## **Appendix**

In this appendix, we provide additional details related to our study, including:

- Figure S1. Antiretroviral coverage in sub-Saharan Africa, by year
- Figure S2. Antiretroviral coverage in sub-Saharan Africa, by year and country
- Figure S3. Living arrangements of older adults, by age
- Figure S4. Proportion of older adults living without working-age adults, by ART coverage
- Table S1. ART coverage and living arrangements of older adults, by study countries and years
- Table S2. Living arrangements of older adults and ART coverage, full regression output
- Table S3. Living arrangements of older adults and ART coverage, by sex
- Table S4. Living arrangements of older adults and ART coverage, using Poisson models
- Table S5. Living arrangements of older adults and ART coverage, post-2000 surveys
- Table S6. Living arrangements of older adults and ART coverage, using quadratic in age
- Table S7. Living arrangements of older adults and ART coverage, weighted by population size
- Table S8. Using alternative definitions of an older adult (50 and 70 years old)



Figure S1. Antiretroviral coverage in sub-Saharan Africa, by year





Figure S2. Antiretroviral coverage in sub-Saharan Africa, by year and country

Notes: Figure shows ART coverage in the 28 sub-Saharan African countries included in our analysis in years when a Demographic and Health Survey, AIDS Indicator Survey, and/or Malaria Indicator Survey was conducted. ART coverage was defined as the percentage of all people living with HIV who are receiving antiretroviral therapy. ART coverage for each country-year observation is listed in Table S1. Source: annual UNAIDS estimates. Link: <u>http://aidsinfo.unaids.org/</u>.



Figure S3. Living arrangements of older adults, by age

*Notes:* Figure shows (i) the proportion of older adults (ages 60 or higher) living without working-age adults (ages of 18 to 59) (blue circles) and (ii) the number of working-age adults per household where an older adult lives (red triangles), by the age of respondents included in our analytical sample. Source: Demographic and Health Surveys, AIDS Indicator Surveys, and Malaria Indicator Surveys for 28 countries in sub-Saharan Africa, between 1991 – 2015.



Figure S4. Proportion of older adults living without working-age adults and ART coverage

(a) pooled sample (n = 28 countries)

(b) country HIV prevalence  $\geq 5\%$  (*n* = 8 countries)



*Notes:* We used the most recently available Demographic and Health Survey, AIDS Indicator Survey, or Malaria Indicator Survey available for each country in our dataset to estimate the proportion of older adults living without working-age adults. ART coverage was defined as the percentage of all people living with HIV who are receiving antiretroviral therapy. ART coverage relates to the year of the most recently available survey. Figure (a) includes all countries and figure (b) includes countries with an HIV prevalence of 5% or higher. Countries are categorized based on adult HIV prevalence (ages 15-49) in 2015 (UNAIDS 2015).

Berin     1996     0.0     23.2     5.0     2.1       Berin     2001     0.0     24.8     5.0     1.8       Berin     2001     0.0     24.8     5.0     1.8       Berin     2011     40.5     33.7     9.6     1.4       Burkina Faso     1998     0.0     13.6     3.2     2.4       Burkina Faso     2003     1.0     15.9     3.4     2.7       Burkina Faso     2010     25.0     37.3     8.2     1.1       Barundi     2012     34.0     36.5     10.2     1.1       Cameroon     2011     18.0     24.3     5.7     2.0       Chad     2014     32.5     26.8     9.1     1.7       Côte d'Ivoire     1994     0.0     1.0     2.4     6.6     1.6       Cameroon     2011     22.0     19.2     4.6     2.3     Democatic Republic of Congo     2013     23.0     30.2     6.6     1.6     1.6     1.0	Country	Survey year	ART coverage (%)	Lives without working-age adults (%)	Lives in missing generation household (%)	Working-age adults in household (number)
non     non <td>Benin</td> <td>1996</td> <td>0.0</td> <td>23.2</td> <td>5.0</td> <td>2.1</td>	Benin	1996	0.0	23.2	5.0	2.1
Berin     2006     0.0     27.6     6.1     1.7       Berin     2011     40.5     33.7     9.6     1.4       Burkina Faso     1993     0.0     13.6     3.2     2.4       Burkina Faso     1998     0.0     13.6     3.2     2.4       Burkina Faso     2010     32.0     16.9     4.0     2.1       Burundi     2010     25.0     37.3     8.2     1.1       Cameroon     2014     3.0     25.4     4.8     1.9       Cameroon     2014     3.0     23.4     5.4     1.8       Chad     2014     3.0     2.4     4.8     1.9       Cameroon     1994     0.0     8.7     1.3     3.7       Côc d'Ivoire     1998     0.0     8.7     1.3     3.7       Côc d'Ivoire     1998     0.0     4.6     2.3     1.1       Côc d'Ivoire     2012     32.0     3.2     6.6     1.6       Gabon     20.0	Benin	2001	0.0	24.8	5.0	1.8
Benin     201     40.5     33.7     9.6     1.4       Burkin Faso     1993     0.0     15.3     3.6     2.5       Burkin Faso     2003     1.0     15.9     3.4     2.7       Burkin Faso     2010     32.0     16.9     4.0     2.1       Burkin Faso     2010     25.0     37.3     8.2     1.1       Burundi     2012     34.0     36.5     10.2     1.1       Cameroon     2044     30.0     25.4     4.8     1.9       Cameroon     2004     0.0     2.3.4     5.7     2.0       Chad     2011     18.0     2.4.3     5.7     2.0       Chad     2014     32.2     2.6.8     9.1     1.7       Côte d'Ivoire     1994     0.0     11.0     2.4     3.6       Côte d'Ivoire     2007     4.0     2.5     4.2     2.0       Democatic Republic of Congo     2012     3.2.0     3.0     2.6.6     1.6       Gabon<	Benin	2006	0.0	27.6	6.1	1.7
Barkina Faso     1993     0.0     15.3     3.6     2.5       Barkina Faso     1998     0.0     13.6     3.2     2.4       Barkina Faso     2003     1.0     15.9     3.4     2.7       Barkina Faso     2010     32.0     16.9     4.0     2.1       Burundi     2010     25.0     37.3     8.2     1.1       Cameroon     2004     3.0     25.4     4.8     1.9       Cameroon     2011     18.0     24.3     5.7     2.0       Chad     2024     0.0     23.4     5.4     1.8       Chad     2014     32.5     2.6.8     9.1     1.7       Cóte dTvoire     1998     0.0     8.7     1.3     3.7       Cóte dTvoire     2011     2.0     8.7     1.3     3.7       Cóte dTvoire     2013     2.3.0     30.2     2.6     1.6       Gabon     2012     32.0     34.0     1.9     1.1       Gabana     2	Benin	2011	40.5	33.7	9.6	1.4
Burkina Faso     1998     0.0     13.6     3.2     2.4       Burkina Faso     2003     1.0     15.9     3.4     2.7       Burkina Faso     2010     25.0     37.3     8.2     1.1       Burundi     2012     34.0     36.5     10.2     1.1       Camercon     2014     3.0     25.4     4.8     1.9       Camercon     2014     32.5     26.8     9.1     1.7       Côbe d'Ivoire     1994     0.0     11.0     2.4     36.6       Côbe d'Ivoire     1994     0.0     11.0     2.4     36.7       Côbe d'Ivoire     1998     0.0     8.7     1.3     37.7       Côbe d'Ivoire     2011     22.0     19.2     4.6     2.3       Democatic Republic of Congo     2013     23.0     30.2     6.6     1.6       Gabon     2000     0.0     31.3     3.4     1.9       Gabon     2014     30.0     33.3     7.3     1.4	Burkina Faso	1993	0.0	15.3	3.6	2.5
Barkine Faso     2003     1.0     15.9     3.4     2.7       Burkine Faso     2010     32.0     16.9     4.0     2.1       Burundi     2012     34.0     36.5     10.2     1.1       Cameroon     2004     3.0     25.4     4.8     1.9       Cameroon     2011     18.0     24.3     5.7     2.0       Chad     2004     0.0     23.4     5.4     1.8       Chad     2014     32.5     26.8     9.1     1.7       Côte d'Ivoire     1994     0.0     11.0     2.4     3.6       Côte d'Ivoire     1998     0.0     8.7     1.3     3.7       Côte d'Ivoire     1998     0.0     8.7     1.3     3.7       Democatic Republic of Congo     2017     4.0     22.5     4.2     2.0       Democatic Republic of Congo     2013     23.0     30.2     6.6     1.6       Gabon     2012     32.0     34.0     2.8     1.1	Burkina Faso	1998	0.0	13.6	3.2	2.4
Burkina Paso200 $32.0$ $16.9$ $4.0$ $2.1$ Burundi2010 $25.0$ $37.3$ $8.2$ $1.1$ Gumeroon2004 $3.0$ $25.4$ $4.8$ $1.9$ Cameroon2011 $18.0$ $24.3$ $5.7$ $2.0$ Chad2004 $0.0$ $23.4$ $5.4$ $1.8$ Chad2014 $32.5$ $26.8$ $9.1$ $1.7$ Cóte d'Ivoire1998 $0.0$ $8.7$ $1.3$ $3.7$ Cóte d'Ivoire2011 $22.0$ $19.2$ $4.6$ $2.3$ Democatic Republic of Congo2017 $4.0$ $22.5$ $4.2$ $2.0$ Democatic Republic of Congo2013 $23.0$ $30.2$ $6.6$ $1.6$ Gabon2002 $0.0$ $43.4$ $10.8$ $1.1$ Ghana1993 $0.0$ $43.4$ $10.8$ $1.1$ Ghana2008 $7.0$ $33.8$ $6.2$ $1.3$ Ghana2005 $2.0$ $13.9$ $4.4$ $2.4$ Guinea2005 $2.0$ $13.9$ $4.4$ $2.4$ Guinea2005 $2.0$ $13.9$ $4.4$ $2.4$ Guinea2004 $1.0$ $26.9$ $7.7$ $1.1$ Guinea2005 $2.0$ $13.9$ $4.4$ $2.4$ Guinea2007 $4.0$ $1.9$ $6.1$ $1.4$ Kenya2003 $0.0$ $33.6$ $5.1$ $1.4$ Kenya2004 $1.0$ $26.9$ $7.7$ $1.8$ <	Burkina Faso	2003	1.0	15.9	3.4	2.7
Burandi     210     25.0     37.3     8.2     1.1       Burundi     2012     34.0     36.5     10.2     1.1       Cameroon     2004     3.0     25.4     4.8     1.9       Cameroon     2011     18.0     24.3     5.7     2.0       Chad     2004     0.0     23.4     5.4     1.8       Chad     2014     32.5     26.8     9.1     1.7       Cóte d'Ivoire     1994     0.0     11.0     2.4     3.6       Cóte d'Ivoire     2011     2.0     19.2     4.6     2.3       Democatic Republic of Congo     2007     4.0     2.2.5     4.2     2.0       Democatic Republic of Congo     2012     32.0     30.2     6.6     1.6       Gabon     2012     32.0     34.0     2.8     1.5       Ghana     1998     0.0     43.4     10.8     1.1       Ghana     2014     30.0     39.7     7.5     1.1       Guinea <td>Burkina Faso</td> <td>2010</td> <td>32.0</td> <td>16.9</td> <td>4.0</td> <td>2.1</td>	Burkina Faso	2010	32.0	16.9	4.0	2.1
Burnadi     212     34.0     36.5     10.2     1.1       Cameroon     2004     3.0     25.4     4.8     1.9       Cameroon     2011     18.0     24.3     5.7     2.0       Chad     2004     0.0     23.4     5.4     1.8       Chad     2004     0.0     23.4     5.4     1.8       Chad     2004     0.0     23.4     5.4     1.8       Côde d'Ivoire     1998     0.0     8.7     1.3     3.7       Côte d'Ivoire     2011     2.0     19.2     4.6     2.3       Democatic Republic of Congo     2013     23.0     30.2     6.6     1.6       Gabon     2000     0.0     31.3     3.4     1.9       Gabon     2003     0.0     43.4     10.8     1.1       Ghana     1993     0.0     43.4     10.8     1.4       Ghana     2005     2.0     13.9     4.4     2.4       Guinea     2012	Burundi	2010	25.0	37.3	8.2	1.1
Cameroon     201     3.0     25.4     4.8     1.9       Cameroon     2011     18.0     24.3     5.7     2.0       Chad     2004     0.0     23.4     5.4     1.8       Chad     2014     32.5     26.8     9.1     1.7       Côte d'Ivoire     1994     0.0     11.0     2.4     3.6       Côte d'Ivoire     1994     0.0     8.7     1.3     3.7       Côte d'Ivoire     2011     22.0     19.2     4.6     2.3       Democatic Republic of Congo     2007     4.0     22.5     4.2     2.0       Democatic Republic of Congo     2000     0.0     31.3     3.4     1.9       Gabon     2012     32.0     34.0     2.8     1.1       Ghana     1998     0.0     43.4     10.8     1.1       Ghana     2014     30.0     39.7     7.5     1.1       Guinea     2012     25.0     11.0     4.2     2.6       Kenya <td>Burundi</td> <td>2012</td> <td>34.0</td> <td>36.5</td> <td>10.2</td> <td>1.1</td>	Burundi	2012	34.0	36.5	10.2	1.1
Cameroon     2011     18.0     2.4.3     5.7     2.0       Chad     2004     0.0     23.4     5.4     1.8       Chad     2014     32.5     26.8     9.1     1.7       Côte d'Ivoire     1994     0.0     8.7     1.3     3.7       Côte d'Ivoire     1998     0.0     8.7     1.3     3.7       Côte d'Ivoire     2011     22.0     192.2     4.6     2.3       Democatic Republic of Congo     2007     4.0     22.5     4.2     2.0       Democatic Republic of Congo     2007     4.0     28.5     4.2     2.0       Democatic Republic of Congo     2012     32.0     30.2     6.6     1.6       Gabon     2002     0.0     31.3     3.4     1.9       Gabon     2003     0.0     33.3     7.3     1.4       Ghana     2003     0.0     33.8     6.2     1.3       Ghana     2014     30.0     39.7     7.5     1.1	Cameroon	2012	3.0	25.4	4.8	19
Chad20040.023.45.41.7Chad201432.526.89.11.7Côte d'Ivoire19940.011.02.43.6Côte d'Ivoire19980.08.71.33.7Côte d'Ivoire201122.019.24.62.3Democatic Republic of Congo20074.022.54.22.0Democatic Republic of Congo201323.030.26.61.6Gabon201232.034.02.81.5Ghana19930.043.410.81.1Ghana19980.041.68.21.1Ghana20030.033.37.31.4Ghana201430.039.77.51.1Guinea19990.010.84.02.7Guinea201225.011.04.22.6Kenya19930.034.56.11.4Kenya20030.033.65.81.2Lesotho201225.011.04.22.6Kenya19930.034.56.11.4Kenya20030.033.65.81.2Kenya19930.033.65.11.4Kenya20030.033.65.11.4Kenya20030.033.65.11.4Kenya20041.026.97.71.7<	Cameroon	2001	18.0	24.3	57	2.0
Chad201432.526.89.11.7Côc d'Ivoire19940.011.02.43.6Côte d'Ivoire19980.0 $8.7$ 1.33.7Côte d'Ivoire201122.019.24.62.3Democatic Republic of Congo20074.022.54.22.0Democatic Republic of Congo201323.030.26.61.6Gabon20000.031.33.41.9Gabon201232.034.02.81.5Ghana19980.041.68.21.1Ghana19980.033.37.31.4Ghana20087.033.86.21.3Ghana201430.039.77.51.1Guinea201225.011.04.42.4Guinea201225.011.04.42.4Guinea201225.011.04.42.4Kenya19930.034.56.11.4Kenya20030.035.67.91.2Lesotho20041.026.97.71.7Lesotho201437.030.59.41.5Lesotho201437.030.59.41.5Lesotho201437.030.59.41.5Lesotho201437.030.59.41.5Lesotho201320.026.97.1	Chad	2011	0.0	23.4	5.4	1.8
CanaLab <thl< td=""><td>Chad</td><td>2014</td><td>32.5</td><td>26.8</td><td>91</td><td>1.0</td></thl<>	Chad	2014	32.5	26.8	91	1.0
ConstructDysDysDysDysDysDysDysDysDysCôte d'Ivoire201122.019.24.62.3Democatic Republic of Congo20074.02.2.54.22.0Democatic Republic of Congo20000.031.33.41.9Gabon201232.034.02.81.5Ghana19930.043.410.81.1Ghana19930.043.410.81.1Ghana20030.033.37.31.4Ghana20030.033.86.21.3Ghana201430.039.77.51.1Guinea20052.013.94.42.4Cuinea201225.011.04.22.6Kenya19980.040.45.81.2Kenya20082.2.533.56.11.4Kenya20082.5.535.57.91.3Kenya20041.026.97.71.7Lesotho20074.017.96.11.9Liberia201320.019.16.72.0Madagascar19920.026.97.11.7Lesotho20030.030.36.31.4Madagascar20030.037.41.51.6Madagascar19920.026.97.71.8Lesotho203 <td>Côte d'Ivoire</td> <td>1994</td> <td>0.0</td> <td>11.0</td> <td>2.4</td> <td>3.6</td>	Côte d'Ivoire	1994	0.0	11.0	2.4	3.6
Concentration     Design of the second seco	Côte d'Ivoire	1998	0.0	87	13	3.0
Core arrow20112.51.724.02.5Democatic Republic of Congo201323.030.26.61.6Gabon20000.031.33.41.9Gabon201232.034.02.81.5Ghana19930.043.410.81.1Ghana19980.041.68.21.1Ghana20030.033.37.31.4Ghana20087.033.86.21.3Ghana20087.033.86.21.3Ghana20052.013.94.42.4Guinea201225.011.04.22.6Kenya19930.034.56.11.4Kenya19930.033.56.31.3Kenya19980.040.45.81.2Kenya20082.533.56.31.3Kenya20082.533.56.31.3Kenya20041.026.97.71.7Lesotho2041.026.97.71.8Lesotho20430.030.59.41.5Liberia20074.017.96.11.9Liberia201220.027.47.51.6Madagascar19970.027.47.51.6Madagascar19970.027.47.51.6Madagascar2008<	Côte d'Ivoire	2011	22.0	19.2	1.5	2.3
Definitional Republic of Congo     200     4.0     2.2.5     4.2     2.0       Gabon     2000     0.0     31.3     3.4     1.9       Gabon     2012     32.0     34.0     2.8     1.5       Ghana     1993     0.0     43.4     10.8     1.1       Ghana     1993     0.0     43.4     10.8     1.1       Ghana     2003     0.0     33.3     7.3     1.4       Ghana     2008     7.0     33.8     6.2     1.3       Ghana     2014     30.0     39.7     7.5     1.1       Guinea     2005     2.0     13.9     4.4     2.4       Guinea     2012     25.0     11.0     4.2     2.6       Kenya     1993     0.0     34.5     6.1     1.4       Kenya     2003     0.0     33.6     5.1     1.4       Kenya     2004     1.0     26.9     7.7     1.7       Lesotho     2004     1.0 <td>Democratic Republic of Congo</td> <td>2011</td> <td>4.0</td> <td>19.2</td> <td>4.0</td> <td>2.5</td>	Democratic Republic of Congo	2011	4.0	19.2	4.0	2.5
Definition Republic of Congo     Dots     Dots <thdots< th="">     Dots     Dots     <t< td=""><td>Democatic Republic of Congo</td><td>2007</td><td>-1.0 23.0</td><td>30.2</td><td>4.2 6.6</td><td>2.0</td></t<></thdots<>	Democatic Republic of Congo	2007	-1.0 23.0	30.2	4.2 6.6	2.0
Caton200 $0.0$ $31.3$ $3.4$ $1.5$ Gabon2012 $32.0$ $34.0$ $2.8$ $1.5$ Ghana1993 $0.0$ $43.4$ $10.8$ $1.1$ Ghana2003 $0.0$ $33.3$ $7.3$ $1.4$ Ghana2008 $7.0$ $33.8$ $6.2$ $1.3$ Ghana2014 $30.0$ $39.7$ $7.5$ $1.1$ Guinea1999 $0.0$ $10.8$ $4.0$ $2.7$ Guinea2005 $2.0$ $13.9$ $4.4$ $2.4$ Guinea2012 $25.0$ $11.0$ $4.2$ $2.6$ Guinea2012 $25.0$ $11.0$ $4.2$ $2.6$ Guinea2012 $25.0$ $11.0$ $4.2$ $2.6$ Kenya1993 $0.0$ $33.6$ $5.1$ $1.4$ Kenya1998 $0.0$ $40.4$ $5.8$ $1.2$ Kenya2008 $22.5$ $33.5$ $6.3$ $1.3$ Kenya2014 $51.0$ $35.0$ $7.9$ $1.2$ Lesotho2004 $1.0$ $26.9$ $7.7$ $1.7$ Lesotho2014 $37.0$ $30.5$ $9.4$ $1.5$ Liberia2007 $4.0$ $17.9$ $6.1$ $1.9$ Liberia2003 $0.0$ $33.6$ $1.4$ $1.6$ Madagascar1997 $0.0$ $27.4$ $7.5$ $1.6$ Madagascar1997 $0.0$ $37.4$ $11.3$ $1.1$ Malawi2000 $0.0$ $3$	Gabon	2013	23.0	31.3	0.0 3 /	1.0
Caton201222.034.02.031.3Ghana19930.043.410.81.1Ghana20030.033.37.31.4Ghana20087.033.86.21.3Ghana201430.039.77.51.1Guinea19990.010.84.02.7Guinea20052.013.94.42.4Guinea201225.011.04.22.6Kenya19930.034.56.11.4Kenya19980.033.65.11.4Kenya20030.033.65.11.4Kenya20930.033.65.11.4Kenya20941.026.97.71.7Lesotho20041.026.97.71.7Lesotho201451.035.07.91.2Lesotho201437.030.59.41.5Liberia201320.019.16.72.0Madagascar19970.027.47.51.6Madagascar20030.030.36.31.4Malawi20000.038.610.91.2Malawi20030.037.411.31.1Malawi20041.04.61.41.0Malawi200532.97.91.31.1Malawi20040.0	Gabon	2000	32.0	34.0	2.4	1.5
Chana1993 $0.0$ $4.1.4$ $10.5$ $1.1$ Ghana1998 $0.0$ $41.6$ $8.2$ $1.1$ Ghana2003 $0.0$ $33.3$ $7.3$ $1.4$ Ghana2008 $7.0$ $33.8$ $6.2$ $1.3$ Ghana2014 $30.0$ $39.7$ $7.5$ $1.1$ Guinea1999 $0.0$ $10.8$ $4.0$ $2.7$ Guinea2005 $2.0$ $13.9$ $4.4$ $2.4$ Guinea2012 $25.0$ $11.0$ $4.2$ $2.6$ Kenya1993 $0.0$ $34.5$ $6.1$ $1.4$ Kenya1998 $0.0$ $40.4$ $5.8$ $1.2$ Kenya2003 $0.0$ $33.6$ $5.1$ $1.4$ Kenya2008 $22.5$ $33.5$ $6.3$ $1.3$ Kenya2004 $1.0$ $26.9$ $7.7$ $1.7$ Lesotho2009 $24.0$ $26.0$ $7.7$ $1.8$ Lesotho2014 $37.0$ $30.5$ $9.4$ $1.5$ Liberia2013 $20.0$ $19.1$ $6.7$ $2.0$ Madagascar1997 $0.0$ $27.4$ $7.5$ $1.6$ Madagascar2008 $0.5$ $32.9$ $7.9$ $1.3$ Malawi2000 $0.0$ $38.6$ $10.9$ $1.2$ Malawi2000 $0.0$ $38.6$ $10.9$ $1.2$ Malawi2004 $1.0$ $44.6$ $14.4$ $1.0$ Malawi2004 $0.0$	Ghana	1003	0.0	13 A	2.8	1.5
Chana199 $0.0$ $3.3$ $6.2$ $1.1$ Ghana2003 $0.0$ $33.3$ $7.3$ $1.4$ Ghana2008 $7.0$ $33.8$ $6.2$ $1.3$ Ghana2014 $30.0$ $39.7$ $7.5$ $1.1$ Guinea1999 $0.0$ $10.8$ $4.0$ $2.7$ Guinea2005 $2.0$ $13.9$ $4.4$ $2.4$ Guinea2012 $25.0$ $11.0$ $4.2$ $2.6$ Kenya1993 $0.0$ $34.5$ $6.1$ $1.4$ Kenya1998 $0.0$ $40.4$ $5.8$ $1.2$ Kenya2003 $0.0$ $33.6$ $5.1$ $1.4$ Kenya2008 $22.5$ $33.5$ $6.3$ $1.3$ Kenya2014 $51.0$ $35.0$ $7.9$ $1.2$ Lesotho2004 $1.0$ $26.9$ $7.7$ $1.8$ Lesotho2014 $37.0$ $30.5$ $9.4$ $1.5$ Liberia2007 $4.0$ $17.9$ $6.1$ $1.9$ Liberia2013 $20.0$ $19.1$ $6.7$ $2.0$ Madagascar1997 $0.0$ $27.4$ $7.5$ $1.6$ Madagascar2008 $0.5$ $32.9$ $7.9$ $1.3$ Malawi1992 $0.0$ $37.4$ $11.3$ $1.1$ Malawi2000 $0.0$ $38.6$ $10.9$ $1.2$ Malawi2000 $0.0$ $38.6$ $10.9$ $1.2$ Malawi2001 $26.0$ $0$	Ghana	1993	0.0	41.6	8.2	1.1
Chana $200$ $0.0$ $0.5$ $1.5$ $1.5$ $1.4$ Ghana $2008$ $7.0$ $33.8$ $6.2$ $1.3$ Guinea $2014$ $30.0$ $39.7$ $7.5$ $1.1$ Guinea $2005$ $2.0$ $13.9$ $4.4$ $2.4$ Guinea $2012$ $25.0$ $11.0$ $4.2$ $2.6$ Kenya $1993$ $0.0$ $34.5$ $6.1$ $1.4$ Kenya $1998$ $0.0$ $40.4$ $5.8$ $1.2$ Kenya $2003$ $0.0$ $33.6$ $5.1$ $1.4$ Kenya $2008$ $22.5$ $33.5$ $6.3$ $1.3$ Kenya $2004$ $1.0$ $26.9$ $7.7$ $1.7$ Lesotho $2004$ $1.0$ $26.9$ $7.7$ $1.5$ Lesotho $2009$ $24.0$ $26.0$ $7.7$ $1.8$ Lesotho $2014$ $37.0$ $30.5$ $9.4$ $1.5$ Liberia $2013$ $20.0$ $19.1$ $6.7$ $2.0$ Madagascar $1992$ $0.0$ $26.9$ $7.1$ $1.7$ Madagascar $1997$ $0.0$ $27.4$ $7.5$ $1.6$ Madagascar $2008$ $0.5$ $32.9$ $7.9$ $1.3$ Malawi $1992$ $0.0$ $37.4$ $11.3$ $1.1$ Malawi $2000$ $0.0$ $38.6$ $10.9$ $1.2$ Malawi $2004$ $1.0$ $44.6$ $14.4$ $1.0$ Malawi $2010$ $0.0$ $37.4$ $5.2$ $2.4$ <	Ghana	2003	0.0	41.0	8.2 7 3	1.1
Chana20081.03.03.77.51.1Ghana201430.039.77.51.1Guinea19990.010.84.02.7Guinea20052.013.94.42.4Guinea201225.011.04.22.6Kenya19930.034.56.11.4Kenya19980.040.45.81.2Kenya20030.033.65.11.4Kenya200822.533.56.31.3Kenya201451.035.07.91.2Lesotho20041.026.97.71.7Lesotho201320.017.96.11.9Liberia20074.017.96.11.9Liberia201320.026.97.11.7Madagascar19970.027.47.51.6Madagascar20080.532.97.91.3Malawi19920.037.411.31.1Malawi20000.038.610.91.2Malawi20041.044.614.41.0Malawi200126.047.41.51.6Malawi19920.037.411.31.1Malawi20000.038.610.91.2Malawi20000.038.610.91.2Malawi2010 <td>Ghana</td> <td>2003</td> <td>0.0 7.0</td> <td>22.8</td> <td>60</td> <td>1.4</td>	Ghana	2003	0.0 7.0	22.8	60	1.4
Onlaha201430.053.77.31.1Guinea19990.010.84.02.7Guinea20052.013.94.42.4Guinea201225.011.04.22.6Kenya19930.034.56.11.4Kenya19980.040.45.81.2Kenya20030.033.65.11.4Kenya200822.533.56.31.3Kenya201451.035.07.91.2Lesotho20041.026.97.71.7Lesotho201437.030.59.41.5Liberia20074.017.96.11.9Liberia201320.019.16.72.0Madagascar19970.027.47.51.6Madagascar20080.532.97.91.3Malawi19920.038.610.91.2Malawi20000.038.610.91.2Malawi20041.044.614.41.0Malawi20041.044.614.41.0Malawi20041.044.614.41.0Malawi20000.013.21.11.1	Chana	2008	7.0	33.8	0.2	1.5
Guinea1999 $0.0$ $10.3$ $4.0$ $2.7$ Guinea $2005$ $2.0$ $13.9$ $4.4$ $2.4$ Guinea $2012$ $25.0$ $11.0$ $4.2$ $2.6$ Kenya $1993$ $0.0$ $34.5$ $6.1$ $1.4$ Kenya $1998$ $0.0$ $40.4$ $5.8$ $1.2$ Kenya $2003$ $0.0$ $33.6$ $5.1$ $1.4$ Kenya $2008$ $22.5$ $33.5$ $6.3$ $1.3$ Kenya $2004$ $1.0$ $26.9$ $7.7$ $1.7$ Lesotho $2004$ $1.0$ $26.9$ $7.7$ $1.7$ Lesotho $2009$ $24.0$ $26.0$ $7.7$ $1.8$ Lesotho $2009$ $24.0$ $26.0$ $7.7$ $1.8$ Lesotho $2014$ $37.0$ $30.5$ $9.4$ $1.5$ Liberia $2007$ $4.0$ $17.9$ $6.1$ $1.9$ Liberia $2003$ $0.0$ $27.4$ $7.5$ $1.6$ Madagascar $1997$ $0.0$ $27.4$ $7.5$ $1.6$ Madagascar $2008$ $0.5$ $32.9$ $7.9$ $1.3$ Malawi $1992$ $0.0$ $38.6$ $10.9$ $1.2$ Malawi $2000$ $0.0$ $38.6$ $10.9$ $1.2$	Guinaa	1000	50.0	10.8	1.5	1.1
Guinea20032.013.94.42.4Guinea201225.011.04.22.6Kenya19930.034.56.11.4Kenya19980.040.45.81.2Kenya20030.033.65.11.4Kenya200822.533.56.31.3Kenya201451.035.07.91.2Lesotho20041.026.97.71.7Lesotho200924.026.07.71.8Lesotho201437.030.59.41.5Liberia20074.017.96.11.9Liberia201320.019.16.72.0Madagascar19920.027.47.51.6Madagascar20080.532.97.91.3Malawi19920.037.411.31.1Malawi20000.038.610.91.2Malawi20041.044.614.41.0Malawi20000.038.610.91.2Malawi20000.038.610.91.2Malawi20041.044.614.41.0Malawi20000.038.610.91.2Malawi20000.038.610.91.2Malawi201026.040.013.21.1Malawi2010	Guinea	2005	0.0	12.0	4.0	2.7
Current Land   2012   20.0   11.0   4.2   2.0     Kenya   1993   0.0   34.5   6.1   1.4     Kenya   1998   0.0   40.4   5.8   1.2     Kenya   2003   0.0   33.6   5.1   1.4     Kenya   2008   22.5   33.5   6.3   1.3     Kenya   2014   51.0   35.0   7.9   1.2     Lesotho   2004   1.0   26.9   7.7   1.7     Lesotho   2004   37.0   30.5   9.4   1.5     Liberia   2007   4.0   17.9   6.1   1.9     Liberia   2013   20.0   19.1   6.7   2.0     Madagascar   1997   0.0   27.4   7.5   1.6     Madagascar   2008   0.5   32.9   7.9   1.3     Madagascar   2008   0.5   32.9   7.9   1.3     Madagascar   2000   0.0   37.4   11.3   1.1     Malawi   1992   0.0	Guinea	2005	2.0	11.0	4.4	2.4
Kenya19930.094.50.11.4Kenya19980.040.45.81.2Kenya20030.033.65.11.4Kenya200822.533.56.31.3Kenya201451.035.07.91.2Lesotho20041.026.97.71.7Lesotho200924.026.07.71.8Lesotho201437.030.59.41.5Liberia20074.017.96.11.9Liberia201320.019.16.72.0Madagascar19920.027.47.51.6Madagascar20030.030.36.31.4Madagascar20000.038.610.91.2Malawi19920.037.411.31.1Malawi20041.044.614.41.0Malawi201026.040.013.21.1Malawi201026.040.013.21.1Malawi201026.040.013.21.1	Kenya	1003	25.0	34.5	4.2	2.0
Kenya19960.040.45.81.2Kenya20030.033.65.11.4Kenya200822.533.56.31.3Kenya201451.035.07.91.2Lesotho20041.026.97.71.7Lesotho200924.026.07.71.8Lesotho201437.030.59.41.5Liberia20074.017.96.11.9Liberia201320.019.16.72.0Madagascar19920.026.97.11.7Madagascar19970.030.36.31.4Madagascar20080.532.97.91.3Malawi19920.037.411.31.1Malawi20000.038.610.91.2Malawi20041.044.614.41.0Malawi201026.040.013.21.1Malawi19950.019.24.52.4	Kenya	1993	0.0	40.4	5.8	1.4
Kenya20030.053.05.11.4Kenya200822.533.56.31.3Kenya201451.035.07.91.2Lesotho20041.026.97.71.7Lesotho200924.026.07.71.8Lesotho201437.030.59.41.5Liberia20074.017.96.11.9Liberia201320.019.16.72.0Madagascar19920.026.97.11.7Madagascar19970.027.47.51.6Madagascar20030.030.36.31.4Madagascar20080.532.97.91.3Malawi19920.037.411.31.1Malawi20041.044.614.41.0Malawi201026.040.013.21.1Mali19950.019.24.52.4	Kenya	2003	0.0	40.4 33.6	5.0	1.2
Kenya200622.353.56.31.3Kenya201451.035.07.91.2Lesotho20041.026.97.71.7Lesotho200924.026.07.71.8Lesotho201437.030.59.41.5Liberia20074.017.96.11.9Liberia201320.019.16.72.0Madagascar19920.026.97.11.7Madagascar19970.027.47.51.6Madagascar20080.532.97.91.3Malawi19920.037.411.31.1Malawi20041.044.614.41.0Malawi201026.040.013.21.1Malawi201026.040.013.21.1	Kenya	2003	22.5	22.5	5.1	1.4
Renya201431.035.07.91.2Lesotho20041.026.97.71.7Lesotho200924.026.07.71.8Lesotho201437.030.59.41.5Liberia20074.017.96.11.9Liberia201320.019.16.72.0Madagascar19920.026.97.11.7Madagascar19970.027.47.51.6Madagascar20030.030.36.31.4Madagascar20080.532.97.91.3Malawi19920.037.411.31.1Malawi20000.038.610.91.2Malawi20041.044.614.41.0Malawi201026.040.013.21.1Mali19950.019.24.52.4	Kenya	2008	51.0	35.0	0.3	1.5
Lesolib20041.020.91.71.7Lesotho200924.026.07.71.8Lesotho201437.030.59.41.5Liberia20074.017.96.11.9Liberia201320.019.16.72.0Madagascar19920.026.97.11.7Madagascar19970.027.47.51.6Madagascar20030.030.36.31.4Madagascar20080.532.97.91.3Malawi19920.037.411.31.1Malawi20000.038.610.91.2Malawi20041.044.614.41.0Malawi201026.040.013.21.1Mali19950.019.24.52.4	L asotho	2014	1.0	35.0 26.0	1.5	1.2
Lesolid200924.020001.71.8Lesotho201437.030.59.41.5Liberia20074.017.96.11.9Liberia201320.019.16.72.0Madagascar19920.026.97.11.7Madagascar19970.027.47.51.6Madagascar20030.030.36.31.4Madagascar20080.532.97.91.3Malawi19920.037.411.31.1Malawi20000.038.610.91.2Malawi20041.044.614.41.0Malawi201026.040.013.21.1Mali19950.019.24.52.4	Lesotho	2004	24.0	20.9	7.7	1.7
Lesonio201437.030.39.41.3Liberia20074.017.96.11.9Liberia201320.019.16.72.0Madagascar19920.026.97.11.7Madagascar19970.027.47.51.6Madagascar20030.030.36.31.4Madagascar20080.532.97.91.3Malawi19920.037.411.31.1Malawi20000.038.610.91.2Malawi20041.044.614.41.0Malawi201026.040.013.21.1Mali19950.019.24.52.4	Lesotho	2009	24.0	20.0	7.7	1.0
Liberia20074.017.96.11.9Liberia201320.019.16.72.0Madagascar19920.026.97.11.7Madagascar19970.027.47.51.6Madagascar20030.030.36.31.4Madagascar20080.532.97.91.3Malawi19920.037.411.31.1Malawi20000.038.610.91.2Malawi20041.044.614.41.0Malawi201026.040.013.21.1Mali19950.019.24.52.4	Liboria	2014	37.0	17.0	9.4 6 1	1.5
Liberta201320019.16.72.0Madagascar19920.026.97.11.7Madagascar19970.027.47.51.6Madagascar20030.030.36.31.4Madagascar20080.532.97.91.3Malawi19920.037.411.31.1Malawi20000.038.610.91.2Malawi20041.044.614.41.0Malawi201026.040.013.21.1Mali19950.019.24.52.4	Liberia	2007	4.0	17.5	0.1 67	1.9
Madagascar19970.020.91.11.7Madagascar19970.027.47.51.6Madagascar20030.030.36.31.4Madagascar20080.532.97.91.3Malawi19920.037.411.31.1Malawi20000.038.610.91.2Malawi20041.044.614.41.0Malawi201026.040.013.21.1Mali19950.019.24.52.4	Madagascar	1002	20.0	26.0	0.7	2.0
Madagascar20030.027.47.51.0Madagascar20030.030.36.31.4Madagascar20080.532.97.91.3Malawi19920.037.411.31.1Malawi20000.038.610.91.2Malawi20041.044.614.41.0Malawi201026.040.013.21.1Mali19950.019.24.52.4	Madagascar	1992	0.0	20.9	7.1	1.7
Madagascar20030.050.50.51.4Madagascar20080.532.97.91.3Malawi19920.037.411.31.1Malawi20000.038.610.91.2Malawi20041.044.614.41.0Malawi201026.040.013.21.1Mali19950.019.24.52.4	Madagascar	2002	0.0	27.4	6.2	1.0
Madagascar20060.352.91.91.3Malawi19920.037.411.31.1Malawi20000.038.610.91.2Malawi20041.044.614.41.0Malawi201026.040.013.21.1Mali19950.019.24.52.4	Madagascar	2003	0.0	30.5	0.5	1.4
Malawi17720.057.411.51.1Malawi20000.038.610.91.2Malawi20041.044.614.41.0Malawi201026.040.013.21.1Mali19950.019.24.52.4	Malawi	2000	0.5	52.9 37 A	1.7	1.3
Malawi 2000 0.0 56.0 10.9 1.2   Malawi 2004 1.0 44.6 14.4 1.0   Malawi 2010 26.0 40.0 13.2 1.1   Mali 1995 0.0 19.2 4.5 2.4	Malawi	1772	0.0	28 6	11.3	1.1
Malawi     2004     1.0     44.0     14.4     1.0       Malawi     2010     26.0     40.0     13.2     1.1       Mali     1995     0.0     19.2     4.5     2.4	Malawi	2000	1.0	50.0 11.6	10.9	1.2
Mai     1995     0.0     19.2     4.5     2.4	Malawi	2004	26.0	44.0	14.4	1.0
ivian 177J U.U 17.2 4.J 2.4	Mali	2010	20.0	40.0	15.2	1.1
Mali 2006 8.0 20.4 4.3 1.0	Mali	2006	8.0	20.4	43	2. <del>4</del> 1 9

Table S1. ART coverage and living arrangements of older adults, by study countries and years

Mozambique	1997	0.0	34.1	5.2	1.4
Mozambique	2003	0.0	32.4	7.0	1.5
Mozambique	2009	13.0	50.5	10.5	0.8
Mozambique	2011	20.0	41.5	9.0	1.1
Namibia	1992	0.0	19.3	6.8	2.5
Namibia	2000	0.0	21.9	8.7	1.9
Namibia	2006	19.5	22.3	6.2	1.9
Namibia	2013	62.0	24.0	8.0	1.8
Niger	1998	0.0	17.5	7.9	2.3
Niger	2006	2.0	16.5	6.9	2.1
Niger	2012	21.0	21.8	8.5	1.6
Nigeria	1990	0.0	20.2	4.9	2.2
Nigeria	2003	1.0	19.5	3.1	2.1
Nigeria	2008	7.0	29.0	4.4	1.6
Nigeria	2010	11.0	24.2	6.5	1.8
Nigeria	2013	19.0	27.6	4.8	1.6
Rwanda	1992	0.0	29.4	11.2	1.4
Rwanda	2000	0.0	36.8	12.8	1.1
Rwanda	2005	10.0	31.8	10.2	1.2
Rwanda	2010	48.0	34.7	9.8	1.2
Rwanda	2014	75.5	32.3	8.0	1.3
Senegal	1992	0.0	5.5	1.7	4.0
Senegal	2005	1.0	4.1	1.1	4.6
Senegal	2010	25.0	2.8	0.9	4.9
Senegal	2012	26.0	2.7	0.2	5.1
Senegal	2014	36.0	3.4	0.5	4.8
Senegal	2015	40.0	4.4	1.1	4.5
Sierra Leone	2008	4.0	11.7	5.8	2.2
Sierra Leone	2013	17.0	11.1	5.3	2.4
Togo	1998	0.0	25.2	7.0	1.8
Togo	2013	33.5	20.1	5.8	2.2
Uganda	1995	0.0	38.6	12.6	1.2
Uganda	2000	0.5	40.0	12.0	1.2
Uganda	2006	9.0	35.6	13.1	1.3
Uganda	2011	25.0	35.0	12.6	1.3
United Republic of Tanzania	1991	0.0	20.4	4.7	2.1
United Republic of Tanzania	1996	0.0	26.2	4.9	1.7
United Republic of Tanzania	1999	0.0	21.4	4.3	1.9
United Republic of Tanzania	2003	0.5	26.1	7.3	1.8
United Republic of Tanzania	2004	1.0	25.4	5.0	1.9
United Republic of Tanzania	2007	10.5	26.2	6.7	1.7
United Republic of Tanzania	2010	18.0	27.2	6.9	1.7
United Republic of Tanzania	2011	25.0	24.5	7.1	1.8
United Republic of Tanzania	2015	53.0	27.7	7.5	1.7
Zambia	1992	0.0	25.2	4.5	1.8
Zambia	1996	0.0	25.7	6.2	1.8
Zambia	2001	0.0	27.4	7.1	1.6
Zambia	2007	17.0	35.7	10.1	1.3
Zambia	2013	54.0	33.3	8.5	1.4
Zimbabwe	1994	0.0	22.5	6.3	1.8
Zimbabwe	1999	0.0	30.7	8.7	1.4
Zimbabwe	2005	3.5	28.6	11.2	1.5
Zimbabwe	2010	34.5	30.7	10.8	1.4
Zimbabwe	2015	62.0	33.4	10.3	1.3

*Notes:* Sources: 103 Demographic and Health Surveys, AIDS Indicator Surveys, and Malaria Indicator Surveys for 28 countries in sub-Saharan Africa, between 1991 – 2015; annual UNAIDS estimates.

Subsample	Cour	try HIV prevalence	>5%	Coun	Country HIV prevalence $\geq 1$ %			Country HIV prevalence < 1%		
Dependent variable	Lives without working-age adults (1=yes, 0=no)	Lives in missing generation household (1=yes, 0=no)	Working-age adults in household (number)	Lives without working-age adults (1=yes, 0=no)	Lives in missing generation household (1=yes, 0=no)	Working-age adults in household (number)	Lives without working-age adults (1=yes, 0=no)	Lives in missing generation household (1=yes, 0=no)	Working-age adults in household (number)	
Model	Probit	Probit	OLS	Probit	Probit	OLS	Probit	Probit	OLS	
Predictor										
ART coverage (%)	-0.007***	-0.002***	0.023***	-0.001***	-0.001***	0.004*	0.002	-0.002	0.012	
	(0.002)	(0.001)	(0.007)	(0.000)	(0.000)	(0.002)	(0.003)	(0.002)	(0.022)	
Age (years)	0.004***	-0.001***	-0.008***	0.005***	-0.0002***	-0.007***	0.004***	0.001***	-0.002	
	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)	(0.002)	
Female (1=yes, 0=no)	0.115***	0.059***	-0.228***	0.117***	0.053***	-0.218***	0.087***	0.035***	-0.197***	
	(0.003)	(0.002)	(0.012)	(0.002)	(0.001)	(0.009)	(0.004)	(0.002)	(0.026)	
Schooling (years)	0.003***	-0.002***	-0.014***	0.003***	-0.001***	-0.011***	0.004***	-0.0004	-0.059***	
	(0.001)	(0.000)	(0.003)	(0.000)	(0.000)	(0.002)	(0.001)	(0.001)	(0.008)	
Urban (1=yes, 0=no)	-0.044***	-0.032***	0.242***	-0.031***	-0.018***	0.277***	-0.008	-0.004	0.213***	
· · ·	(0.009)	(0.005)	(0.032)	(0.005)	(0.003)	(0.023)	(0.007)	(0.004)	(0.078)	
Electricity (1=yes, 0=no)	-0.009	-0.033***	0.257***	-0.033***	-0.019***	0.355***	-0.058***	-0.033***	1.392***	
	(0.011)	(0.007)	(0.036)	(0.005)	(0.003)	(0.023)	(0.008)	(0.006)	(0.090)	
Radio (1=yes, 0=no)	-0.128***	-0.024***	0.459***	-0.130***	-0.027***	0.559***	-0.090***	-0.030***	0.821***	
-	(0.005)	(0.003)	(0.017)	(0.003)	(0.002)	(0.013)	(0.005)	(0.003)	(0.041)	
Bicycle (1=yes, 0=no)	-0.116***	-0.022***	0.412***	-0.143***	-0.030***	0.641***	-0.126***	-0.030***	0.931***	
	(0.006)	(0.004)	(0.024)	(0.004)	(0.002)	(0.018)	(0.008)	(0.005)	(0.056)	
Observations R-squared	92,474	92,474	92,474 0.107	234,321	234,321	234,321 0.148	54,096	54,096	54,096 0.305	

Table S2. Living arrangements of older adults and ART coverage, full regression output

Multivariable probit and OLS models. Regression coefficients reflect the changes in outcome variable given an increase in national ART coverage of 1%. Values from the probit models are marginal effects estimates and those from the ordinary least squares regression are coefficient estimates. All models control for age, sex, residence (urban or rural), education, measures of household wealth, survey year indicators, and country indicators. Countries are categorized based on adult HIV prevalence (ages 15-49) in 2015 (UNAIDS). \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. Source: Demographic and Health Surveys, AIDS Indicator Surveys, and Malaria Indicator Surveys for 28 countries in sub-Saharan Africa, between 1991 – 2015.

Dependent variable	Lives without working-age adults (1=yes, 0=no)	Lives in missing generation household (1=yes, 0=no)	Working-age adults in household (number)
Model	Probit	Probit	OLS
	Subsample: Female		
Predictor: ART coverage (%)			
Country HIV prevalence $\geq 5\%$ ( <i>n</i> = 50,076)	-0.006***	-0.003***	0.022***
	(0.002)	(0.001)	(0.007)
Country HIV prevalence $\geq 1 \%$ ( <i>n</i> = 123,836)	-0.002***	-0.001***	0.005**
	(0.001)	(0.000)	(0.002)
Country HIV prevalence $< 1\%$ ( $n = 26,255$ )	0.001	-0.003	0.011
	(0.004)	(0.002)	(0.023)
	Subsample: Male		
Predictor: ART coverage (%)			
Country HIV prevalence $\geq 5\%$ ( <i>n</i> = 42,671)	-0.007***	-0.001	0.021***
	(0.002)	(0.001)	(0.007)
Country HIV prevalence $\geq 1 \% (n = 119,277)$	-0.001	0.000	0.001
	(0.000)	(0.000)	(0.002)
Country HIV prevalence $< 1\%$ ( $n = 27,963$ )	0.003	-0.001	0.013
	(0.003)	(0.001)	(0.023)

Table S3. Living arrangements of older adults and ART coverage, by sex

Multivariable probit and OLS models. Regression coefficients reflect the changes in outcome variable given an increase in national ART coverage of 1%. Values from the probit models are marginal effects estimates and those from the ordinary least squares regression are coefficient estimates. All models control for age, residence (urban or rural), education, measures of household wealth, survey year indicators, and country indicators. Countries are categorized based on adult HIV prevalence (ages 15-49) in 2015 (UNAIDS). \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. Source: Demographic and Health Surveys, AIDS Indicator Surveys, and Malaria Indicator Surveys for 28 countries in sub-Saharan Africa, between 1991 – 2015.

Dependent variable	Lives without	Lives in missing	Working-age adults	
	working-age adults	generation household	in household	
	(1=yes, 0=no)	(1=yes, 0=no)	(number)	
Model	Poisson	Poisson	Poisson	
Predictor: ART coverage (%)				
Country HIV prevalence $\geq$ 5% ( <i>n</i> =92,474)	-0.007***	-0.002***	0.018***	
	(0.002)	(0.001)	(0.004)	
Country HIV prevalence $\geq 1 \%$ ( <i>n</i> =234,321)	-0.001***	-0.001***	0.002	
	(0.000)	(0.000)	(0.000)	
Country HIV prevalence < 1% ( <i>n</i> =54,096)	0.003	-0.002	0.010	
	(0.004)	(0.002)	(0.010)	

Table S4. Living arrangements of older adults and ART coverage, using Poisson models

Multivariable Poisson models. Regression coefficients reflect the changes in outcome variable given an increase in national ART coverage of 1%. Values are marginal effects estimates. All models control for age, sex, residence (urban or rural), education, measures of household wealth, survey year indicators, and country indicators. Countries are categorized based on adult HIV prevalence (ages 15-49) in 2015 (UNAIDS). \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. Source: Demographic and Health Surveys, AIDS Indicator Surveys, and Malaria Indicator Surveys for 28 countries in sub-Saharan Africa, between 1991 – 2015.

Dependent variable	Lives without	Lives in missing	Working-age adults
	working-age adults	generation household	in household
	(1=yes, 0=no)	(1=yes, 0=no)	(number)
Model	Probit	Probit	OLS
Predictor: ART coverage (%)			
Country HIV prevalence $\geq 5\%$ ( <i>n</i> =74,061)	-0.007***	-0.002**	0.028***
	(0.002)	(0.001)	(0.006)
Country HIV prevalence $\geq 1 \%$ ( <i>n</i> =193,881)	-0.002***	-0.001****	0.008***
	(0.001)	(0.000)	(0.002)
Country HIV prevalence $< 1 \%$ ( <i>n</i> =43,575)	n/a	n/a	n/a

Table S5. Living arrangements of older adults and ART coverage, using post-2000 surveys

Multivariable probit and OLS models. Regression coefficients reflect the changes in outcome variable given an increase in national ART coverage of 1%. Values from the probit models are marginal effects estimates and those from the ordinary least squares regression are coefficient estimates. All models control for age, sex, residence (urban or rural), education, measures of household wealth, survey year indicators, and country indicators. In the subsample of HIV prevalence < 1%, the country variable drops out because of collinearity with few country-year observations. Countries are categorized based on adult HIV prevalence (ages 15-49) in 2015 (UNAIDS). \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. Source: Demographic and Health Surveys, AIDS Indicator Surveys, and Malaria Indicator Surveys for 28 countries in sub-Saharan Africa, between 2000 – 2015.

Dependent variable	Lives without	Lives in missing	Working-age adults
	working-age adults	generation household	in household
	(1=yes, 0=no)	(1=yes, 0=no)	(number)
Model	Probit	Probit	OLS
Predictor: ART coverage (%)			
Country HIV prevalence $\geq 5\%$ ( <i>n</i> =92,474)	-0.007***	-0.002***	0.023***
	(0.002)	(0.001)	(0.007)
Country HIV prevalence $\geq 1 \%$ ( <i>n</i> =234,321)	-0.001***	-0.001***	0.003*
	(0.000)	(0.000)	(0.002)
Country HIV prevalence < 1% ( <i>n</i> =54,096)	0.002	-0.002	0.012
	(0.003)	(0.002)	(0.022)

Table S6. Living arrangements of older adults and ART coverage, using quadratic in age

Multivariable probit and OLS models. Regression coefficients reflect the changes in outcome variable given an increase in national ART coverage of 1%. Values from the probit models are marginal effects estimates and those from the ordinary least squares regression are coefficient estimates. All models control for age, age squared, sex, area of residence, education, measures of household wealth, survey year indicators, and country indicators. Countries are categorized based on adult HIV prevalence (ages 15-49) in 2015 (UNAIDS). \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. Source: Demographic and Health Surveys, AIDS Indicator Surveys, and Malaria Indicator Surveys for 28 countries in sub-Saharan Africa, between 1991 – 2015.

Dependent variable	Lives without working-age adults (1=yes, 0=no)	Lives in missing generation household (1=yes, 0=no)	Working-age adults in household (number)
Model	Probit	Probit	OLS
Predictor: ART coverage (%)			
Country HIV prevalence $\geq 5\%$ ( <i>n</i> =92,474)	-0.009***	-0.002**	0.031***
	(0.002)	(0.001)	(0.005)
Country HIV prevalence > 1 % ( $n = 234.321$ )	-0.002**	-0.000*	0.005*
	(0.001)	(0.000)	(0.003)
	0.001	0.002*	0.025
Country HIV prevalence $< 1\%$ ( $n = 34,096$ )	(0.001	-0.003*	(0.025
	(0.004)	(0.002)	(0.022)

Table S7. Living arrangements of older adults and ART coverage, weighted by population size

Multivariable probit and OLS models. Regression coefficients reflect the changes in outcome variable given an increase in national ART coverage of 1%. Values from the probit models are marginal effects estimates and those from the ordinary least squares regression are coefficient estimates. All models control for age, sex, residence (urban or rural), education, measures of household wealth, survey year indicators, and country indicators. Countries are categorized based on adult HIV prevalence (ages 15-49) in 2015 (UNAIDS). \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. Observations were reweighted with the country population size ages 60+ at the time of the survey. Source: Demographic and Health Surveys, AIDS Indicator Surveys, and Malaria Indicator Surveys for 28 countries in sub-Saharan Africa, between 1991 – 2015.

Dependent variable	Lives without working-age adults (1=yes, 0=no)	Lives in missing generation household (1=yes, 0=no)	Working-age adults in household (number)	
Model	Probit	Probit	OLS	
Subsample:	Elderly defined as $\geq$ 7	70 years old		
Predictor: ART coverage (%)				
Country HIV prevalence $\geq 5\%$ ( <i>n</i> =40,238)	-0.009***	-0.004***	0.032***	
	(0.002)	(0.001)	(0.007)	
Country HIV prevalence $\geq 1$ % ( <i>n</i> =99,967)	-0.001**	-0.001***	0.004*	
	(0.001)	(0.000)	(0.002)	
Country HIV prevalence $< 1\%$ ( <i>n</i> =21,959)	0.002	-0.001	0.019	
	(0.003)	(0.002)	(0.025)	
Subsample:	Elderly defined as $\geq 5$	50 years old		
Predictor: ART coverage (%)				
Country HIV prevalence $> 5\%$ ( <i>n</i> =173,655)	-0.004***	-0.001*	0.014**	
	(0.002)	(0.001)	(0.006)	
Country HIV prevalence $\geq 1 \%$ ( <i>n</i> =442,938)	-0.001**	-0.001***	0.002	
	(0.000)	(0.000)	(0.002)	
Country HIV prevalence < 1% ( <i>n</i> =107,638)	0.001	-0.003*	0.015	
	(0.003)	(0.002)	(0.019)	

Multivariable probit and OLS models. Regression coefficients reflect the changes in outcome variable given an increase in national ART coverage of 1%. Values from the probit models are marginal effects estimates and those from the ordinary least squares regression are coefficient estimates. All models control for age, sex, residence (urban or rural), education, measures of household wealth, survey year indicators, and country indicators. In Panel A, we defined an older adult to be 70 years of age or older and a working-age adult between the ages of 18 and 69. In Panel B, we defined an older adult to be 50 years of age or older and a working-age adult between the ages of 18 and 69. In Panel B, we defined an older adult to be 50 years of age or older and a working-age adult between the ages of 18 and 49. Countries are categorized based on adult HIV prevalence (ages 15-49) in 2015 (UNAIDS). \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. Source: Demographic and Health Surveys, AIDS Indicator Surveys, and Malaria Indicator Surveys for 28 countries in sub-Saharan Africa, between 1991 – 2015.