

Table S1: simulation outputs per year										
NUMBER of MONITORING VISITS	Year 2020		Year 2021		Year 2022		Year 2023		Year 2024	
	Baseline	Scenario 1	Baseline	Scenario 1	Baseline	Scenario 1	Baseline	Scenario 1	Baseline	Scenario 1
Naive	784.5	784.5	804.7	794.1	852.2	819.6	885.0	843.4	920.9	862.3
Tx Experienced	2429.3	2429.3	2525.9	2527.1	2695.0	2714.4	2835.6	2793.0	3006.7	2976.5
Failed - IAC	359.2	359.2	343.4	347.8	347.8	374.2	372.2	361.8	412.0	405.6
Failed - TL Switch	229.8	229.8	217.4	234.2	190.6	225.2	235.0	231.6	263.8	279.6
<b>Total Monitoring Visits</b>	<b>3802.8</b>	<b>3802.8</b>	<b>3891.4</b>	<b>3903.2</b>	<b>4085.6</b>	<b>4133.4</b>	<b>4327.8</b>	<b>4229.8</b>	<b>4603.4</b>	<b>4524.0</b>
NUMBER OF COUNSELLING VISITS	Year 2020		Year 2021		Year 2022		Year 2023		Year 2024	
	Baseline	Scenario 1	Baseline	Scenario 1	Baseline	Scenario 1	Baseline	Scenario 1	Baseline	Scenario 1
First Counselling	100.0	100.0	105.0	103.0	109.0	105.0	115.0	108.0	119.0	111.0
Group Counselling	417.4	417.4	430.0	431.2	453.4	456.4	479.6	469.8	508.2	500.6
Intensive Adherence Counselling	363.6	363.6	346.4	350.6	349.4	377.2	376.0	363.4	418.8	408.2
<b>Total Counselling Visits</b>	<b>881.0</b>	<b>881.0</b>	<b>881.4</b>	<b>884.8</b>	<b>911.8</b>	<b>938.6</b>	<b>970.6</b>	<b>941.2</b>	<b>1046.0</b>	<b>1019.8</b>
SERVICE HOURS REQUIRED	Year 2020		Year 2021		Year 2022		Year 2023		Year 2024	
	Baseline	Scenario 1	Baseline	Scenario 1	Baseline	Scenario 1	Baseline	Scenario 1	Baseline	Scenario 1
Doctor	2427.3	2660.4	2451.1	2824.1	2572.6	3110.0	2733.6	3294.3	2919.9	3641.4
Counselor	844.8	908.8	859.9	962.5	900.4	1053.0	957.5	1108.8	1024.5	1219.2
Medical lab scientist	690.6	754.6	710.0	811.5	747.8	891.8	794.1	951.2	845.1	1045.0
HIV specialist nurse	673.0	877.0	691.7	1012.2	730.8	1177.9	781.7	1322.5	838.8	1508.9
General nurse	560.5	656.5	575.0	726.5	605.8	819.2	645.4	893.5	689.8	999.9
Dietician	391.7	391.7	399.7	400.6	418.3	423.6	443.4	432.0	472.2	462.4
<b>Total Service Hours</b>	<b>5587.9</b>	<b>6249.0</b>	<b>5687.3</b>	<b>6737.4</b>	<b>5975.7</b>	<b>7475.5</b>	<b>6355.6</b>	<b>8002.3</b>	<b>6790.3</b>	<b>8876.8</b>

OPTIMAL NUMBER OF STAFF	Year 2020		Year 2021		Year 2022		Year 2023		Year 2024	
	Baseline	Scenario 1	Baseline	Scenario 1	Baseline	Scenario 1	Baseline	Scenario 1	Baseline	Scenario 1
Doctor	5	6	5	6	6	7	6	7	6	8
Counselor	2	2	2	2	2	3	2	3	3	3
Medical lab scientist	2	2	2	2	2	2	2	2	2	3
HIV specialist nurse	2	2	2	2	2	3	2	3	2	3
General nurse	2	2	2	2	2	2	2	2	2	2
Dietician	1	1	1	1	1	1	1	1	1	1
<b>Total Staffs</b>	<b>14</b>	<b>15</b>	<b>14</b>	<b>15</b>	<b>15</b>	<b>18</b>	<b>15</b>	<b>18</b>	<b>16</b>	<b>20</b>
COSTS	Year 2020		Year 2021		Year 2022		Year 2023		Year 2024	
	Baseline	Scenario 1	Baseline	Scenario 1	Baseline	Scenario 1	Baseline	Scenario 1	Baseline	Scenario 1
First Line ART Costs	\$121,588	\$121,588	\$128,617	\$127,984	\$135,781	\$134,041	\$143,691	\$141,521	\$149,409	\$147,872
Second Line ART Costs	\$18,900	\$18,900	\$20,500	\$22,000	\$22,700	\$25,300	\$24,200	\$25,800	\$30,900	\$30,300
Laboratory Costs	\$40,306	\$40,306	\$42,707	\$42,721	\$45,234	\$45,059	\$47,894	\$47,446	\$50,603	\$50,043
Overhead & Personnel Costs	\$377,725	\$377,725	\$400,226	\$400,357	\$423,907	\$422,267	\$448,835	\$444,637	\$474,222	\$468,974
PrEP/PEP ART Costs	\$34,400	\$200,000	\$36,000	\$210,400	\$37,600	\$220,000	\$40,000	\$232,000	\$41,600	\$242,400
<b>Total Costs</b>	<b>\$592,919</b>	<b>\$758,519</b>	<b>\$628,049</b>	<b>\$803,462</b>	<b>\$665,222</b>	<b>\$846,667</b>	<b>\$704,620</b>	<b>\$891,404</b>	<b>\$746,734</b>	<b>\$939,589</b>
Dietician	391.7	391.7	399.7	400.6	418.3	423.6	443.4	432.0	472.2	462.4
<b>Total Service Hours</b>	<b>5587.9</b>	<b>6249.0</b>	<b>5687.3</b>	<b>6737.4</b>	<b>5975.7</b>	<b>7475.5</b>	<b>6355.6</b>	<b>8002.3</b>	<b>6790.3</b>	<b>8876.8</b>
<p>Abbreviations: <b>Failed – IAC:</b> Patients who are Intensive Adherence Counselling in due to virology failure, <b>Failed - TL Switch:</b> Patients whose therapy line switched due to virology failure, <b>HIV:</b> human immunodeficiency virus, <b>ART:</b> antiretroviral treatment, <b>PrEP:</b> Pre-Exposure Prophylaxis, <b>PEP:</b> Post Exposure Prophylaxis (PEP).</p>										