## S1 Tables. Supplemental Tables

Table A. Characteristics of population screened for hypertension at study baseline ..... 2
Table B. Risk factors for baseline uncontrolled hypertension among overall screened population ..... 3
Table C. Baseline characteristics, stratified by sex ..... 4
Table D. Mortality by year three among all adults with baseline uncontrolled hypertension. ..... 5
Table E. Causes of death by trial arm ..... 6
Table F. Mortality by year three among adults <80 years of age with baseline uncontrolled hypertension ..... 7
Table G. Mortality by year three among HIV-uninfected adults with baseline uncontrolled hypertension ..... 8
Table H. Characteristics of participants with measured year 3 blood pressure ..... 9
Table I. Year three hypertension control, by baseline hypertension severity ..... 10
Table J. Change in blood pressure from baseline to study year three ..... 11
Table K. Baseline characteristics of participants who died by study year three ..... 12
Table L. Baseline characteristics of participants with controlled hypertension at study year three ..... 13
Table M. Baseline characteristics of participants who linked to care within one year of baseline hypertension screening (Uganda only) ..... 14

Table A. Characteristics of population screened for hypertension at study baseline

|  | Intervention$\mathrm{n}=44,717$ |  | $\begin{gathered} \text { Control } \\ \mathrm{n}=41,361 \end{gathered}$ |  | $\begin{gathered} \text { Overall } \\ \mathrm{n}=86,078 \end{gathered}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | n | \% | n | \% | n | \% |
| Region |  |  |  |  |  |  |
| Eastern Uganda | 15,134 | 34\% | 13,693 | 33\% | 28,827 | 33\% |
| Kenya | 13,880 | 31\% | 13,291 | 32\% | 27,171 | 32\% |
| Western Uganda | 15,703 | 35\% | 14,377 | 35\% | 30,080 | 35\% |
| Sex |  |  |  |  |  |  |
| Female | 26,029 | 58\% | 24,146 | 58\% | 50,175 | 58\% |
| Male | 18,688 | 42\% | 17,215 | 42\% | 35,903 | 42\% |
| Age category |  |  |  |  |  |  |
| $18-29 \mathrm{yrs}$ | 16,482 | 37\% | 15,108 | 37\% | 31,590 | 37\% |
| 30-44 yrs | 13,782 | 31\% | 12,867 | 31\% | 26,649 | 31\% |
| $45-59 \mathrm{yrs}$ | 8,290 | 19\% | 7,709 | 19\% | 15,999 | 19\% |
| 60-74 yrs | 4,552 | 10\% | 4,195 | 10\% | 8,747 | 10\% |
| $\geq 75 \mathrm{yrs}$ | 1,611 | 4\% | 1,482 | 4\% | 3,093 | 4\% |
| Wealth quintile categories* |  |  |  |  |  |  |
| First, indicating least wealth | 7,292 | 16\% | 7,468 | 18\% | 14,760 | 17\% |
| Second | 7,916 | 18\% | 7,632 | 18\% | 15,548 | 18\% |
| Third | 8,979 | 20\% | 8,598 | 21\% | 17,577 | 20\% |
| Fourth | 9,555 | 21\% | 8,949 | 22\% | 18,504 | 21\% |
| Fifth, indicating most wealth | 10,824 | 24\% | 8,460 | 20\% | 19,284 | 22\% |
| Missing | 151 | 0\% | 254 | 1\% | 405 | 0\% |
| Self-reported prior HTN diagnosis | 1,999 | 4\% | 2104 | 5\% | 4,103 | 5\% |
| Self-reported baseline HTN treatment | 758 | 2\% | 868 | 2\% | 1,626 | 2\% |
| Baseline hypertension stage $\dagger$ |  |  |  |  |  |  |
| Not hypertensive (<140/90) | 39,258 | 88\% | 35,892 | 87\% | 75,150 | 87\% |
| Grade 1 (140-159 / 90-99) | 3,810 | 9\% | 3,775 | 9\% | 7,585 | 9\% |
| Grade 2 (160-179 / 100-109) | 1,197 | 3\% | 1,162 | 3\% | 2,359 | 3\% |
| Grade 3 ( $\geq 180 / 110$ ) | 452 | 1\% | 532 | 1\% | 984 | 1\% |
| Baseline BMI $\ddagger$ |  |  |  |  |  |  |
| Underweight (<18.5) | 7,066 | 16\% | 6,167 | 15\% | 13,233 | 15\% |
| Healthy weight (18.5-24.9) | 30,628 | 68\% | 28,165 | 68\% | 58,793 | 68\% |
| Overweight (25.0-29.9) | 5,473 | 12\% | 5,465 | 13\% | 10,938 | 13\% |
| Obese ( $\geq 30$ ) | 1,350 | 3\% | 1,271 | 3\% | 2,621 | 3\% |
| missing | 200 | 0\% | 293 | 1\% | 493 | 1\% |
| Comorbid conditions |  |  |  |  |  |  |
| HIV | 4,886 | 11\% | 4,313 | 10\% | 9,199 | 11\% |
| Diabetes | 824 | 2\% | 944 | 2\% | 1,768 | 2\% |

*Quintiles calculated using principle-component analysis of the household wealth survey and were calculated at the level of the household. $\dagger$ Baseline hypertension defined by lowest of three blood pressure (BP) measurements and classified as not hypertensive $(<140 / 90 \mathrm{mmHg}$ ), Grade 1 (BP 140-159/90-99 mmHg), Grade 2 (BP 160-179/100-109 mmHg), Grade 3 (BP $\geq 180 / 110 \mathrm{mmHg}$ ). $\ddagger$ Body mass index (BMI) categories include underweight ( $\mathrm{BMI}<18.5 \mathrm{~kg} / \mathrm{m}^{2}$ ), normal (BMI $18.5-24.9 \mathrm{~kg} / \mathrm{m}^{2}$ ), overweight (BMI 25$29.9 \mathrm{~kg} / \mathrm{m}^{2}$ ), or obese ( $\mathrm{BMI} \geq 30 \mathrm{~kg} / \mathrm{m}^{2}$ ).

Table B. Risk factors for baseline uncontrolled hypertension among overall screened population

|  | Total Screened | Total <br> Uncontrolled Hypertension | \% Uncontrolled <br> Hypertension |
| :---: | :---: | :---: | :---: |
| Overall | 86,078 | 10,928 | 13\% |
| Region |  |  |  |
| Eastern Uganda | 28,827 | 4,253 | 15\% |
| Kenya | 27,171 | 2,786 | 10\% |
| Western Uganda | 30,080 | 3,889 | 13\% |
| Sex |  |  |  |
| Female | 50,175 | 6,058 | 12\% |
| Male | 35,903 | 4,870 | 14\% |
| Age category |  |  |  |
| 18-29 yrs | 31,590 | 1,309 | 4\% |
| 30-44 yrs | 26,649 | 2,312 | 9\% |
| $45-59 \mathrm{yrs}$ | 15,999 | 3,117 | 19\% |
| $60-74$ yrs | 8,747 | 2,888 | 33\% |
| $\geq 75 \mathrm{yrs}$ | 3,093 | 1,302 | 42\% |
| Wealth quintile categories* |  |  |  |
| First, indicating least wealth | 14,760 | 1,966 | 13\% |
| Second | 15,548 | 1,884 | 12\% |
| Third | 17,577 | 2,174 | 12\% |
| Fourth | 18,504 | 2,383 | 13\% |
| Fifth, indicating most wealth | 19,284 | 2,440 | 13\% |
| Missing | 405 | 81 | 20\% |
| Self-reported prior HTN diagnosis | 4,103 | 1,460 | 36\% |
| Self-reported baseline HTN treatment | 1,626 | 777 | 48\% |
| Baseline BMI category $\dagger$ |  |  |  |
| Underweight | 13,233 | 1,643 | 12\% |
| Healthy weight | 58,793 | 6,493 | 11\% |
| Overweight | 10,938 | 1,986 | 18\% |
| Obese | 2,621 | 716 | 27\% |
| missing | 493 | 90 | 18\% |
| Comorbid conditions |  |  |  |
| HIV | 9,199 | 677 | 7\% |
| Diabetes | 1,768 | 477 | 27\% |

*Quintiles calculated using principle-component analysis of the household wealth survey and were calculated at the level of the household. $\dagger$ Body mass index (BMI) categories include underweight ( $\mathrm{BMI}<18.5 \mathrm{~kg} / \mathrm{m}^{2}$ ), normal (BMI $18.5-24.9 \mathrm{~kg} / \mathrm{m}^{2}$ ), overweight (BMI $25-29.9 \mathrm{~kg} / \mathrm{m}^{2}$ ), or obese ( $\mathrm{BMI} \geq 30 \mathrm{~kg} / \mathrm{m}^{2}$ ).

Table C. Baseline characteristics, stratified by sex

|  | Screened population |  |  |  | Baseline Uncontrolled HTN |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \text { Female } \\ \mathrm{n}=50,175 \end{gathered}$ |  | $\begin{gathered} \text { Male } \\ \mathrm{n}=35,903 \end{gathered}$ |  | $\begin{aligned} & \text { Female } \\ & \mathrm{n}=6,058 \end{aligned}$ |  | $\begin{gathered} \text { Male } \\ \mathrm{n}=4,870 \end{gathered}$ |  |
|  | n | $\begin{gathered} \text { Column } \\ \% \end{gathered}$ | n | $\begin{gathered} \text { Column } \\ \% \end{gathered}$ | n | $\begin{gathered} \text { Column } \\ \% \end{gathered}$ | n | $\begin{gathered} \text { Column } \\ \% \end{gathered}$ |
| Region |  |  |  |  |  |  |  |  |
| Eastern Uganda | 15,932 | 32\% | 12,895 | 36\% | 2,257 | 37\% | 1,996 | 41\% |
| Kenya | 16,995 | 34\% | 10,176 | 28\% | 1,738 | 29\% | 1,048 | 22\% |
| Western Uganda | 17,248 | 34\% | 12,832 | 36\% | 2,063 | 34\% | 1,826 | 37\% |
| Age category |  |  |  |  |  |  |  |  |
| 18-29 yrs | 17,922 | 36\% | 13,668 | 38\% | 415 | 7\% | 894 | 18\% |
| 30-44 yrs | 15,717 | 31\% | 10,932 | 30\% | 1,160 | 19\% | 1,152 | 24\% |
| $45-59 \mathrm{yrs}$ | 9,596 | 19\% | 6,403 | 18\% | 1,894 | 31\% | 1,223 | 25\% |
| 60-74 yrs | 5,194 | 10\% | 3,553 | 10\% | 1,800 | 30\% | 1,088 | 22\% |
| $\geq 75$ yrs | 1,746 | 3\% | 1,347 | 4\% | 789 | 13\% | 513 | 11\% |
| Wealth quintile categories* |  |  |  |  |  |  |  |  |
| First, indicating least wealth | 8,825 | 18\% | 5,935 | 17\% | 1,165 | 19\% | 801 | 16\% |
| Second | 9,090 | 18\% | 6,458 | 18\% | 1,053 | 17\% | 831 | 17\% |
| Third | 10,327 | 21\% | 7,250 | 20\% | 1,198 | 20\% | 976 | 20\% |
| Fourth | 10,780 | 21\% | 7,724 | 22\% | 1,319 | 22\% | 1,064 | 22\% |
| Fifth, indicating most wealth | 10,931 | 22\% | 8,353 | 23\% | 1,283 | 21\% | 1,157 | 24\% |
| Missing | 222 | 0\% | 183 | 1\% | 40 | 1\% | 41 | 1\% |
| Self-reported prior HTN diagnosis | 3,095 | 6\% | 1008 | 3\% | 1,061 | 18\% | 399 | 8\% |
| Self-reported baseline HTN treatment | 1,215 | 2\% | 411 | 1\% | 558 | 9\% | 219 | 4\% |
| Baseline hypertension severity $\dagger$ |  |  |  |  |  |  |  |  |
| Not hypertensive ( $<140 / 90 \mathrm{mmHg}$ ) | 44,117 | 88\% | 31,033 | 86\% | - |  | - |  |
| Grade 1 (140-159 / 90-99 mmHg) | 3,945 | 8\% | 3,640 | 10\% | 3,945 | 65\% | 3,640 | 75\% |
| Grade 2 ( $160-179$ / 100-109 mmHg) | 1,456 | 3\% | 903 | 3\% | 1,456 | 24\% | 903 | 19\% |
| Grade 3 ( $\geq 180 / 110 \mathrm{mmHg}$ ) | 657 | 1\% | 327 | 1\% | 657 | 11\% | 327 | 7\% |
| Baseline BMI category $\ddagger$ |  |  |  |  |  |  |  |  |
| Underweight | 6,456 | 13\% | 6,777 | 19\% | 793 | 13\% | 850 | 17\% |
| Healthy weight | 32,859 | 65\% | 25,934 | 72\% | 3,289 | 54\% | 3,204 | 66\% |
| Overweight | 8,271 | 16\% | 2,667 | 7\% | 1,339 | 22\% | 647 | 13\% |
| Obese | 2,279 | 5\% | 342 | 1\% | 581 | 10\% | 135 | 3\% |
| missing | 310 | 1\% | 183 | 1\% | 56 | 1\% | 34 | 1\% |
| Comorbid conditions |  |  |  |  |  |  |  |  |
| HIV | 6,198 | 12\% | 3,001 | 8\% | 403 | 7\% | 274 | 6\% |
| Diabetes | 1,023 | 2\% | 745 | 2\% | 263 | 4\% | 214 | 4\% |

Characteristics of both screened population and nonpregnant adults with baseline uncontrolled hypertension, stratified by sex.
*Quintiles calculated using principle-component analysis of the household wealth survey and were calculated at the level of the household. $\dagger$ Baseline hypertension severity defined by lowest of three blood pressure (BP) measurements and classified as not hypertensive ( $<140 / 90 \mathrm{mmHg}$ ), Grade 1 (BP 140-159/90-99 mmHg), Grade 2 (BP 160-179/100-109 mmHg), Grade 3 (BP $\geq 180 / 110$ mmHg ) $\ddagger$ Body mass index (BMI) categories include underweight ( $\mathrm{BMI}<18.5 \mathrm{~kg} / \mathrm{m}^{2}$ ), normal (BMI $18.5-24.9 \mathrm{~kg} / \mathrm{m}^{2}$ ), overweight (BMI $25-29.9 \mathrm{~kg} / \mathrm{m}^{2}$ ), or obese ( $\mathrm{BMI} \geq 30 \mathrm{~kg} / \mathrm{m}^{2}$ ).

Table D. Mortality by year three among all adults with baseline uncontrolled hypertension

|  | Intervention |  | Control |  | Effect Estimate <br> (calculated at cluster level using TMLE, see methods) |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |
|  | n | \% | n | \% |  |
| Vital status assessed | 5422/5459 | 99\% | 5426/5469 | 99\% |  |
| Overall study popuation | 174/5422 | 3.2\% | 225/5426 | 4.1\% | RR 0.79, $95 \%$ CI 0.64-0.97, $\mathrm{p}=0.028$ |
| Grade 1 hypertension | 98/3783 | 2.6\% | 112/3742 | 3.0\% | RR 0.88, 95\% CI 0.65-1.20, $\mathrm{p}=0.40$ |
| Grade 2 hypertension | 54/1188 | 4.5\% | 71/1157 | 6.1\% | $\mathrm{RR}=0.78,95 \% \mathrm{CI} 0.58-1.05, \mathrm{p}=0.091$ |
| Grade 3 hypertension | 22/451 | 4.9\% | 42/527 | 8.0\% | $\mathrm{RR}=0.62,95 \% \mathrm{CI} 0.39-0.97, \mathrm{p}=0.038$ |

Tabulation of vital status assessment and mortality among individual participants. Baseline hypertension severity defined by lowest of three blood pressure (BP) measurements and classified as not hypertensive ( $<140 / 90 \mathrm{mmHg}$ ), Grade 1 (BP 140-159/90-99 mmHg), Grade 2 (BP 160-179/100-109 mmHg), Grade 3 (BP $\geq 180 / 110 \mathrm{mmHg}$ ). TMLE, targeted maximum likelihood estimation.

Table E. Causes of death by trial arm

| Cause of death | Intervention | Control |
| :--- | :---: | :---: |
| Illness | $164(94 \%)$ | $218(97 \%)$ |
| Accident | $10(6 \%)$ | $1(0 \%)$ |
| Homicide | $0(0 \%)$ | $2(1 \%)$ |
| Suicide | $0(0 \%)$ | $2(1 \%)$ |
| Childbirth | $0(0 \%)$ | $1(0 \%)$ |
| Unknown | $0(0 \%)$ | $1(0 \%)$ |
| Total | 174 | 225 |

Table F. Mortality by year three among adults $<\mathbf{8 0}$ years of age with baseline uncontrolled hypertension

|  | Intervention |  | Control |  | Effect Estimate <br>  <br>  <br>  <br>  <br> (calculated at cluster level using TMLE, see methods) |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | $5068 / 5103$ | $99 \%$ | $5040 / 5080$ | $99 \%$ |  |
| Overall study popuation | $109 / 5068$ | $2.2 \%$ | $160 / 5040$ | $3.2 \%$ | RR $0.68,95 \%$ CI $0.55-0.84, \mathrm{p}=0.002$ |
| Grade 1 hypertension | $64 / 3591$ | $1.8 \%$ | $82 / 3559$ | $2.3 \%$ | RR $0.78,95 \%$ CI $0.57-1.06, \mathrm{p}=0.10$ |
| Grade 2 hypertension | $34 / 1084$ | $3.1 \%$ | $50 / 1028$ | $4.9 \%$ | RR $0.64,95 \%$ CI $0.42-0.98, \mathrm{p}=0.041$ |
| Grade 3 hypertension | $11 / 393$ | $2.8 \%$ | $28 / 453$ | $6.2 \%$ | RR $0.45,95 \%$ CI $0.26-0.79, \mathrm{p}=0.009$ |

Tabulation of vital status assessment and mortality among individual participants, excluding adults $\geq 80$ years of age. Baseline hypertension severity defined by lowest of three blood pressure (BP) measurements and classified as not hypertensive ( $<140 / 90$ mmHg ), Grade 1 (BP 140-159/90-99 mmHg), Grade 2 (BP 160-179/100-109 mmHg), Grade 3 (BP $\geq 180 / 110 \mathrm{mmHg}$ ). TMLE, targeted maximum likelihood estimation.

Table G. Mortality by year three among HIV-uninfected adults with baseline uncontrolled hypertension

|  | Intervention |  | Control |  | Effect Estimate <br> (calculated at cluster level using TMLE, see methods) |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | n | \% | n | \% |  |
| Vital status assessed | 5069/5102 | 99\% | 5113/5149 | 99\% |  |
| Overall study popuation | 162/5069 | 3.2\% | 208/5113 | 4.1\% | RR 0.80, 95\% CI 0.64-0.98, $\mathrm{p}=0.037$ |
| Grade 1 hypertension | 91/3520 | 2.6\% | 106/3513 | 3.0\% | RR 0.86, 95\% CI 0.64-1.15, p=0.29 |
| Grade 2 hypertension | 50/1121 | 4.5\% | 61/1096 | 5.6\% | RR 0.82, 95\% CI 0.59-1.12, $\mathrm{p}=0.19$ |
| Grade 3 hypertension | 21/428 | 4.9\% | 41/504 | 8.1\% | RR 0.60, 95\% CI 0.39-0.93, p=0.026 |

Tabulation of vital status assessment and mortality among individual participants, excluding baseline HIV-infected adults. Baseline hypertension severity defined by lowest of three blood pressure (BP) measurements and classified as not hypertensive ( $<140 / 90$ mmHg ), Grade 1 (BP 140-159/90-99 mmHg), Grade 2 (BP 160-179/100-109 mmHg), Grade 3 (BP $\geq 180 / 110 \mathrm{mmHg}$ ). TMLE, targeted maximum likelihood estimation.

Table H. Characteristics of participants with measured year 3 blood pressure

|  | Overall population $\mathrm{n}=10,928$ |  | BP measured at year 3$\mathrm{n}=8,286$ |  |
| :---: | :---: | :---: | :---: | :---: |
|  | n | \% | n | \% |
| Region |  |  |  |  |
| Eastern Uganda | 4253 | 39\% | 3262 | 39\% |
| Kenya | 2786 | 25\% | 2031 | 25\% |
| Western Uganda | 3889 | 36\% | 2993 | 36\% |
| Sex |  |  |  |  |
| Female | 6058 | 55\% | 4763 | 57\% |
| Male | 4870 | 45\% | 3523 | 43\% |
| Age category |  |  |  |  |
| 18-29 yrs | 1309 | 12\% | 751 | 9\% |
| 30-44 yrs | 2312 | 21\% | 1762 | 21\% |
| $45-59 \mathrm{yrs}$ | 3117 | 29\% | 2526 | 30\% |
| 60-74 yrs | 2888 | 26\% | 2351 | 28\% |
| $\geq 75$ yrs | 1302 | 12\% | 896 | 11\% |
| Wealth quintile categories* |  |  |  |  |
| First, indicating least wealth | 1966 | 18\% | 1391 | 17\% |
| Second | 1884 | 17\% | 1467 | 18\% |
| Third | 2174 | 20\% | 1683 | 20\% |
| Fourth | 2383 | 22\% | 1866 | 23\% |
| Fifth, indicating most wealth | 2440 | 22\% | 1839 | 22\% |
| Missing | 65 | 1\% | 58 | 1\% |
| Self-reported prior HTN diagnosis | 1460 | 13\% | 1098 | 13\% |
| Self-reported baseline HTN treatment | 777 | 7\% | 574 | 7\% |
| Baseline hypertension severity $\dagger$ |  |  |  |  |
| Grade 1 (140-159 / 90-99 mmHg) | 7585 | 69\% | 5768 | 70\% |
| Grade 2 ( $160-179$ / 100-109 mmHg) | 2359 | 22\% | 1786 | 22\% |
| Grade 3 ( $\geq 180 / 110 \mathrm{mmHg}$ ) | 984 | 9\% | 732 | 9\% |
| Baseline BMI category $\ddagger$ |  |  |  |  |
| Underweight | 1643 | 15\% | 1220 | 15\% |
| Healthy weight | 6493 | 59\% | 4909 | 59\% |
| Overweight | 1986 | 18\% | 1541 | 19\% |
| Obese | 716 | 7\% | 552 | 7\% |
| Missing | 47 | 0\% | 14 | 0\% |
| Comorbid conditions |  |  |  |  |
| HIV | 677 | 6\% | 454 | 5\% |
| Diabetes§ | 477 | 4\% | 350 | 4\% |

Characteristics of nonpregnant adults with baseline uncontrolled hypertension who had measured year 3 blood pressure (BP) at population-level testing. *Quintiles calculated using principle-component analysis of the household wealth survey and were calculated at the level of the household. $\dagger$ Baseline hypertension severity defined by lowest of three BP measurements and classified as Grade 1 (BP 140-159/90-99 mmHg), Grade 2 (BP $160-179 / 100-109 \mathrm{mmHg}$ ), Grade 3 ( $\mathrm{BP} \geq 180 / 110 \mathrm{mmHg}$ ). $\ddagger$ Body mass index (BMI) categories include underweight ( $\mathrm{BMI}<18.5 \mathrm{~kg} / \mathrm{m}^{2}$ ), normal (BMI $18.5-24.9 \mathrm{~kg} / \mathrm{m}^{2}$ ), overweight (BMI $25-29.9 \mathrm{~kg} / \mathrm{m}^{2}$ ), or obese (BMI $\geq 30 \mathrm{~kg} / \mathrm{m}$.

Table I. Year three hypertension control, by baseline hypertension severity

|  | Intervention |  | Control |  | Effect Estimate <br>  <br>  <br>  <br> (calculated at cluster level using TMLE, see methods) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Year 3 blood pressure measured | $4173 / 5459$ | $76 \%$ | $4113 / 5459$ | $75 \%$ |  |
| Overall study popuation | $2200 / 4173$ | $53 \%$ | $1764 / 4113$ | $43 \%$ | RR $1.22,95 \%$ CI $1.12-1.33, \mathrm{p}=0.0002$ |
| Grade 1 hypertension | $1752 / 2924$ | $60 \%$ | $1475 / 2844$ | $52 \%$ | RR $1.15,95 \%$ CI $1.09-1.22, \mathrm{p}=0.0001$ |
| Grade 2 hypertension | $351 / 906$ | $39 \%$ | $227 / 880$ | $26 \%$ | RR $1.50,95 \%$ CI $1.24-1.82, \mathrm{p}=0.0004$ |
| Grade 3 hypertension | $97 / 343$ | $28 \%$ | $62 / 389$ | $16 \%$ | RR $1.87,95 \%$ CI $1.13-3.10, \mathrm{p}=0.018$ |

Tabulation of year three blood pressure measurement and control, stratified by baseline hypertension severity. Baseline hypertension severity defined by lowest of three blood pressure (BP) measurements and classified as not hypertensive ( $<140 / 90 \mathrm{mmHg}$ ), Grade 1 (BP 140-159/90-99 mmHg), Grade 2 (BP $160-179 / 100-109 \mathrm{mmHg}$ ), Grade 3 ( $\mathrm{BP} \geq 180 / 110 \mathrm{mmHg}$ ). TMLE, targeted maximum likelihood estimation.

Table J. Change in blood pressure from baseline to study year three

|  | Intervention | Control <br> Median $B P\left(25^{\text {th }}-75^{\text {th }}\right.$ quantile $)$ | Median BP $\left(25^{\left.\text {th }-75^{\text {th }} \text { quantile }\right)}\right.$ |
| :--- | :---: | :---: | :---: |

BP, blood pressure; SBP systolic blood pressure; HTN, hypertension. Blood pressure in mmHg . Baseline grade 1 hypertension defined as lowest baseline blood pressure 140-159/90-99 mmHg , grade 2 HTN defined as baseline blood pressure 160-179/100-109 mmHg , and grade 3 HTN defined as baseline blood pressure $\geq 180 / 110 \mathrm{mmHg}$. *Post-hoc comparisons by trial arm calculated with clusterlevel paired $t$-test.

Table K. Baseline characteristics of participants who died by study year three

|  | Intervention | Control |
| :---: | :---: | :---: |
| Overall | 174/5422 (3.2\%) | 225/5426 (4.1\%) |
| Region |  |  |
| Eastern Uganda | 41/2110 (1.9\%) | 69/2118 (3.3\%) |
| Kenya | 68/1337 (5.1\%) | 85/1425 (6\%) |
| Western Uganda | 65/1975 (3.3\%) | 71/1883 (3.8\%) |
| Sex |  |  |
| Female | 89/3021 (2.9\%) | 110/3004 (3.7\%) |
| Male | 85/2401 (3.5\%) | 115/2422 (4.7\%) |
| Age category |  |  |
| 18-29 yrs | 3/619 (0.5\%) | 7/667 (1\%) |
| $30-44$ yrs | 14/1184 (1.2\%) | 14/1102 (1.3\%) |
| $45-59 \mathrm{yrs}$ | 25/1541 (1.6\%) | 45/1559 (2.9\%) |
| 60-74 yrs | 52/1435 (3.6\%) | 64/1444 (4.4\%) |
| $\geq 75 \mathrm{yrs}$ | 80/643 (12.4\%) | 95/654 (14.5\%) |
| Wealth quintile categories* |  |  |
| First, indicating least wealth | 39/926 (4.2\%) | 58/1028 (5.6\%) |
| Second | 32/899 (3.6\%) | 37/980 (3.8\%) |
| Third | 42/1088 (3.9\%) | 42/1085 (3.9\%) |
| Fourth | 31/1176 (2.6\%) | 48/1199 (4\%) |
| Fifth, indicating most wealth | 30/1319 (2.3\%) | 38/1100 (3.5\%) |
| Missing | 0/14 (0\%) | 2/34 (5.9\%) |
| Self-reported prior HTN diagnosis | 31/688 (4.5\%) | 43/765 (5.6\%) |
| Self-reported baseline HTN treatment | 20/363 (5.5\%) | 29/410 (7.1\%) |
| Baseline hypertension severity $\dagger$ |  |  |
| Grade 1 (140-159 / 90-99 mmHg) | 98/3783 (2.6\%) | 112/3742 (3\%) |
| Grade 2 (160-179 / 100-109 mmHg) | 54/1188 (4.5\%) | 71/1157 (6.1\%) |
| Grade 3 ( $\geq 180 / 110 \mathrm{mmHg}$ ) | 22/451 (4.9\%) | 42/527 (8\%) |
| Baseline BMI category $\ddagger$ |  |  |
| Underweight | 63/828 (7.6\%) | 57/803 (7.1\%) |
| Healthy weight | 88/3268 (2.7\%) | 124/3176 (3.9\%) |
| Overweight | 18/941 (1.9\%) | 33/1033 (3.2\%) |
| Obese | 5/366 (1.4\%) | 7/345 (2\%) |
| Missing | 0/19 (0\%) | 4/69 (5.8\%) |
| Comorbid conditions |  |  |
| HIV | 12/353 (3.4\%) | 17/313 (5.4\%) |
| Diabetes | 17/225 (7.6\%) | 17/247 (6.9\%) |

Characteristics of nonpregnant adults with baseline uncontrolled hypertension who died by study year three. *Quintiles calculated using principle-component analysis of the household wealth survey and were calculated at the level of the household. $\dagger$ Baseline hypertension severity defined by lowest of three blood pressure (BP) measurements and classified as Grade 1 (BP 140-159/90-99 mmHg ), Grade 2 (BP $160-179 / 100-109 \mathrm{mmHg}$ ), Grade 3 ( $\mathrm{BP} \geq 180 / 110 \mathrm{mmHg}$ ). $\ddagger$ Body mass index (BMI) categories include underweight ( $\mathrm{BMI}<18.5 \mathrm{~kg} / \mathrm{m}^{2}$ ), normal (BMI $18.5-24.9 \mathrm{~kg} / \mathrm{m}^{2}$ ), overweight (BMI $25-29.9 \mathrm{~kg} / \mathrm{m}^{2}$ ), or obese (BMI $\geq 30 \mathrm{~kg} / \mathrm{m}^{2}$ ).

Table L. Baseline characteristics of participants with controlled hypertension at study year three

|  | Intervention | Control |
| :--- | :---: | :---: |
| Overall | $2200 / 4173(53 \%)$ | $1764 / 4113(43 \%)$ |
| Region |  |  |
| Eastern Uganda | $826 / 1632(51 \%)$ | $625 / 1630(38 \%)$ |
| Kenya | $568 / 971(58 \%)$ | $542 / 1060(51 \%)$ |
| Western Uganda | $806 / 1570(51 \%)$ | $597 / 1423(42 \%)$ |
| Sex |  |  |
| Female | $1228 / 2416(51 \%)$ | $952 / 2347(41 \%)$ |
| Male | $972 / 1757(55 \%)$ | $812 / 1766(46 \%)$ |
| Age category |  |  |
| 18-29 yrs | $252 / 353(71 \%)$ | $251 / 398(63 \%)$ |
| $30-44$ yrs | $512 / 917(56 \%)$ | $405 / 845(48 \%)$ |
| $45-59$ yrs | $622 / 1267(49 \%)$ | $477 / 1259(38 \%)$ |
| $60-74$ yrs | $605 / 1185(51 \%)$ | $448 / 1166(38 \%)$ |
| $\geq 75$ yrs | $209 / 451(46 \%)$ | $183 / 445(41 \%)$ |
| Wealth quintile categories* |  |  |
| First, indicating least wealth | $386 / 673(57 \%)$ | $337 / 718(47 \%)$ |
| Second | $382 / 704(54 \%)$ | $314 / 763(41 \%)$ |
| Third | $440 / 849(52 \%)$ | $341 / 834(41 \%)$ |
| Fourth | $482 / 936(51 \%)$ | $410 / 930(44 \%)$ |
| Fifth, indicating most wealth | $502 / 999(50 \%)$ | $349 / 840(42 \%)$ |
| Missing | $8 / 12(67 \%)$ | $13 / 28(46 \%)$ |
| Self-reported prior HTN diagnosis | $221 / 534(41 \%)$ | $169 / 564(30 \%)$ |
| Self-reported baseline HTN treatment | $119 / 277(43 \%)$ | $85 / 297(29 \%)$ |
| Baseline hypertension severity $\dagger$ |  |  |
| Grade 1 (140-159 / 90-99 mmHg) | $1752 / 2924(60 \%)$ | $1475 / 2844(52 \%)$ |
| Grade 2 (160-179 / 100-109 mmHg) | $351 / 906(39 \%)$ | $227 / 880(26 \%)$ |
| Grade 3 ( $\geq 180 / 110$ mmHg) | $97 / 343(28 \%)$ | $62 / 389(16 \%)$ |
| Baseline BMI category $\ddagger$ |  |  |
| Underweight | $359 / 614(58 \%)$ | $274 / 606(45 \%)$ |
| Healthy weight | $1346 / 2516(53 \%)$ | $1075 / 2393(45 \%)$ |
| Overweight | $360 / 747(48 \%)$ | $315 / 794(40 \%)$ |
| Obese | $130 / 282(46 \%)$ | $86 / 270(32 \%)$ |
| Missing | $53 / 14(36 \%)$ | $14 / 50(28 \%)$ |
| Comorbid conditions |  | $119 / 214(56 \%)$ |
| Diabetes |  | $500)$ |

Characteristics of participants with baseline uncontrolled hypertension who had controlled blood pressure at year three community health campaign. *Quintiles calculated using principle-component analysis of the household wealth survey and were calculated at the level of the household. $\dagger$ Baseline hypertension severity defined by lowest of three blood pressure (BP) measurements and classified as Grade 1 (BP 140-159/90-99 mmHg), Grade 2 (BP $160-179 / 100-109 \mathrm{mmHg}$ ), Grade 3 (BP $\geq 180 / 110 \mathrm{mmHg}$ ). $\ddagger$ Body mass index (BMI) categories include underweight ( $\mathrm{BMI}<18.5 \mathrm{~kg} / \mathrm{m}^{2}$ ), normal (BMI $18.5-24.9 \mathrm{~kg} / \mathrm{m}^{2}$ ), overweight (BMI $25-29.9 \mathrm{~kg} / \mathrm{m}^{2}$ ), or obese ( $\mathrm{BMI} \geq 30 \mathrm{~kg} / \mathrm{m}^{2}$ ).

Table M. Baseline characteristics of participants who linked to care within one year of baseline hypertension screening (Uganda only)

|  | Intervention | Control |
| :---: | :---: | :---: |
| Overall | 1810/4112 (44\%) | 1413/4030 (35\%) |
| Region |  |  |
| Eastern Uganda | 806/2117 (38\%) | 632/2136 (30\%) |
| Western Uganda | 1004/1995 (50\%) | 781/1894 (41\%) |
| Sex |  |  |
| Female | 1035/2179 (47\%) | 817/2141 (38\%) |
| Male | 775/1933 (40\%) | 596/1889 (32\%) |
| Age category |  |  |
| 18-29 yrs | 101/493 (20\%) | 86/512 (17\%) |
| $30-44$ yrs | 377/986 (38\%) | 266/907 (29\%) |
| $45-59 \mathrm{yrs}$ | 583/1192 (49\%) | 456/1206 (38\%) |
| 60-74 yrs | 531/985 (54\%) | 428/968 (44\%) |
| $\geq 75$ yrs | 218/456 (48\%) | 177/437 (41\%) |
| Wealth quintile categories* |  |  |
| First, indicating least wealth | 353/801 (44\%) | 303/887 (34\%) |
| Second | 310/764 (41\%) | 275/830 (33\%) |
| Third | 371/848 (44\%) | 301/816 (37\%) |
| Fourth | 390/865 (45\%) | 274/808 (34\%) |
| Fifth, indicating most wealth | 360/806 (45\%) | 228/652 (35\%) |
| Missing | 26/28 (93\%) | 32/37 (86\%) |
| Self-reported prior HTN diagnosis | 320/537 (60\%) | 283/632 (45\%) |
| Self-reported baseline HTN treatment | 180/285 (63\%) | 164/344 (48\%) |
| Baseline hypertension severity $\dagger$ |  |  |
| Grade 1 (140-159 / 90-99 mmHg) | 1139/2898 (39\%) | 795/2788 (29\%) |
| Grade 2 (160-179 / 100-109 mmHg) | 473/887 (53\%) | 391/847 (46\%) |
| Grade 3 ( $\geq 180 / 110 \mathrm{mmHg}$ ) | 198/327 (61\%) | 227/395 (57\%) |
| Baseline BMI category $\ddagger$ |  |  |
| Underweight | 264/642 (41\%) | 230/627 (37\%) |
| Healthy weight | 1047/2469 (42\%) | 774/2335 (33\%) |
| Overweight | 361/719 (50\%) | 294/771 (38\%) |
| Obese | 133/269 (49\%) | 106/263 (40\%) |
| Missing | 5/13 (38\%) | 9/34 (26\%) |
| Comorbid conditions |  |  |
| HIV | 159/174 (91\%) | 113/180 (63\%) |
| Diabetes | 123/203 (61\%) | 109/215 (51\%) |

Characteristics of participants with baseline uncontrolled hypertension in Uganda who linked to hypertension care within one year of baseline screening. *Quintiles calculated using principle-component analysis of the household wealth survey and were calculated at the level of the household. $\dagger$ Baseline hypertension severity defined by lowest of three blood pressure (BP) measurements and classified as Grade 1 (BP 140-159/90-99 mmHg), Grade 2 (BP $160-179 / 100-109 \mathrm{mmHg}$ ), Grade 3 ( $\mathrm{BP} \geq 180 / 110 \mathrm{mmHg}$ ). $\ddagger$ Body mass index (BMI) categories include underweight (BMI $<18.5 \mathrm{~kg} / \mathrm{m}^{2}$ ), normal (BMI 18.5-24.9 $\mathrm{kg} / \mathrm{m}^{2}$ ), overweight (BMI 25-29.9 $\mathrm{kg} / \mathrm{m}^{2}$ ), or obese ( $\mathrm{BMI} \geq 30 \mathrm{~kg} / \mathrm{m}^{2}$ ).

