protests. According to LMPD, 435 protesters have been arrested.

**Legislative proposals**

In June 2020, Democrats in Congress introduced the Justice in Policing Act of 2020, a broad bill containing measures to combat misconduct, excessive force, and racial bias in policing. The bill would prohibit the issuance of no-knock warrants (like the kind used in the raid that resulted in Taylor’s killing) in federal drug investigations and provide incentives to states to enact a similar prohibition.

Kentucky’s Senator Rand Paul introduced the Justice for Breonna Taylor Act, which would prohibit federal law enforcement from carrying out a warrant “until after the officer provides notice of his or her authority and purpose”. It would also apply to state and local law enforcement that receive funding from the Justice Department.

On June 10 the Louisville city council voted unanimously to ban no-knock search warrants. The law is called Breonna’s Law and requires all officers who serve warrants to wear body cameras and have them turned on from at least five minutes before the warrant is served to at least five minutes after.

**Reactions**

For weeks after Taylor’s death, there was very little public reaction or response from government officials. The LMPD has not provided many details about the shooting or answers to questions about the case.

On May 13, 2020, Kentucky Governor Andy Beshear responded to reports about Taylor’s death and said the public deserved to know everything about the March raid. Beshear requested that Kentucky Attorney General Daniel Cameron and local and federal prosecutors review the Louisville police’s initial investigation “to ensure justice is done at a time when many are concerned that justice is not blind.”

On May 14, Louisville Mayor Greg Fischer and LMPD Chief Steve Conrad announced they had asked the Federal Bureau of Investigation and the United States Attorney to review the local findings of the Public Integrity Unit’s investigation when it is completed.

Commentators such as Arwa Mahdawi and Professor Brittney Cooper suggested Taylor’s killing would likely not have received so much attention if not for the George Floyd protests, as black women are often neglected.

Mahdawi related this to the #SayHerName campaign and Malcolm X’s statement “The most disrespected person in America is the black woman,” and called for further protest until justice for Taylor is secured.

### Black Americans are killed at a much higher rate than white Americans

Although half of the people shot and killed by police are white, black Americans are shot at a disproportionate rate. They account for less than 13 percent of the U.S. population, but are killed by police at more than twice the rate of white Americans. Hispanic Americans are also killed by police at a disproportionate rate.
The FBI has opened an investigation into the shooting death of Kentucky EMT Breonna Taylor

By Scottie Andrew, CNN
May 21, 2020

The FBI has opened an investigation into the shooting death of Breonna Taylor, an EMT who was killed after officers forced their way inside her home.

Robert Brown, special agent in charge for the FBI Louisville, issued a statement Thursday that said in part, “The FBI will collect all available facts and evidence and will ensure that the investigation is conducted in a fair, thorough and impartial manner.”

As this is an ongoing investigation, Brown said they aren’t able to comment further.

The news follows the Louisville Metro Police Department announcing that it would require all sworn officers to wear body cameras and change how the department carries out search warrants. They’re the first steps toward improving police accountability, Mayor Greg Fischer said at a news conference, in which he repeatedly referred to Taylor’s death as a “tragedy.”

In March, Taylor was shot at least eight times when three officers forcibly entered her apartment to serve a search warrant in a narcotics investigation. The department said the men announced themselves and returned gunfire when Taylor’s boyfriend fired at them.

But in a wrongful death lawsuit, Taylor’s mother says the officers didn’t knock at all and should have called off their search because the suspect they sought had already been arrested.

Officers didn’t find drugs in her apartment when they entered, Taylor’s mother said in the lawsuit.

Stricter no-knock warrants and required body cameras

Going forward, “no-knock warrants,” which allow police to enter a residence without announcing themselves or their purpose, must be signed off on by a judge and the police chief or his designee before police can serve them, Fischer said at a news conference Monday. Previously, the warrant required only a judge’s sign-off.

None of the three officers who entered Taylor’s apartment wore body cameras, the department said, since they were plainclothes narcotics officers.

Now, the department will require all sworn officers to wear body cameras while they serve warrants and in other situations in which they identify themselves as police officers, Fischer announced.

“This is an important moment in the history and evolution of our city,” the mayor said. “At metro government, we’re going to do everything we can to channel the pain and anger of this moment into dialogue, into work that will eventually help us heal and over time make us a stronger, safer and more connected community.”

Community leaders seek action

Fischer was joined remotely by black city council members and local pastors. Some of them will join a community task force to conduct a civilian review of police disciplinary matters, he said.

Council member Jessica Green said she expects to see immediate action and policy change from Taylor’s death, including improved relations between black Louisville residents and police and that “black people will stop being gunned down.”

“As an African American, black folks are tired of talking, tired of meeting,” Green said during the conference. “I can’t take another meeting where there’s not actually something that specifically happens.”

This week, the department’s public integrity unit shared the investigation file for Taylor’s case to the Kentucky Attorney General’s Office and will soon share the file with the FBI and the US attorney.

Taylor’s boyfriend, Kenneth Walker, was arrested and charged with attempted murder of a police officer and first-degree assault. He was released for home incarceration and is scheduled to appear in court in late June.

CNN’s Kay Jones, Carma Hassan, Leah Asmelash and Rebekah Riess contributed to this report.
What the data say about police brutality and racial bias — and which reforms might work

By Lynne Peeples, Nature.com
June 19, 2020

For 8 minutes and 46 seconds, Derek Chauvin pressed his knee into the neck of George Floyd, an unarmed Black man. This deadly use of force by the now-former Minneapolis police officer has reinvigorated a very public debate about police brutality and racism.

As protests have spread around the globe, the pressure is on police departments and politicians, particularly in the United States, to do something — from reforming law-enforcement tactics to defunding or even abolishing police departments.

And although researchers are encouraged by the momentum for change, some are also concerned that, without ample evidence to support new policies, leaders might miss the mark. Many have been arguing for years about the need for better data on the use of force by the police in the United States, and for rigorous studies that test interventions such as training on how to de-escalate tense interactions or mandating the use of body-worn cameras by officers. Those data and studies have begun to materialize, spurred by protests in 2014 after the deadly shooting of Michael Brown in Ferguson, Missouri, and the death by chokehold of Eric Garner in New York City.

Government officials, academic researchers and media outlets launched data-collection projects around that time to better understand the frequency of police violence and the risk factors that contribute to it. From these growing data sets come some disturbing findings. About 1,000 civilians are killed each year by law-enforcement officers in the United States. By one estimate, Black men are 2.5 times more likely than white men to be killed by police during their lifetime. And in another study, Black people who were fatally shot by police seemed to be twice as likely as white people to be unarmed.

“We have enough evidence that tells us that action needs to be taken,” says Justin Nix, a criminologist at the University of Nebraska Omaha. “One thousand deaths a year does not have to be normal.” Since Nature reported last September on what the data say about racial bias and police killings, new evidence has continued to support a link.

Data from California show that police stopped and used force against Black people disproportionately, compared with other racial groups, in 2018. A December 2019 paper reported that bias in police administrative records results in many studies underestimating levels of racial bias in policing, or even masking discrimination entirely.

The data are still limited, which makes crafting policy difficult. A national data set established by the FBI in 2019, for example, contains data from only about 40% of US law-enforcement officers. Data submission by officers and agencies is voluntary, which many researchers see as part of the problem.

“Most agencies do not collect that data in a systematic way,” says Tracey Meares, founding director of the Justice Collaboratory at Yale Law School in New Haven, Connecticut. “I hope when people think about the science of this that they understand what we know, what we don’t know and why we don’t know it,” she says. “Policing, in large part for historical reasons, has proceeded in kind of a science-free zone.”

Bad apples

Scientists must often think creatively to work around the limitations in the data. Mark Hoekstra, an economist at Texas A&M University in College Station, has attempted to decipher the role of race in police officers’ use of force, by comparing responses to emergency calls.

Based on information from more than two million 911 calls in two US cities, he concluded that white officers dispatched to Black neighbourhoods fired their guns five times as often as Black officers dispatched for similar calls to the same neighbourhoods (see ‘Answering the call’). Hoekstra wonders whether the factors that contribute to an officer using excessive force might be predicted in a similar way to how US Major League Baseball teams use sophisticated statistical models to predict whether a player has the potential to be a future all-star.

Scientists have tried to identify some predictive factors, such as racial bias, a bad temper, insecure masculinity and other individual characteristics, many of which can be identified through simulations already used in officer training. Nix suggests that such screening could help with vetting officers before they are recruited. But raising the bar for hiring might be impractical, he cautions, because many police departments are already struggling to attract and retain highly qualified candidates.

Answering the call

Researchers looked at responses to 1.2 million 911 emergency calls in a US city and plotted the use of force involving a gun across neighbourhoods, according to their racial composition. White officers were more likely to use a gun than were Black officers and more likely to do so in predominantly Black neighbourhoods.

- White officers
- Black officers

Percentage of calls in which police used force involving a gun

Percentage of Black residents in a neighbourhood
Similar forecasting models could recognize patterns of bad behaviour among officers. Data from the New York City Police Department suggests that officers who had repeated negative marks in their files were more than three times as likely to fire their gun as were other officers.

Such wrongdoing might even be contagious. Another study, published in February, looked at complaints filed against police officers in Chicago, Illinois. It found that although only a small percentage of officers shoot at civilians, those who have done so often serve as “brokers” in the social networks within policing. Other officers connected to them were also found to be at greater risk of shooting.

But carrying out disciplinary action, let alone firing a police officer, is notoriously difficult in the United States. Union contracts give officers protections that have been tied to increases in misconduct. In many states, a bill of rights for law-enforcement officers shields personnel from investigations into misconduct. “One thing we need to take a hard look at are those state laws and union contracts that provide either flawed or overly protective procedures that insulate officers from appropriate accountability,” says Seth Stoughton, a former police officer who is a law professor at the University of South Carolina in Columbia.

Lawrence Sherman, director of the Cambridge Centre for Evidence-Based Policing in Cambridge, UK, suggests that states have the constitutional power to license or revoke, the power of any individual to serve as a police officer. “If a state agency was keeping track of everyone’s disciplinary history, they might have taken Derek Chauvin out of the policing business ten years ago,” says Sherman. Chauvin had received 18 complaints against him even before he put his knee on Floyd’s neck. “We monitor performance of doctors,” Sherman adds. “Why don’t we monitor the performance of police officers?”

Even officers who are fired for misconduct are frequently rehired. The police officer in Cleveland, Ohio, who fatally shot 12-year-old Tamir Rice in 2014 had previously resigned from another police department after it had deemed him unfit to serve. The Cleveland police did not review the officer’s personnel file before hiring him, The New York Times reported in 2015. An investigation of public records from Florida showed that about 3% of that state’s police force had previously been fired or had resigned in lieu of being dismissed. The study, published in May, found that these officers tended to move to smaller agencies which served a slightly larger proportion of Black residents, but with no significant difference in crime rates. They also appeared to be more likely to commit misconduct in the future compared to officers who had never been fired.

“If an officer is fired for misconduct, or resigned to avoid an investigation, they shouldn’t be able to get hired by another agency,” says Stoughton. “This is a low-hanging fruit.”

Federal legislation introduced last month targets barriers to good and fair policing. One bill would effectively end the doctrine of qualified immunity, by which courts have largely prevented officers from being successfully sued for abuse of power or misconduct since the mid-1960s (ref. 10). A similar bill proposes a number of measures intended to increase police accountability, training and data collection, including a national police misconduct registry to keep record of when an officer is fired or quits. Although Democrats in Washington DC broadly support the bills, Republicans unveiled a competing, weaker proposal that does not address the issue of qualified immunity. This came on 17 June — a day after President Donald Trump signed an executive order that incentivizes police reform. The order drew swift criticism over its relatively narrow breadth and lack of teeth.

Robin Engel, director of the Center for Police Research and Policy in Cincinnati, Ohio, suggests that the real capacity for change is at the state and local levels. “There’s a collective citizen call to action now to hold political leaders responsible for ensuring that the police are collecting data, releasing data and operating with best practices,” says Engel.

**Evidence-based policing**

It remains unclear which law-enforcement practices are actually best, largely because of a lack of data and science. “We’re operating in the dark about what are the most effective strategies, tactics and policies to move forward with,” Engel says.

Political leaders and activists pushing for change in the United States have widely endorsed body-worn cameras, de-escalation training, implicit-bias training, early intervention systems, the banning of chokeholds, and civilian oversight since the tragedies of 2014. A survey of 47 of the largest US law-enforcement agencies between 2015 and 2017 found that 39% changed their use-of-force policies in 2015–16 and revised their training to incorporate tactics such as de-escalation. Among the agencies surveyed, officer-involved shootings dropped by 21% during the study period.

“But as we have seen in the last several weeks — from Minneapolis and from the police response to the protests — there’s a great deal that still has to change in policing,” says Laurie Robinson, a criminologist at George Mason University in Fairfax, Virginia.

Researchers are advocating collection of better data, such as tracking situations in which force was avoided by de-escalation strategies or, when force was used, recording whether it was at a lower level than it might previously have been.

Bias detectives: the researchers striving to make algorithms fair

The Oklahoma City Police Department is among agencies working to fill that void. It now collects details on the applicability of each specific de-escalation tactic and technique any force is used. “Since the implementation of our de-escalation policy, our use-of-force numbers
have decreased,” states Megan Morgan, a police sergeant and spokesperson for the department.

The collection of data might itself hold police officers more accountable. In one study, a requirement that officers file a report when they point their guns at people but do not fire was associated with significantly reduced rates of gun death.

The use of body-worn cameras could be among the easiest interventions to enhance accountability. The technology gained traction after a randomized experiment published in 2014 compared shifts in which all officers wore cameras all the time with shifts in which they never did. The likelihood of force being used by officers with cameras was roughly half that of officers without cameras. Furthermore, camera-wearing officers received about one-tenth the number of complaints as did officers without cameras.

Results of more-recent studies have been mixed. When the Las Vegas Metropolitan Police Department in Nevada implemented body cameras, it experienced significant drops in both the rate of complaints and the use of force. But when the Metropolitan Police Department of the District of Columbia did the same, it found no benefits. The differences might have more to do with policies that allow officers to choose when to turn on their cameras, as well as a lack of controls for situations in which one officer shows up wearing a camera while another does not, notes Sherman.

The latter could dilute true differences in the rates of complaints or uses of force.

“IT would be a travesty if we got rid of body cams,” says Sherman. “They very often help to clarify what happened.”

Evidence suggests that encouraging officers to listen to citizens’ views before making decisions and to generally demonstrate an interest in working with members of a community can be another effective intervention. A one-day training programme based on these principles of procedural justice — a model of policing that focuses on respect, neutrality and transparency — was shown to reduce both citizen complaints and use of force by officers in the Chicago Police Department.

“If police are to be of service to communities, they need to build trust with communities that are likely to distrust them,” says Thomas O’Brien, a researcher at the Social Action Lab at the University of Illinois in Urbana-Champaign. His work suggests that such trust-building requires the police to both acknowledge its role in creating the distrust, as well as apologize for it. Any half-hearted attempts at reconciliation could backfire, he says. Special training can be difficult, however, particularly in smaller jurisdictions, which have been shown to have a higher rate of police shooting civilians.

In the wake of Floyd’s death, many calls for change have gone beyond police reform to defunding police departments — reducing their public funding and reallocating resources to other programmes — or dismantling them altogether. Some researchers caution against fully abolishing police departments. That could have “disastrous consequences”, says Engel. “It’s better to work within and demand significant and meaningful change, and then hold them accountable for that change.”

However, Engel does support proposals that would begin “carving off pieces” of law-enforcement agencies’ current responsibilities that might fall outside their expertise — or might not require an armed response — such as issues of homelessness, drug abuse and mental illness. In New York City, the police purview goes as far as to include enforcement of street-vendor licences. Across the United States, an arrest is made every 3 seconds; less than 5% of these are for serious violent crimes, according to the Vera Institute of Justice in Brooklyn, New York.

Curtiling police encounters could also result in fewer crimes. Research published last year found that Black and Latino boys who are stopped more often by police are more likely to commit crimes months later.

Stoughton also emphasizes the role of racial bias in society, as evidenced in the months leading up to Floyd’s murder by the fatal shooting of a 25-year-old Black man, Ahmaud Arbery, by two white men while he was jogging in Georgia, and by a white woman’s 911 call to falsely report being threatened by a Black birdwatcher in New York City’s Central Park. “I have become convinced that we do not have a race problem in policing,” says Stoughton. “Rather, we have a race problem in society that is reflected in policing.”
Significance
Police violence is a leading cause of death for young men in the United States. Over the life course, about 1 in every 1,000 black men can expect to be killed by police. Risk of being killed by police peaks between the ages of 20 y and 35 y for men and women and for all racial and ethnic groups. Black women and men and American Indian and Alaska Native women and men are significantly more likely than white women and men to be killed by police. Latino men are also more likely to be killed by police than are white men.

Abstract
We use data on police-involved deaths to estimate how the risk of being killed by police use of force in the United States varies across social groups. We estimate the lifetime and age-specific risks of being killed by police by race and sex. We also provide estimates of the proportion of all deaths accounted for by police use of force. We find that African American men and women, American Indian/Alaska Native men and women, and Latino men face higher lifetime risk of being killed by police than do their white peers. We find that Latina women and Asian/Pacific Islander men and women face lower risk of being killed by police than do their white peers. Risk is highest for black men, who (at current levels of risk) face about a 1 in 1,000 chance of being killed by police over the life course. The average lifetime odds of being killed by police are about 1 in 2,000 for men and about 1 in 33,000 for women. Risk peaks between the ages of 20 y and 35 y for all groups. For young men of color, police use of force is among the leading causes of death.

Violent encounters with the police have profound effects on health, neighborhoods, life chances, and politics. Policing plays a key role in maintaining structural inequalities between people of color and white people in the United States. The killings of Oscar Grant, Michael Brown, Charleena Lyles, Stephon Clark, and Tamir Rice, among many others, and the protests that followed have brought sustained national attention to the racialized character of police violence against civilians. Social scientists and public health scholars now widely acknowledge that police contact is a key vector of health inequality and is an important cause of early mortality for people of color.

Police in the United States kill far more people than do police in other advanced industrial democracies. While a substantial body of evidence shows that people of color, especially African Americans, are at greater risk for experiencing criminal justice contact and police-involved harm than are whites, we lack basic estimates of the prevalence of police-involved deaths, largely due to the absence of definitive official data. Journalists have stepped into this void and initiated a series of systematic efforts to track police-involved killings. These data enable a richer understanding of the geographic and demographic patterning of police violence and an evaluation of the magnitude of exposure to police violence over the life course.

Prior research has clearly established that race, sex, and age are closely correlated with exposure to the criminal justice system. Age, race, and gender are also central to the logics that police and legal systems use to decide who to target, how to intervene, and how much force should be applied in the process of policing.

Research Strategy and Key Findings
This paper provides descriptive estimates of the national prevalence of fatal police violence. In doing so, we contribute to a body of research that uses demographic methods to systematically describe the depth of the involvement of the criminal justice system in the lives of Americans.

We estimate the risk of being killed by police use of force in the United States by age, race, and sex. We also construct period life tables that provide estimates of the risk of death across the life course, with the central assumption that risk profiles observed between 2013 and 2018 remain stable. We use Bayesian simulation and multilevel models to provide uncertainty intervals for our mortality estimates.

Our results show that people of color face a higher likelihood of being killed by police than do white men and women, that risk peaks in young adulthood, and that men of color face a nontrivial lifetime risk of being killed by police.

Focal measures for this analysis rely on data compiled by Fatal Encounters (FE), a journalist-led effort to document deaths involving police. Cases are identified through public records and news coverage, and each variable in the data is validated against published documents. Unofficial media-based methods provide more comprehensive information on police violence than do the limited official data currently available.

We focus exclusively on police use-of-force deaths and exclude cases from the analysis that police described as a suicide, that involved a vehicular collision, or that involved an accident such as an overdose or a fall. We provide sensitivity analyses that explore the impact of these inclusion criteria in SI Appendix, Fig. S12. Mortality rate estimates for all groups increase substantially when all recorded cases are included in the analysis.

We describe the data and methods, their limitations, and their assumptions in more detail in Materials and Methods and in SI Appendix.
Results

Fig. 1 displays estimates of lifetime risk of being killed by police use of force by race and sex, using data from 2013 to 2018. We estimate that over the life course, at levels of risk similar to those observed between 2013 and 2018, about 52 (90% uncertainty interval) of every 100,000 men and boys in the United States will be killed by police use of force over the life course, and about 3 of every 100,000 women and girls will be killed by police over the life course.

Fig. 2 displays the ratio of lifetime risk for each racial–ethnic group relative to risk for whites for both men and women. Note that a rate ratio of 1 indicates equality in mortality risk relative to whites. The highest levels of inequality in mortality risk are experienced by black men. Black men are about 2.5 times more likely to be killed by police over the life course than are white men. Black women are about 1.4 times more likely to be killed by police than are white women. Although risks are estimated with less precision for American Indian/Alaska Native men and women than for other groups, we show that they face a higher lifetime risk of being killed by police than do whites. American Indian men are between 1.2 and 1.7 times more likely to be killed by police than are white men, and American Indian women are between 1.1 and 2.1 times more likely to be killed by police than are white women. Latino men are between 1.3 and 1.4 times more likely to be killed by police than are white men, but Latina women are between 12% and 23% less likely to be killed by police than are white women. Both Asian/Pacific Islander men and women are more than 50% less likely to be killed by police than are white men and women, respectively.

Among all groups, black men and boys face the highest lifetime risk of being killed by police. Our models predict that about 1 in 1,000 black men and boys will be killed by police over the life course (96 per 100,000). We predict that between 36 and 81 American Indian/Alaska Native men and boys per 100,000 will be killed by police over the life course. Latino men and boys have an estimated risk of being killed by police of about 53 per 100,000. Asian/Pacific Islander men and boys face a lifetime risk of between 9 and 23 per 100,000, while white men and boys face a lifetime risk of about 39 per 100,000.

Women’s lifetime risk of being killed by police is about 20 times lower than men’s risk. Among women and girls, black women’s and American Indian/Alaska Native women’s risk is highest; we expect between 2.4 and 5.4 black women and girls to be killed by police over the life course.

Both Asian/Pacific Islander men and women are more than 50% less likely to be killed by police than are white men and women, respectively.
course per 100,000 at current rates. American Indian and Alaska Native women and girls are killed by police over the life course at a rate of about 4.2 per 100,000. Latina and white women and girls have similar lifetime mortality risks, at about 2 per 100,000. Asian/Pacific Islander women and girls are at the lowest risk of being killed by police for all groups, with a lifetime risk of about 0.6 per 100,000. However, when other causes of fatality are included in risk estimates, particularly vehicle-related deaths, risk estimates more than double for women across all racial and ethnic groups. We show estimates of lifetime risk at 2013 to 2018 mortality risk levels for multiple causes of police-involved deaths in SI Appendix, Fig. S12.

Fig. 3 displays male age-specific rates of death by police use of force by race–ethnicity, and Fig. 4 displays female age-specific rates of being killed by police by race–ethnicity and age. Risk for all groups peaks between the ages of 20 y and 35 y and declines with age. This pattern is similar to the distribution of violent crime.

Between the ages of 25 y and 29 y, black men are killed by police at a rate between 2.8 and 4.1 per 100,000, American Indian and Alaska Native men are killed at a rate between 1.5 and 2.8 per 100,000, Asian/Pacific Islander men are killed by police at a rate between 0.3 and 0.6 per 100,000, Latino men at a rate between 1.4 and 2.2 per 100,000, and white men at a rate between 0.9 and 1.4 per 100,000. Inequalities in risk persist throughout the life course.

We estimate an overall mortality rate of about 1.8 per 100,000 for men between the ages of 25 y and 29 y. This ranks police use of force as one of the leading causes of death for young men. Between these ages, police violence trails accidents (which include drug overdoses, motor vehicle traffic deaths, and other accidental fatalities) at 76.6 deaths per 100,000, suicide (26.7 deaths per 100,000), other homicides (22.0 deaths per 100,000), heart disease (7.0 deaths per 100,000), and cancer (6.3 deaths per 100,000) as a leading cause of death.

Women’s risk of being killed by police use of force is about an order of magnitude lower than men’s risk at all ages, as shown in Fig. 4. Between the ages of 25 y and 29 y, we estimate a median mortality risk of 0.12 per 100,000 for black women, a risk of 0.14 for American Indian/Alaska Native women, a risk of 0.02 for Asian/Pacific Islander women, a risk of 0.07 for Latina women, a risk of 0.07 for white women, and an overall mortality risk of 0.08 per 100,000 for women in this age group. Police use of force is not among the 15 leading causes of death for young women.
Fig. 5 displays the ratio of police use-of-force deaths to all deaths by age, sex, and race. Police use of force accounts for 0.05% of all male deaths in the United States and 0.003% of all female deaths, a low overall share. However, this ratio is strongly correlated with age and race and is starkly unequal across racial groups. Police use of force is responsible for 1.6% of all deaths involving black men between the ages of 20 y and 24 y. At this age range, police are responsible for 1.2% of American Indian/Alaska Native male deaths, 0.5% of Asian/Pacific Islander male deaths, 1.2% of Latino male deaths, and 0.5% of white male deaths. For women between the ages of 20 y and 24 y, police use of force is responsible for 0.2% of all deaths of black women, 0.2% of all deaths of American Indian/Alaska Native women, 0.05% of all deaths of Asian/Pacific Islander women, 0.16% of all deaths of Latina women, and 0.11% of all deaths of white women.

**Discussion**

Our analysis shows that the risk of being killed by police is jointly patterned by one’s race, gender, and age. Police violence is a leading cause of death for young men, and young men of color face exceptionally high risk of being killed by police. Inequalities in risk are pronounced throughout the life course. This study reinforces calls to treat police violence as a public health issue. Racially unequal exposure to the risk of state violence has profound consequences for public health, democracy, and racial stratification.

Results should be interpreted with several considerations in mind. While the methods used in this paper allow for nationally precise age-, race-, and gender-specific mortality estimates, they may mask important subnational variation and changes in risk over time. Because our analysis focuses on some groups that have low age-specific risks, we lack the power to closely consider spatial and temporal trends. However, in SI Appendix, Fig. S3 we show that rates of death have increased by as much as 50% since 2008. Also note that while black people remain disproportionately more likely than white people to be killed by police, the share of white deaths has been increasing in recent years (SI Appendix, Fig. S5). Our approach smooths over these changes by treating year effects as random error, but future research should examine these trends closely. Prior research suggests that despite high contemporary rates, the risk of being killed by police was higher in decades past.

FE relies on photographs and victim obituaries to classify the race–ethnicity of victims. FE does not currently collect data on variables that may be associated with variation in risk within racial/ethnic groups such as skin tone, multiracial identity, or social class. We discuss FE’s methodology and compare FE’s racial data to other sources of data in SI Appendix, Figs. S5 and S7. The meaning of race, age, and gender for police violence emerges in the interactions between how officers perceive an individual’s identity and the salience of these classifications for perceptions of criminality, belonging, and dangerousness. Future work should closely consider how place, race, gender, age, social class, and disability intersectionally structure exposure to violence.

The absence of authoritative official data is a key challenge in reducing police violence. The Bureau of Justice Statistics should renew efforts to develop comprehensive systems to track officer-involved deaths. Both the public interest and social science are served by increasing transparency with regard to police use of force. Using such data, the research community has made strides in identifying officers most at risk of being involved in cases of excessive force and system failures that result in civilian deaths.

While our research does not evaluate the effects of policy, we believe that several avenues of reform may be fruitful in reducing rates of death. Austerity in social welfare and public health programs has led to police and prisons becoming catch-all responses to social problems. Adequately funding community-based services and restricting the use of armed officers as first responders to mental health and other forms of crisis would likely reduce the volume of people killed by police. Increasing the ability of the public to engage in the regulation of policing through both investigatory commissions with disciplinary teeth and equal participation in police union contract negotiations would also likely reduce rates of death.
Protests over the death of George Floyd entered their seventh day on Monday as cities across the country imposed curfews and deployed police in riot gear to control demonstrators.

Floyd, a black man, was killed in police custody in Minneapolis one week ago. Video taken by bystanders showed a white police officer kneeling on Floyd’s neck as the unarmed man lay handcuffed and cried out that he could not breathe.

The officer, Derek Chauvin, has been charged with murder. The criminal complaint, issued on Friday, accuses Chauvin of having his knee on Floyd’s neck for eight minutes and 46 seconds, including for nearly three minutes after Floyd was nonresponsive.

Chauvin and three other officers involved in the arrest have been fired.

The protests against police violence that have erupted across the country have mirrored those that followed the killing of Eric Garner in 2014. Garner, a black man, died after being choked by a white New York City police officer. Garner’s plea, “I can’t breathe,” became a rallying cry for the Black Lives Matter movement.

No comprehensive official database exists for tracking police violence, though there have been efforts at the federal level to create one. But data compiled by researchers have served as an important source of information about how often people in the United States are killed by police, and who is most likely to be killed.

Last year, more than 1,000 people were killed by police, according to Mapping Police Violence, one research group.

Black people were disproportionately among those killed, the group found. Black people accounted for 24% of those killed, despite making up only about 13% of the population.

Scientists have struggled to study whether racial bias is directly responsible for the disproportionate killing of black people, given limited data on the race of those with whom police regularly come into contact.

Mapping Police Violence, which says that it is able to track more than 90% of killings in the U.S., defines a police killing as any time someone dies as a result of “being shot, beaten, restrained, intentionally hit by a police vehicle, pepper sprayed, tasered, or otherwise harmed by police officers, whether on-duty or off-duty.”

The data from Mapping Police Violence is sourced from three databases — killedbypolice.net, fatalitycounters.org and the U.S. Police Shootings Database — as well as original research focused on social media, obituaries, criminal records databases, police reports and other sources, according to the group.

Three charts below characterize violence attributed to police, while a fourth depicts attacks carried out against police.

American police forces killed three people per day in 2019, for a total of nearly 1,100 killings.

Those numbers are far higher than in other wealthy western countries.

In comparison, The Guardian newspaper reported in 2015 that there was a total of 55 fatal police shootings in England and Wales between 1990 and 2014. Only 15 people were shot fatally by German police in 2010 and 2011 combined, the newspaper reported. The U.S. population is about six times that of England and Wales, and four times that of Germany.

According to Mapping Police Violence data, December and January were the months with the most police killings last year. In December, 110 people were killed by the police. In January, the figure was 105. In February, the month with the fewest deaths, 80 people were killed by the police.
There were only 27 days in which no police killings were reported, according to the data.

Police killings per capita vary dramatically across America’s largest cities, the data shows.

The rate of police killings is highest in St. Louis, where police killed about 18 people per million residents annually between 2013 and 2019. In New York, where the rate of police killings was the lowest, police killed about 1.3 people per million residents in those years.

St. Louis is also significant because of its proximity to the site of one of the police killings that was key in catalyzing the Black Lives Matter movement. In 2014, Michael Brown, a black 18-year-old, was shot by the white police officer Darren Wilson in Ferguson, Mo., located about 10 miles outside St. Louis.

Wilson was not charged with a crime and a 2015 report by the Department of Justice found that his actions were not “objectively unreasonable.” But Brown’s killing, and the phrase “Hands up, don’t shoot!” became symbols of the Black Lives Matter movement that developed over subsequent years.

Despite the large number of police killings annually, police are almost never charged for excessive force violations. Between 2013 and 2019, 99% of killings resulted in no charges, according to Mapping Police Violence.

Prosecutors are often wary of bringing charges against
A doctrine known as “qualified immunity” also protects police from excessive force lawsuits in cases that don’t involve a “clearly established” violation of the law.

An investigation by Reuters published last month showed that, over the past three years, police won more than half of the excessive force suits in which they claimed qualified immunity, a sharp increase from prior periods. Qualified immunity was “making it easier for officers to kill or injure civilians with impunity,” the news service reported.

Hennepin County Attorney Mike Freeman, who announced the charges against Chauvin, acknowledged the difficulty of bringing charges against police officers in a press conference on Friday.

“This is by far the fastest we’ve ever charged a police officer,” Freeman said.

Floyd’s family has called for charges to be brought against the other three officers involved in his arrest, and for Chauvin’s murder charge to be escalated from third degree to first degree, which would carry steeper penalties.

Policing can be dangerous work. According to FBI data, 48 police officers were killed in the line of duty in 2019, with an additional 41 dying accidentally.

The agency reported that 40 of the victim officers were white, seven were black, and one was Asian.