# Appendix

Appendix 1: Continuum states over time by repeated cross-section, normal mortality scenario



The stacked area represents the proportion of people in a given state on each day in the simulated scenario. All persons in a given state had passed through all prior states (e.g. persons who are in the “On ART” area had already passed through being at risk for HIV, living with HIV, and Knows status). The death state is shown in the state in which a person was when they died. The vertical bars represent the three simulated periods.

Appendix 2: Continuum states over time by repeated cross-section, high mortality scenario



The stacked area represents the proportion of people in a given state on each day in the simulated scenario. All persons in a given state had passed through all prior states (e.g. persons who are in the “On ART” area had already passed through being at risk for HIV, living with HIV, and knows status). The death state is shown in the state in which a person was when they died. The vertical bars represent the three simulated periods.

Appendix 3: UNAIDS 90-90-90 metrics

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | Baseline mortality scenario | High mortality scenario |
| Years after simulation start | % Knows statusout of those whoare living with HIV | % On ARTout of those whoknow their status | % Virally suppressedout of those whoare on ART | % Knows statusout of those whoare living with HIV | % On ARTout of those whoknow their status | % Virally suppressedout of those whoare on ART |
| Low ART(Period 1) | 1 | 16% | 0% | 33% | 16% | 0% | 33% |
| 2 | 29% | 1% | 44% | 29% | 1% | 44% |
| 3 | 39% | 2% | 49% | 39% | 2% | 49% |
| 4 | 47% | 3% | 61% | 47% | 3% | 61% |
| 5 | 53% | 4% | 69% | 53% | 4% | 69% |
| Normal ART(Period 2) | 6 | 59% | 27% | 56% | 59% | 27% | 56% |
| 7 | 63% | 40% | 73% | 63% | 40% | 73% |
| 8 | 67% | 48% | 81% | 67% | 48% | 81% |
| 9 | 70% | 53% | 85% | 70% | 53% | 85% |
| 10 | 73% | 58% | 88% | 73% | 58% | 88% |
| Low ART(Period 3) | 11 | 75% | 53% | 96% | 75% | 53% | 96% |
| 12 | 77% | 49% | 98% | 77% | 49% | 98% |
| 13 | 79% | 46% | 98% | 79% | 46% | 98% |
| 14 | 81% | 44% | 98% | 81% | 44% | 98% |
| 15 | 82% | 43% | 97% | 82% | 43% | 97% |