The Cure Violence model for violence prevention is being utilized in more than 25 cities across eight countries and has been demonstrated to be effective by multiple independent evaluations and other analyses, each showing large reductions in shootings and killings. In Chicago, the Cure Violence model* has had an inconsistent level of implementation – with a large increase in funding in 2004 and three funding lapses in 2007-8, 2011-2, and 2015-6. An analysis of the homicide and shooting trends in Chicago demonstrates that these changes in implementation of the Cure Violence model corresponded in time and place with changes in the number of homicides – specifically with a 25% decrease in 2004 and large increases in 2007-8, 2011-2 and 2015-6. Additionally, when funding was restored in 2008 and 2012, violence dropped to previous lower levels. In total, at six distinct points the level of violence changed when Cure Violence implementation changed. This analysis, along with data on effect sizes from independent evaluations, demonstrates that there is an inverse correlation between the level of implementation of the Cure Violence model and the level of shootings and killings in Chicago. Further, it suggests that expanding the Cure Violence model to all areas with high rates of lethal violence in Chicago could dramatically reduce homicides to less than 350 per year and possibly less than 200.

* In Chicago the Cure Violence model is known by the name CeaseFire
**Background**

The Cure Violence model for violence prevention, known in Chicago as CeaseFire, is a public health approach to violence prevention that stops lethal violence before it occurs and stops its spread by interrupting ongoing conflicts, working with the highest risk to change behavior related to violence, and changing community norms (Slutkin 2015, Slutkin 2013, Ransford et al. 2013). This model is based on proven public health techniques and is designed to have a community level effect, meaning that it does not just change individuals but also changes the entire community outcome as measured by shooting and killings. At some point, when the implementation of the model covers enough of the areas of a city with substantially high rates of lethal violence, the program is expected to have an effect on citywide levels of shootings and killings.

This report examines the implementation status of the Cure Violence program from 2000 to 2016 and compares it to the citywide trend in shooting and killing in Chicago. As shown in Figure #1 below, there have been four periods in the past 12 years where killings in Chicago have had a large increases or decreases, and in each case this shift has coincided with a change in Cure Violence implementation. In 2004, a tripling of the Cure Violence program coincided with a precipitous 25% drop in killing. In 2008, 2012, and 2015-6, a large cut in Cure Violence coincided with large jumps in killings. The chart shows a visually apparent connection in time between these trends. This report will detail our analysis of the evidence in support of this connection.

*Figure #1 – The trend in homicides in Chicago has had four major changes since 1999, all of which coincided in time with major changes to the CeaseFire program. In 2004, a tripling of CeaseFire coincided with a 25% drop in homicides. In 2008, 2012, and 2015 a partial shut down of CeaseFire coincided in time with a large increase in homicides.*
More importantly, this report will conclude by examining the potential effect that could be had by expanding the Cure Violence method throughout the communities in Chicago with substantially high rates of lethal violence. With a fully funded Cure Violence program working to supplement the efforts of law enforcement and community organizations, it is projected that homicides could be reduced to less than 350 per year and possibly much lower.

Effectiveness of Cure Violence Model
The effectiveness of the Cure Violence model lies in the innovative way in which it addresses violence. First, the model utilizes workers who have a unique ability to detect and peacefully mediate conflicts within the community before they can turn violent. Evaluations have shown that these workers have been up to 100% effective in preventing retaliations and that their work is directly related to actual reductions in shootings and killings. Second, Cure Violence outreach workers have the ability to identify and work with individuals at highest risk for involvement in violence. The evaluation of the program in Chicago found that 84% of clients met the criteria for being high risk and that overall clients were given meaningful assistance in areas such as finding a job, treating drug abuse, and leaving a gang.

Cure Violence also implements a new angle in reducing violence by utilizing community messengers to shift community norms related to the acceptability of the use of violence. These efforts include community based “responses to violence” by the community, as well as special events such as rallies, marches, community barbeques where anti-violence messages are propagated, and community workshops and summits where high risk individuals are convened to discuss the use of violence. Additionally, a public education campaign, which has been shown to effectively change other behaviors such as smoking, is deployed to change group and community norms related to violence. An evaluation of the implementation of Cure Violence in Baltimore found that the program was effective in reducing the acceptability of the use of violence in its target communities, even among those that were not active clients.

The Cure Violence model has been evaluated many times with many additional informal analyses, each showing large reductions in violence. In Chicago, shootings dropped by 41% to 73% in program communities. In Baltimore, homicides were reduced by up to 56% and shootings by up to 44%. In New York, the rate of gun violence was found to be 20% lower than comparison neighborhoods after implementation of the program. The CDC funded Johns Hopkins study in Baltimore showed many other positive effects as well, including a relationship between interruptions and less homicides, an effect on norms related to use of firearms, and a positive effect in neighboring communities of having the Cure Violence method operating “next door.” As shown in Figure #2, the Cure Violence model has been evaluated many times with many additional informal analyses, each showing large reductions in violence.

The following pages present the case for the connection between the level of implementation of Cure Violence in Chicago and the citywide increases and decreases in killings. While not a comparative analysis, the evidence presented suggests that fluctuations in the level of homicide were at least partly a result of the level of Cure Violence implementation and that expanding the program could substantially reduce killings across the city.
## Figure #2 – Cure Violence has had several independent evaluations as well as several other studies that have all demonstrated large reductions in violence across different contexts.

<table>
<thead>
<tr>
<th>Location</th>
<th>Statistical Findings</th>
<th>Reference and Data Source</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Baltimore (USA)</strong> 2007-present</td>
<td>- Up to 56% reduction in killings 44% in shootings - Evidence of norm change</td>
<td>Webster et al. 2012 Police data and surveys</td>
</tr>
<tr>
<td><strong>Baltimore (USA)</strong> 2007-present</td>
<td>- 25% reduction in shootings across 5 sites (high of 43% reduction)</td>
<td>Webster 2016 Police data</td>
</tr>
<tr>
<td><strong>Baltimore (USA)</strong> 2007-present</td>
<td>- Improvement in 43% of the attitudes on violence assessed</td>
<td>Milam et al 2016 Survey</td>
</tr>
<tr>
<td><strong>Chicago (USA)</strong> 2000-present</td>
<td>- 41% to 73% reduction in killings - 100% reduction in retaliations</td>
<td>Skogan et al. 2009 Police data</td>
</tr>
<tr>
<td><strong>Chicago (USA)</strong> 2000-present</td>
<td>- 38% reduction in killings - 15% reduction in shootings</td>
<td>Henry et al. 2015 Police data</td>
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<tr>
<td><strong>Chicago (USA)</strong> 2000-present</td>
<td>- Treatment was half as likely to get re-injured as control</td>
<td>Salzman et al. unpublished Hospital data</td>
</tr>
<tr>
<td><strong>Chicago (USA)</strong> 2000-present</td>
<td>- 48% reduction in shootings</td>
<td>U of Chicago unpublished Police data</td>
</tr>
<tr>
<td><strong>New Orleans (USA)</strong> 2012-present</td>
<td>- 47% reduction in shooting rate - target pop. - 85% reduction in retaliations/argument motive - 44% reduction in shooting re-injury</td>
<td>City of New Orleans 2016 Progress Report Police and hospital data</td>
</tr>
<tr>
<td><strong>New York City (USA)</strong> 2010-present</td>
<td>- 20% lower rates of shooting - &gt;100 mediations involving &gt;1,000 people</td>
<td>Picard-Fritsche et al. 2013 Police data</td>
</tr>
<tr>
<td><strong>New York City (USA)</strong> 2010-present</td>
<td>- 18% reduction in killings v. 69% increase in control - Reduction in norms accepting use of violence</td>
<td>Butts et al. 2015 Police and hospital data</td>
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<tr>
<td><strong>San Pedro Sula (Honduras)</strong> 2013-present</td>
<td>- 88% reduction in shootings and killing - 1 site - 17 months without any shootings</td>
<td>Ransford et al. 2016 Site reported data</td>
</tr>
<tr>
<td><strong>County of Kent (UK) [Prison program] 2013</strong></td>
<td>- 51% reduction in overall violence - 95% in group attacks - 44% reduction in adjudications (discipline)</td>
<td>Ransford et al. 2016 Prison data</td>
</tr>
<tr>
<td><strong>Cape Town</strong> (South Africa) 2012-present</td>
<td>- 23% lower homicides - 33% lower attempted homicides - 14% lower serious assaults</td>
<td>Ransford et al. 2016 Site reported data</td>
</tr>
<tr>
<td><strong>Kansas City (USA)</strong> 2008-present</td>
<td>- 17.9% reduction in firearm killings</td>
<td>Thompson et al 2013 Police data</td>
</tr>
<tr>
<td><strong>Sadr City</strong> (Iraq) 2008-2013</td>
<td>- Almost 1000 interruptions and over 14,000 people reached through outreach</td>
<td>Site reported data</td>
</tr>
<tr>
<td><strong>Halifax</strong> (Canada)</td>
<td>- No killings since implementation - Downward trend in shootings and violent crimes</td>
<td>Ungar et al 2016 Police data and interviews</td>
</tr>
<tr>
<td><strong>Juarez</strong> (Mexico) 2014-present</td>
<td>- 24.3% in killings 1st year, 13.1% in 2nd year - Reduction in perceived number of disputes and conflicts among clients</td>
<td>Observatorio Ciudadano 2016 Surveys &amp; observatory data</td>
</tr>
<tr>
<td><strong>Loiza</strong> (Puerto Rico) 2013-2015</td>
<td>- 50% reduction in homicides</td>
<td>Site reported data</td>
</tr>
<tr>
<td><strong>Philadelphia</strong> (USA)</td>
<td>- Significant reductions in shootings</td>
<td>Roman et al. unpublished Police data</td>
</tr>
<tr>
<td><strong>Port Au Prince</strong> (Trinidad)</td>
<td>- 67% in woundings and attempted murders - 33% in calls for persons armed with firearms</td>
<td>Maguire et al. unpublished Police data</td>
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</table>
2004 – 25% Drop in Homicide and Increase of CeaseFire Implementation in Chicago

In 2004, CeaseFire received funding from the state of Illinois that allowed it to rapidly expand, approximately tripling in size – from 5 to 15 communities and from 20 to 80 workers. This same year, homicides dropped by an unprecedented 25% in Chicago. While CeaseFire was not covering a large area of the city during this time, there is evidence that suggests that the program was a factor in this large drop. First, the formal evaluation funded by the Department of Justice showed that the CeaseFire program was having an effect on shootings and killings that was attributable to the program at the neighborhood level during this year (Skogan et al., 2009).

Further suggestion of the effect of the CeaseFire strategy is information from beats where CeaseFire was most active and where decreases outpaced the city’s overall drop. For example in the 11th police district, where CeaseFire was active the longest and where efforts were substantially increased, there was a 56% drop in homicides. Also, beat 1413 in Logan Square, which had the highest number of homicides (ten) of any beat in the city in 2003 and where CeaseFire also had a doubling of activity (from 4 workers to 8 workers), there were zero homicides in 2004. Overall, CeaseFire beats had a 47% reduction in homicides in 2004, nearly twice the level of reduction citywide.iii

CeaseFire may not have been the only factor in the decline in homicides in 2004, but it is likely that it was one of the important factors. Among the other factors, the efforts of the Chicago Police Department are important to consider. An independent study of the Chicago Police Department efforts in 2004 looked at many aspects of the Chicago Police Department’s efforts including hot spot policing, targeted deployment (including Special Operations Section and Targeted Response Unit), and enhanced activities. No statistical evidence linking the police efforts to the reduction in homicides in 2004 was found. Despite this lack of evidence, the researchers believed that a more thorough analysis could show some effect (Rosenbaum and Stephens, 2005).

Another possible factor is the Project Safe Neighborhoods (PSN) program, which was active in two Chicago districts during 2004. PSN, however, actually started in January 2003, and therefore would not be temporally linked to a reduction unique to 2004. Additionally, PSN was limited to only two police districts in 2004. This does not rule out PSN as a contributing factor and one analysis has suggested that the program was effective in reducing homicides in two districts.iv

It is likely that CeaseFire, Chicago Police efforts, and PSN all played a role in decreasing homicides to historic lows in Chicago in 2004. There are other possible factors as well, including displacement that occurred due to the closing of some public housing and gentrification. However, the role of CeaseFire in the 2004 reduction is hard to ignore given the increase from 5 to 15 communities and from 20 to 80 workers at the same time as the reduction occurred. The other factors may have played a role, but are not as correlated in time as the changes to the CeaseFire implementation.

2007-2008 - 1st Homicide Increase and Interruption of CeaseFire in Chicago
In September 2007, funding of CeaseFire was cut, temporarily shutting down the intervention in 15 sites. Starting in the same month, September 2007, shootings in Chicago began to increase after a long period of decline. From January to August of 2007, when CeaseFire was still active, shootings decreased by 155 and homicides by 11 compared to the same period in 2006. Beginning in September 2007, however, shootings began to increase, and continued to increases consistently over the next year with 11 of the next 12 months having an increase over the preceding year. After 12 months, shootings had increased by 416 additional victims and homicides increased by 37 victims.

As shown in Figure #4, the loss of funding had a drastic effect on the number of CeaseFire workers and clients. Prior to the interruption in funding, from January to August of 2007, there was an average of 61 CeaseFire outreach workers helping 529 highest risk participants. In September 2007, the number of outreach workers dropped from 61 to 4, and then rose slightly to an average of 15 workers per month over the next year. The number of highest risk participants fell from 529 to 0 for several months before the remaining outreach workers were slowly able to build back their caseloads to just over 100 participants. As a result, more than 400 individuals who were trying to get their lives on a better path found themselves dropped from the program and left without assistance from CeaseFire. Several of the participants who were dropped are known to have been killed in that period of increasing violence.

In addition to reducing the number of outreach workers, CeaseFire also laid off nearly two-thirds of its violence interrupters, the workers tasked with mediating potentially fatal conflicts. From January to August of 2007, 343 high-risk conflicts that were otherwise thought likely to result in a shooting were instead mediated by CeaseFire workers, an average of 49 per month. After the funding interruption, the number of high-risk conflicts mediated dropped to an average of 21 per month. These conflict mediations are a major element of the Cure Violence model and have been shown to play a major role in its effectiveness. The evaluation of CeaseFire in Chicago showed that CeaseFire mediated interruptions were up to 100% effective in preventing retaliations homicides and the evaluation of Baltimore confirmed a relationship between interruptions and reductions in homicides.

In addition to the decrease in CeaseFire implementation and the increasing shootings beginning in the same month, the geographic location of the increases in violence during this period further ties this increase to the CeaseFire reductions. Fully 351 of the 416 additional shootings in Chicago over the 12 months following September 2007 occurred in the districts where the CeaseFire intervention had been removed; 82 of the shootings happened in the specific CeaseFire beats that were shut down. Regarding homicides, the districts that had a program shut down had 41 additional homicides, with the remainder of the city actually having a reduction in homicides. The specific CeaseFire beats that were shut down had a subsequent increase of 18 additional homicides a year after the shut down.
The same month that CeaseFire was shut down, shootings started increasing after a long trend downward. While CeaseFire remained shut down, shootings increased in 11 of 12 months for an additional 416 shooting victims and 37 additional homicide victims.
As shown in Figure #5, many of the districts where the CeaseFire program was shut down had large increases in shootings. For example, in the 7th police district, where the CeaseFire program maintained violence interrupters but did not have outreach workers or community norm change activity, there were 100 additional shootings compared to the previous year, 41 of which were in the former CeaseFire beats. This was the largest increase in shootings of any Chicago Police district over this period. In the 5th police district, which also had violence interrupters but no outreach or community norm change, had an increase of 85 shootings. Beat 522, a former CeaseFire community, had an additional 20 shootings.

There were a few CeaseFire communities that were able to maintain an active program. Three police beats in the 14th district were able to maintain CeaseFire programs through the generous support of private funders and had continued decreases in shootings. After September 2007, when the other CeaseFire beats were shut down and the shootings were increasing, these CeaseFire beats in the 14th district had a reduction of 14 fewer shootings and one fewer homicide. The 11th district was the one other district that maintained a full program, however the program was maintained in only two beats while it was cut in five beats. Overall, the 11th district had an increase of 19 shootings and decrease of 2 homicides, but the two active CeaseFire beats had no change in shootings and had a reduction of nine fewer homicides. The five CeaseFire beats that shut down in the 11th district had an increase of 7 shootings and a decrease of four fewer homicides.

Few other explanations have been offered for this increase in violence. The news media, which largely did not report on the increase that started in September 2007 until 2008 (see Rozas, May 2008), put forth the theory that it could have been related to the hiring of a new police superintendent (see Rozas, July 2008). However, the superintendent did not join the department until February 2008, six months after the point at which the increase in shootings actually began. There is no other record of any change to law enforcement or criminal justice programs during this time period.

At the end of December 2008, CeaseFire funds were fully restored to the “pre-cut” level. In 2009, the number of workers and active community sites were fully restored, and there were 458 killings in 2009 – essentially a full return to the 2007 number. Therefore not only were the increases in killings concurrent with the drop in CeaseFire staffing, but the subsequent reductions in killings also followed the restoration of the program.
2011 - 2nd Homicide Increase and Interruption of CeaseFire in Chicago

As in 2007, in 2011 there was an interruption in the CeaseFire program, this time because of delays in state contracting. During the period of implementation from January to June 2011, CeaseFire had an average of 91 workers who were working with 423 high-risk participants per month, peaking in July 2011 with 562 participants. Beginning in July 2011 most of CeaseFire program sites shut down. In August, after implementation levels decreased, the number of high-risk participants was reduced to 227 and continued to drop, bottoming out in November at 134 participants. This means that 428 of the highest risk individuals who CeaseFire was working with to get their lives on a better path were dropped from the program and left without assistance from CeaseFire.

As with the 2007-2008 increase, this drop in CeaseFire implementation coincided with an increase in shootings and killings. There had been reductions in shootings and killings from January to August 2011, with shootings decreasing by 62 (a 5% drop) and homicides by 37 (a 12% drop). If this same level of reduction had been maintained for the remainder of the year, homicides could have been reduced to less than 400 in 2011, to an estimated 382 killings. Starting in September 2011, these trends reversed. From September 2011 to June 2012, homicides increased every month for a total of 106 additional victims compared to the previous year. Shootings also increased, although the increase did not begin until December 2011 and continued to March 2012 for a total of 109 additional victims.

Most of the sites that were shut down experienced increases in homicides, shootings, or both, while the areas with CeaseFire sites that were able to maintain funding were mostly able to continue to reduce homicides and shootings. Sites that previously had an active CeaseFire program from January to June that was shut down had a subsequent increase of 21 homicides from September 2011 to June 2012 compared to the previous year. When these sites were active from January to June 2011 they had a reduction of 5 homicides. Shootings increased in these sites by 10 additional shootings from September 2011 to December 2011 before decreasing in 2012.

This decrease in shootings in 2012 was largely due to a few very large decreases in a few communities that had CeaseFire programs reinstated. For example, the Chicago Lawn community was cut from July 2011 to December 2012, but was able to rehire workers in January 2012 and was able to maintain a partial staff of outreach workers and violence interrupters in 10 of 12 months. In 2012, this one community had 28 fewer shootings than the previous year. By comparison, beats 833 and 835, which had been part of the Chicago Lawn CeaseFire site in 2011, but were not able to be reinstated in 2012, had an increase in shootings of 6 additional shootings. Although the timing of reinstatement and the decrease in shootings varied, and other communities did not have as large of a reduction as Chicago Lawn, similar results occurred in CeaseFire. These sites were interrupted in

Figure H6 – In June 2011, CeaseFire lost most of its funding in Chicago and had to shut down many sites. Starting in September, homicides increased after a large downward trend.
2011 and homicide and shootings increases occurred, then reinstated in 2012 and decreases occurred.\textsuperscript{xiii}

There were also a few sites that were able to maintain implementation throughout 2011 and 2012, although some experienced some short interruptions.\textsuperscript{xiv} These four sites covering 10 beats had a reduction of 14 homicides and 4 shootings in 2011, including 5 fewer homicides and one fewer shooting in the final 6 months when the rest of the city was increasing. In 2012, these sites had 3 fewer homicides and 54 fewer shootings.

There are many factors that affect violence in Chicago, but few appear as closely linked in time and place as CeaseFire implementation levels. Law enforcement and criminal justice initiatives, which are major factors that determine the level of violence in a community, may also have had an effect in this period but were not able to be systematically reviewed. One of the leading theories in the media was that the unseasonably warm weather in early 2012 could have brought more people out, increasing the chance of conflict. However, this theory does not account for the increase in homicides during the fall of 2011 (i.e. the increase started earlier), which preceded and followed a similar trajectory in 2012. Furthermore, a separate review of other cities that also experienced unusually warm weather – including Detroit, St. Louis, Indianapolis, and Cincinnati – did not experience an increase in homicides.\textsuperscript{xv}

Also telling is that no other violent crime category experienced a similar increase over this same period. If law enforcement, criminal justice programs, or the weather were responsible, the increase likely would have occurred for other crime categories as well. Since CeaseFire is a program that addresses gun violence, specifically shootings and killings, it should not be surprising that around the time that it was cut back, lethal violence increased while other crime did not.

\textbf{2015-6 – 3\textsuperscript{rd} Homicide Increase and Interruption of CeaseFire in Chicago}

There has been a well documented increase in shootings and killings in Chicago in 2016 – with August 2016 designated the deadliest month in Chicago in almost 20 years and the projection for the end of year total predicting the deadliest year in at least 10 years. While the 2016 levels have skyrocketed to record levels, the increasing trend actual began in the spring of 2015.

As illustrated in \textit{Figure 8}, the decreasing trend extended until February 2015, when the trend reversed and increased throughout 2015, and then sharply increased additionally in 2016.\textsuperscript{xvi} As shown in \textit{Figure 7}, the decreasing trend resulted in 290 fewer shootings and 46 fewer homicides, while the increasing trend resulted in 724 more shootings and 162 more homicides. Before this epidemic rise in violence, shootings in Chicago had been on a long downward trajectory - decreasing in 21 out of the 25 months before March 2015. After March 2015, shootings increased in 13 out of 17 months.

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure_7.png}
\caption{The period preceding the cut to CeaseFire, shootings and homicides were both down substantially based on the average levels of the past 10 years. The period after the cut in CeaseFire had a large increase in shootings and killings.}
\end{figure}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure_8.png}
\caption{Additional killings and shootings in Chicago after the CeaseFire funding cut in March 2015.}
\end{figure}
Figure #8 – The period before the cut in CeaseFire experienced a long downward trend. This trend was reversed at the same time that CeaseFire was cut and resulted in a large increase in shootings. This trendline uses an average level of homicides from 2004 to 2014 in Chicago (a relatively stable period) to compute a baseline. The trendline is formed by adding together each month’s deviation from the mean for that particular month to the prior months accumulated deviation.
As before, this increase in violence coincides with a sharp reduction in the level of implementation of CeaseFire in Chicago. On March 4, 2015, funding from the state of Illinois was suspended, effective immediately. In March, about half of the staff were immediately laid off and by July 2015 most of the staff were laid off. In February, CeaseFire had 71 staff in the communities, including 26 interrupters. By July 2015, CeaseFire was down to 10 workers – mostly in the 4th district. From July 2015 to July 2016 CeaseFire had between 9 and 12 workers, 3-4 of which were interrupters.

This decrease in staffing had a major impact on program activity. Clients in most communities were left without support. Before the cut, CeaseFire sites were helping 372 high risk clients (July to December 2014). After the cut, the remaining program sites could only manage 54 high risk clients (July to December 2015). Likewise, there were much fewer activities for the community – only 56 compared to 386 before the cut (July to December, 2014 v. 2015).

Perhaps the greatest indicator is the number of mediations that occur – because these mediations interrupt events that are ongoing in a community. In the 6 months before the cut (September 2014 to February 2015), CeaseFire sites were averaging 81 mediations of high risk conflicts per month. In the 12 month period after the wind down of the program (July 2015 to June 2016), the remaining programs averaged only 30 mediations per month – half of which were concentrated in the 4th district (the remainder occurring in Woodlawn and Little Village).

Beyond the timing of the increase coinciding with the cuts to CeaseFire, the places where this historic increase in violence has occurred also coincides with the places the program has been cut. The districts where the CeaseFire programs were cut are the districts where violence increased the most, accounting for 94% of the total citywide increase in shootings. In particular, the 11th district—where CeaseFire operated its longest running program with 10 experienced staff before the cut—were two times greater than the district with the next highest total. This 11th district team were averaging 10 mediation per month the previous year before the program was stopped.

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As shown in Figures 10 and 11, the 4th district was the only district that had reductions in shootings and killings (57 fewer shootings and 6 fewer homicide than the mean baseline). The 4th district is also the location of the only CeaseFire program that had full staffing after the cut in funding. The South Shore program in the 4th district began just as the other programs were being shut down in March 2015. The program has two interrupters and six total staff. From July 2015 to June 2016, the program averaged 15 mediation per month, and performed 33 mediations in July 2016.

The contrast between the 11th district and the 4th is worth looking at closer due to their vastly different experiences. As shown in Figure #12, the trends in these individual districts show a pattern of CeaseFire implementation being inversely correlated with the trend in shootings. In the 4th district, as workers become active, the shootings trend decreases. This occurs in May 2014 when an initial increase in workers coincided with a drop in shootings. These workers were lost in July 2014, which coincides with an increase in shootings. The workers return in October 2014, which coincides with a stabilization of the upward trend, however the trend does not drop until around July 2015. During this period of stabilization, the location of the site was changing – which was

![Graph showing the relationship between the number of CeaseFire workers, shootings decrease in the 4th district](image-url)

![Graph showing the relationship between the number of CeaseFire workers, shootings increase in the 11th district](image-url)

*Figure #12 – As workers in the 4th district were deployed, drops in shootings followed. This includes an initial drop that followed an initial staff, an increase when those workers were lost, and then a sustained decrease when 6 workers are maintained. By contrast, in the 11th district as workers dropped to 0, shootings increased.*
essentially closing one site in the 4th district and opening a new site. The new site began in March 2015, but had unstable staffing until August 2015, when the trend in shootings began to drop.

By contrast, in the 11th district, a loss of funding coincides with a large increase in shootings. First, with a low but stable number of workers there is a downward trend in 2013. In late 2013, a loss of workers coincides with a reversal of the trend. The program increases the number of workers to between 8 and 11 workers in 2014, but the trend continues to increase until the end of 2014 when a 6-month downward trend begins. This trend reverses in July 2015 and increases sharply for the next year. The 11th district site, unlike the other sites that shut down in March 2015, received crisis funding from a donor (along with the 7th district sites) that extended it operations with a full staff through June and completely shutting down in July – coinciding with the increasing trend in shootings.

Summary
This report describes the correlation between the level of implementation of the CeaseFire program and the level of killings in Chicago. Chicago had been on a long and continuous trend of decreasing shootings and killings starting in 2001, coinciding with the start of the CeaseFire intervention. In 2004, the tripling of the CeaseFire program coincided with a sharp drop in killings. In mid-2007, the CeaseFire intervention was interrupted and shootings and killings started increasing during the exact same month. These increases occurred in the same districts where CeaseFire used to work and not where the CeaseFire intervention remained active. In mid-2011, the CeaseFire program again experienced an interruption in funding, which again coincided with an increase in shootings and killings. Additionally, when funding was restored in 2008 and 2012, violence dropped to previous lower levels. In 2015, a sharp reduction in staff coincided with reversal of a downward trend with a sharp increase that continues today.

These are six instances in which there was a documented and consistent correlation between CeaseFire implementation and trends in shootings and killings. This report is consistent with multiple independent scientific evaluations that have shown that the program causes large statistically significant decreases in shootings and killings as well as associations between staffing patterns and trends in violence. This explanation takes into account the timing of the decreases, the timing of the increases, the location of the increases, and the removal and re-institution of an intervention that has been scientifically demonstrated effective in Chicago.

Possibility of Expanding CeaseFire Citywide
While the increases can be discouraging, they at least provide for hope and a possible course of action. Levels of implementation of CeaseFire are achievable that can be predicted to get Chicago’s number of homicides to less than 350, and possibly less than 200. This would have a very strong impact on the city in terms of saving lives from unnecessary tragedy and restoring communities to vibrancy.

Currently, CeaseFire remains at a low level of coverage in Chicago when calculated according to districts and community areas with rates that would warrant the implementation of the strategy. Even at its peak of implementation, CeaseFire has only been funded to cover a quarter to a third of the areas of Chicago with high rates of lethal violence. Over the last five years, the program has had an interruption in funding on two occasions that have caused major cut backs in the intervention for long periods of time.
Multiple calculations have been done to determine the need and potential impact of enhanced coverage of the Cure Violence strategy in Chicago. Calculating where the strategy is warranted and where effectiveness is expected is based on an area having rates twice the national average – as is done for the Cure Violence national and international program – a criterion which would currently be met by approximately 90 to 110 Chicago police beats. Furthermore, CeaseFire’s funding needs would require stabilization for summer periods when state contracting issues are problematic so that interruptions in implementation do not cause reversals of the progress made.

If CeaseFire were fully funded throughout Chicago, extrapolations of data from the evaluations suggest that the city could experience a large reduction in gun violence – conservatively to less than 350 killings per year and possibly to fewer than 200. The evaluation of the program in Chicago showed reductions in shootings due to the program – controlling for other factors – of up to 28%. The evaluation of the program in Baltimore showed reductions in homicides of up to 56% and in drops in shootings of up to 44%.

There is also reason to believe that an expansion of coverage throughout the city could result in a more effective program. The primary reason for this is the synergies that would be created by having teams of workers throughout the city that could work together to address a violence problem that does not recognize community boundaries. This has already been demonstrated in one independent analysis of the program that compared the implementations in Chicago and Baltimore (Whitehall, 2012). The Baltimore implementation, which had larger reductions due to the program, also had more staff per program area suggesting that larger teams could get larger reduction. There would also be an enhanced ability to saturate the city with the message of rejecting the use of violence increasing the effect on community norms.

With all of these results and all of the factors that affect violence, it is hard to predict how much a fully funded CeaseFire program could reduce lethal violence over and above what law enforcement could achieve. Assuming that all other factors remain constant – the economy does not worsen, the police do not reduce their efforts, and many others - a 30% annual reduction would seem to be a conservative estimate. Over three years, this type of reduction would result in dropping Chicago’s total homicide level below 200 per year. An even more conservative 10% reduction per year estimate, resulting in a 27% decline over 3 years, would result in around 350 homicides in a year.

This type of reduction would have profound impacts on the city. Estimates of the costs of untreated violence to Chicago taxpayers are in the range of $2 to $2 1/2 billion. Costs of treating the victims, arresting the offenders, and repairing the community would be drastically cut. Schools, community organizations, and businesses would all improve. Real estate values would increase bringing in increased tax revenue to the city. In all, this type of reduction would have an effect on the city that would be valued in the billions of dollars per year.
Based on effect sizes demonstrated in three independent evaluations, a fully implemented CeaseFire program would be expected to reduce homicides to 200 to 350 per year after three years of continuous coverage.

Figure #14 – Based on effect sizes demonstrated in three independent evaluations, a fully implemented CeaseFire program would be expected to reduce homicides to 200 to 350 per year after three years of continuous coverage.
APPENDIX A: Short Description of Model

Cure Violence Model is a public health approach to violence prevention that understands violence as a learned behavior that can be prevented using disease control methods. The model prevents violence through a three-prong approach:

1. **Interrupt transmission**
   The Cure Violence model deploys violence interrupters who use a specific method to locate potentially lethal, ongoing conflicts and respond with a variety of conflict mediation techniques both to prevent imminent violence and to change the norms around the need to use violence. Cure Violence hires culturally appropriate workers who live in the community, are known to high-risk people, and have possibly even been gang members or spent time in prison, but have made a change in their lives and turned away from crime. Interrupters receive specific training on a method for detecting potential shooting events, mediating conflicts, and keeping safe in these dangerous situations.

2. **Identify and change the thinking of highest potential transmitters**
   Cure Violence employs a strong outreach component to change the norms and behavior of high-risk clients. Outreach workers act as mentors to a caseload of participants, seeing each client multiple times per week, conveying a message of rejecting the use of violence, and assisting them to obtain needed services such as job training and drug abuse counseling. Outreach workers are also available to their clients during critical moments – when a client needs someone to help him avoid a relapse into criminal and violent behavior. The participants of the program are of highest risk for being a victim or perpetrator of a shooting in the near future, as determined by a list of risk factors specific to the community. In order to have access and credibility among this population, Cure Violence employs culturally appropriate workers, similar to the indigenous workers used in other public health models.

3. **Change group norms**
   In order to have lasting change, the norms in the community, which accept and encourage violence, must change. At the heart of Cure Violence’s effort at community norm change is the idea that the norms can be changed if multiple messengers of the same new norms are consistently and abundantly heard. Cure Violence uses a public education campaign, community events, community responses to every shooting, and community mobilization to change group and community norms related to the use of firearms.

Three additional elements are essential for proper implementation. First, with all of these components, data and monitoring are used to measure and provide constant feedback to the Cure Violence workers. Second, extensive training of workers is necessary to ensure that they can properly carry out their duties. This includes an initial training before they are sent out on the streets, follow up trainings every few months, and regular meetings in which techniques for effective work are reviewed. Third, the program implements a partnership with local hospitals so that workers are notified immediately of gunshot wound victims admitted to emergency rooms. These notifications enable workers to respond quickly, often at the hospital, to prevent retaliations (Ransford et al., 2014).
References


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i For a more detailed description of the components of the model, see the appendix at the end of this report.

ii Overall reductions in shootings in the seven program sites were between 41% and 73%. When comparing to control communities to control for other factors such as law enforcement, statistically significant reductions that were specifically attributable to the CeaseFire program were found to be between 16% and 28% in four communities by time series analysis. Hot spot analysis found reductions of shooting density between 15% and 40% in four partially overlapping communities. Six of the seven communities examined had reductions due to the program as determined by either time series analysis or hot spot analysis. The seventh community had -100% drop in retaliation homicides and large reductions in shootings, but the neighboring comparison community had similar reductions.

iii There was also a -40% citywide reduction in shootings in 2004, however a change in the definition of what was classified as a shooting occurred in late 2003 making analysis of shooting trends impossible. The shooting reductions in CeaseFire beats and districts were greater than the reductions in beats and districts without a program.

iv Papachristos et al. 2007 - While the analysis of the PSN program showed strong effects of the program, the analysis appears to have incorrect data for the CeaseFire implementation and therefore could not have properly controlled for the CeaseFire effect. For example, the paper claims CeaseFire began in 1999 and that it was present in 50% of PSN beats, both incorrect statements.

v There were 2 sites that secured private funding to reinstate workers after shutting down for 2 to 3 months. One other site shut down for 4 of 7 months before stabilizing at half strength. The remaining sites shut down for at least 12 months. Some of the sites maintained violence interrupters, but the outreach staff were cut effectively shutting down the intervention.

vi The external evaluation of the Chicago program confirmed that the program worked with the highest risk individuals with 84% of the participant meeting the criteria to be considered high risk.

vii This is based on anecdotal evidence from outreach workers and has not been otherwise documented.

viii From January to October there were 27 to 35 violence interrupters. The number of violence interrupters dropped to 12 from November through January. The number of interrupters fluctuated in 2008 between 12 and 21 violence interrupters.

ix Both Logan Square and Humboldt Park maintained staffing after two periods of program interruption in November and December 2007 and again in February and March 2008. Of the 12 months being examined here, these two communities maintained at least 75% staffing in 8 months.

x There were two additional communities that maintained partial outreach staffs for the period in question, however they did not have violence interrupters. The Auburn Gresham community shut down for two months and had half staff for five months and had an increase of two shootings. The
Woodlawn community shut down for three months, had half staff for four months, and three-quarters staff for six months. This area of Woodlawn had an increase of four shootings.

\textsuperscript{xi} The external evaluation of CeaseFire in Chicago showed that CeaseFire was 85\% to 97\% successful in meeting client needs on a number of areas including leaving a gang, finding a job, finishing their education, and getting drug treatment (Skogan et al., 2009).

\textsuperscript{xii} Some sites that shut down had brief periods of program activity. It is theorized that this program activity was not consistent enough to have a positive effect and could in fact have a negative effect.

\textsuperscript{xiii} The decreases in homicides did not begin to occur until September 2012 while shootings decreases started in January 2012.

\textsuperscript{xiv} Seven of the 10 active beats had periods where the program shut down, but was active most months. The 3 other active beats had only 3 outreach workers instead of 4, but had very high levels of violence interrupters. There was one additional new site that was active only from January to June 2012 and had a reduction of 2 homicides.

\textsuperscript{xv} Of 265 cities with population over 100,000 for which data was available, 105 had an increase in homicides in the first six months of 2012. Chicago had, by far, the highest real number increase in homicides with 69 additional homicides. The next closest was Philadelphia with an increase of 26. Only seven cities had double digit increases (FBI UCR 2013).

\textsuperscript{xvi} Not every program area had significant reductions in all measures, but all program areas had at least one significant reduction.