The Check. Change. Control® program began in August 2012 as a pilot program initially targeting (18) markets. It was based on best practices learned from a pilot conducted in Durham County in 2011 (concluded March 2012). The principles rely on volunteer engagement through the successes of Power To End Stroke®, as well as other successful community-based programs identified through recent science literature reviews. The first year of Check. Change. Control. ended in June 2013, the second year ended in June 2014, the third year ended in June 2015, the fourth year ended in June 2016. July 2016 marks the start of the fifth year of the program.

Key evidence-based scientific principles foundational to the program include:
1. The practice of self-monitoring and tracking of blood pressure readings at home or outside of the healthcare provider office setting.
2. Use of a digital self-monitoring online tracker like the CCC Tracker and Heart360.
3. The practice of self-management skills related to blood pressure management.
4. Use of health mentors to motivate and encourage participants.

The program is designed with a specified begin and end date for a period of 4-months for several reasons:
1. It is possible for individuals to see positive improvements in blood pressure within this timeframe.
2. This amount of time is commonly shown to be adequate for individuals to form new healthy habits, in this case, the practice of self-monitoring and tracking of blood pressure.
3. In an effort to systematically evaluate and improve upon our efforts, specific start and end dates for participant groups will allow the AHA Science staff and volunteers to understand how participants are progressing in the program over time and what improvements we can make to ensure we are retaining participants for a period of time we believe can lead to positive improvements in blood pressure.

We saw great success with our pilot in Durham County. At the end of the study (March 2012), 70% of the patients had a BP of less than 140/90 or a 10 mmHg decrease in systolic blood pressure. We continued to see success in the second year of the CCC program (June 2014) with results that showed 75% of all participants (hypertensive, pre-hypertensive and normal) saw improvement in their blood pressure. Hypertensive participants (1st reading >140/90) showed a drop of 21.85 mmHg systolic. This is important because even a 5 mmHg decrease in SBP leads to improved health and a reduction in deaths from stroke and heart disease.
Here are results from the first two years of the CCC program (FY 2012-13 appear in grey, FY 2013-14 appear in red or white):

**Overall Statistics 2013-14**
Previous year’s results in grey

- **11,343** (9,377) people
- **43,200+** (30,000) BP readings uploaded to Heart360®

**Participants began the program by gathering initial BP numbers.**
Previous year’s results in grey

- **33%** (33%) high blood pressure
- **43%** (47%) prehypertensive blood pressure
- **23%** (20%) normal blood pressure

(greater than 140 mmHg systolic, or 90 mmHg diastolic)
(systolic BP between 120 & 140 or a diastolic between 80 & 90 mmHg)
(less than 120/80)
Participants* who met the retention criteria

Uploading readings:
- At least 2x’s per month
- For 4 consecutive months

<table>
<thead>
<tr>
<th>SBP</th>
<th>DBP</th>
</tr>
</thead>
<tbody>
<tr>
<td>12.69</td>
<td>8.12</td>
</tr>
<tr>
<td>(11.2) mmHg</td>
<td>(4.3) mmHg</td>
</tr>
</tbody>
</table>

*Total participant pop. represented is 1,674

Previous year’s results in grey

Avg drops in BP

Participants* who met the retention criteria

Uploading readings:
- At least 2x’s per month
- For 4 consecutive months
- And started the program with a starting BP > 140/90 (Hypertensive)

<table>
<thead>
<tr>
<th>SBP</th>
<th>DBP</th>
</tr>
</thead>
<tbody>
<tr>
<td>23.72</td>
<td>8.36</td>
</tr>
<tr>
<td>(27.23) mmHg</td>
<td>(10.52) mmHg</td>
</tr>
</tbody>
</table>

*Total participant pop. represented is 528

Previous year’s results in grey
For participants* who uploaded readings

- At least twice total
- The second reading was taken at least 7 days from the first

**Avg drops in BP**

\[
\begin{align*}
SBP & \quad DBP \\
13.95 & \quad 9.48 \\
(5.68) & \quad (2.87) \\
(3.145) & \quad (2.92)
\end{align*}
\]

*Total participant pop represented is 4,803

Previous year's results in grey

For participants* who uploaded readings

- At least twice total
- The second reading was taken at least 7 days from the first
- And started the program with a starting BP > 140/90 (Hypertensive)

**Avg drops in BP**

\[
\begin{align*}
SBP & \quad DBP \\
21.85 & \quad 12.65 \\
(17.48) & \quad (7.97) \\
(1:171)
\end{align*}
\]

*Total participant pop represented is 1,621

Previous year's results in grey
Here are the results from (FY 2014-15) using Heart360 website and iHealth app:

Overall Statistics 2014-15

# of Campaigns: 188 Heart360
21 iHealth

Participants began the program by gathering initial BP numbers using Heart360 or iHealth sites
Participants who met the retention criteria

Uploading readings using Heart360 & iHealth:
- At least 8 readings
- Over 4 consecutive months
- At least 1 reading each month

Avg drops in BP using Heart360*
Avg drops in BP using iHealth**

<table>
<thead>
<tr>
<th>SBP</th>
<th>DBP</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.96 mmHg</td>
<td>9.10 mmHg</td>
</tr>
<tr>
<td>12.82 mmHg</td>
<td>9.47 mmHg</td>
</tr>
</tbody>
</table>

*Heart360 participant pop. represented is 1,210
**iHealth participant pop. represented is 316

Participants who met the retention criteria

Uploading readings using Heart360 & iHealth:
- At least 8 readings
- Over 4 consecutive months
- At least 1 reading each month
- And began the program with a starting BP > 140/90 (Hypertensive)

Avg drops in BP using Heart360*
Avg drops in BP using iHealth**

<table>
<thead>
<tr>
<th>SBP</th>
<th>DBP</th>
</tr>
</thead>
<tbody>
<tr>
<td>18.14 mmHg</td>
<td>12.93 mmHg</td>
</tr>
<tr>
<td>18.05 mmHg</td>
<td>13.13 mmHg</td>
</tr>
</tbody>
</table>

*Heart360 participant pop. represented is 271
**iHealth participant pop. represented is 85
A summary of results from August 2012 to June 30, 2016:

> Enrollment: 50,364 individuals
> Blood Pressure Readings: 163,522
## AVERAGE DROP IN SYSTOLIC & DIASTOLIC BLOOD PRESSURE

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Average Drop in Systolic BP</th>
<th>Average Drop in Diastolic BP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aug. ’12-June ’13 (Heart360 Campaigns)</td>
<td>11.20 mm HG</td>
<td>4.31 mm HG</td>
</tr>
<tr>
<td>July’13-June ’14 (Heart360 Campaigns)</td>
<td>12.69 mm HG</td>
<td>8.12 mm HG</td>
</tr>
<tr>
<td>July ’14-June ’15 (Heart360 Campaigns)</td>
<td>11.96 mm HG</td>
<td>9.10 mm HG</td>
</tr>
<tr>
<td>July ’14-June ’15 (iHealth sites)</td>
<td>12.82 mm HG</td>
<td>9.47 mm HG</td>
</tr>
<tr>
<td>July ’15-June ’16 (Heart360 Campaigns)</td>
<td>11.99 mm HG</td>
<td>8.67 mm HG</td>
</tr>
</tbody>
</table>

### What Do These Results Mean?

- **Overall Mortality Reduction**: 7%
- **Heart Disease Mortality**: 9%
- **Stroke Mortality**: 14%

> Also, a 5mmHg reduction in systolic blood pressure would increase the prevalence of ideal blood pressure from 44.26% to 65.31%
Another way to look at the urgency around high blood pressure control: