Table S1 An estimation of the number of deaths in those aged 15 and above attributable to HIV in the Agincourt HDSS site between 1992 and 2013

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Year** | **Person years Male** | **Person years Female** | **HIV**  **prevalence for Mpumalanga 1** | **Estimated number HIV +ve Male Agincourt** | **Estimated number HIV +ve Female Agincourt** | **ART**  **period 2** | **HIV attributable mortality rate amongst those**  **HIV positive**  **/1000 PY (Males) 2** | **HIV attributable mortality rate amongst those**  **HIV positive**  **/1000 PY (Females) 2** | **Excess Male Deaths Agincourt** | **Excess Female Deaths Agincourt** | **Excess Deaths Agincourt** | **Actual Deaths Agincourt 3** | **% deaths HIV attributable** |
| 1992 | 3582.5 | 3064.9 | 3.1 | 111 | 95 | Pre | 56.2 | 56.7 | 6 | 5 | 12 | 119 | 9.8 |
| 1993 | 18700.2 | 15771.4 | 4.7 | 870 | 733 | Pre | 56.2 | 56.7 | 49 | 42 | 90 | 222 | 40.7 |
| 1994 | 19373.4 | 16469.3 | 6.2 | 1201 | 1021 | Pre | 56.2 | 56.7 | 68 | 58 | 125 | 228 | 55.0 |
| 1995 | 19703.6 | 16824.4 | 7.8 | 1527 | 1304 | Pre | 56.2 | 56.7 | 86 | 74 | 160 | 273 | 58.5 |
| 1996 | 20207.0 | 17429.0 | 9.3 | 1879 | 1621 | Pre | 56.2 | 56.7 | 106 | 92 | 198 | 280 | 70.5 |
| 1997 | 20266.5 | 17724.4 | 10.9 | 2199 | 1923 | Pre | 56.2 | 56.7 | 124 | 109 | 233 | 251 | 92.7 |
| 1998 | 20779.6 | 18271.1 | 12.4 | 2577 | 2266 | Pre | 56.2 | 56.7 | 145 | 128 | 273 | 344 | 79.4 |
| 1999 | 21176.7 | 18727.5 | 14.0 | 2954 | 2612 | Pre | 56.2 | 56.7 | 166 | 148 | 314 | 321 | 97.9 |
| 2000 | 21810.3 | 19301.7 | 15.5 | 3381 | 2992 | Pre | 56.2 | 56.7 | 190 | 170 | 360 | 381 | 94.4 |
| 2001 | 22125.3 | 19629.5 | 17.1 | 3772 | 3347 | Pre | 56.2 | 56.7 | 212 | 190 | 402 | 465 | 86.4 |
| 2002 | 22398.3 | 19953.2 | 18.6 | 4166 | 3711 | Pre | 56.2 | 56.7 | 234 | 210 | 445 | 561 | 79.2 |
| 2003 | 22783.5 | 20262.6 | 18.6 | 4238 | 3769 | Pre | 56.2 | 56.7 | 238 | 214 | 452 | 639 | 70.7 |
| 2004 | 23168.7 | 20672.5 | 18.6 | 4309 | 3845 | Pre | 56.2 | 56.7 | 242 | 218 | 460 | 686 | 67.1 |
| 2005 | 23636.3 | 20989.8 | 18.6 | 4396 | 3904 | Pre | 56.2 | 56.7 | 247 | 221 | 468 | 755 | 62.0 |
| 2006 | 24130.9 | 21471.0 | 18.9 | 4561 | 4058 | Pre | 56.2 | 56.7 | 256 | 230 | 486 | 773 | 62.9 |
| 2007 | 24571.9 | 21881.0 | 19.2 | 4718 | 4201 | Pre | 56.2 | 56.7 | 265 | 238 | 503 | 768 | 65.5 |
| 2008 | 25149.2 | 22250.5 | 19.5 | 4904 | 4339 | Pre | 56.2 | 56.7 | 276 | 246 | 522 | 826 | 63.2 |
| 2009 | 25633.4 | 22630.5 | 19.6 | 5011 | 4424 | During | 39.5 | 38.3 | 198 | 169 | 367 | 787 | 46.7 |
| 2010 | 26225.3 | 23110.9 | 19.6 | 5140 | 4530 | During | 39.5 | 38.3 | 203 | 173 | 377 | 708 | 53.2 |
| 2011 | 26708.4 | 23572.1 | 19.7 | 5248 | 4632 | Post | 37.5 | 22.6 | 197 | 105 | 301 | 685 | 44.0 |
| 2012 | 27293.3 | 24160.2 | 19.7 | 5377 | 4760 | Post | 37.5 | 22.6 | 202 | 108 | 309 | 670 | 46.1 |
| 2013 | 27770.8 | 24604.2 | 19.8 | 5485 | 4859 | Post | 37.5 | 22.6 | 206 | 110 | 315 | 738 | 42.8 |
|  |  |  |  |  |  |  |  | **TOTALS** | **3914** | **3259** | **7173** | **11480** | **62.5** |

**1** HIV prevalence data for Mpumalanga province were taken from [Shisana O., et al., South African national HIV prevalence, incidence and behaviour survey 2012] for the years 2002 , 2005 2008 and 2012 and applied to Agincourt population. An assumption was made that the first cases were seen in 1990 and there was a linear increase until 2002. From 2002 results were extrapolated between measured data points.

**2** Data based on those calculated by [Slaymaker, E., et al., Glob Health Action, 2014. 7]. The HIV attributable mortality rate was calculated for uMkhanyakude in KwaZulu Natal which is the closest of the sites to the Agincourt HDSS and had similar HIV prevalence in 2011.

**3** Actual numbers of deaths extracted from the Agincourt HDSS database.