|  |  |  |  |
| --- | --- | --- | --- |
|  | **National Reference Laboratory (NRL SSS-HIV test)** | | |
| **PMTCT sites results** | HIV+ | HIV- | **Total** |
| **Test +** | a | b | a + b |
| **Test -** | c | d | c + d |
| **Total** | a + c | b + d | a + b + c +d |

**Table 1. Calculation of intrinsic and extrinsic performances of HIV testing by PMTCT site laboratories**

**Table 2: Comparison of intrinsic performances (Sensitivity, specificity) by geographical locations in 2012 and in 2016.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Region** | **Year** | **Urban** | | | **Rural** | | | **National** | | | | |
| **Number of pregnant women enrolled** | **Sensitiviy** | **Specificity** | **Number of pregnant women enrolled** | **Sensitiviy** | **Specificity** | **Number of pregnant women enrolled** | **Sensitivity** | **Comparison Site vs NRL (P-Value)** | **Specificity** | **Comparison Site vs NRL (P-Value)** |
| **Adamawa** | **2012** | 412 | 87.5 | 99.8 | 301 | 76.48 | 98.9 | 713 | 81.8 | 0.069 | 99.4 | 0.227 |
| **2016** | 475 | 93.3 | 99.5 | 202 | 100 | 100 | 677 | 95.5 | 99.7 |
| **Centre** | **2012** | 317 | 88.6 | 100 | 244 | 50 | 100 | 561 | 78.3 | **0.001** | 100 | 0.113 |
| **2016** | 541 | 97.7 | 99.6 | 137 | 100 | 100 | 678 | 98.1 | 99.7 |
| **East** | **2012** | 303 | 93.8 | 100 | 327 | 69.6 | 99.6 | 630 | 79.5 | 0.146 | 99.8 | 0.315 |
| **2016** | 317 | 93.1 | 99.6 | 380 | 82.4 | 99.7 | 697 | 87.3 | 99.7 |
| **Far North** | **2012** | 382 | 92.6 | 99.1 | 296 | 100 | 99.2 | 678 | 93.1 | 0.052 | 99.2 | **0.001** |
| **2016** | 327 | 73.3 | 100 | 355 | 85.7 | 100 | 682 | 77.3 | 100 |
| **Littoral** | **2012** | 402 | 77.5 | 99.1 | 272 | 82.6 | 98.3 | 674 | 79.4 | 0.229 | 98.8 | 0.051 |
| **2016** | 448 | 100 | 99.8 | 169 | 66.7 | 99.4 | 617 | 87.5 | 99.6 |
| **North** | **2012** | 427 | 65.2 | 99.2 | 300 | 87.5 | 100 | 727 | 71 | 0.063 | 99.6 | 0.318 |
| **2016** | 406 | 93.8 | 99.5 | 312 | 66.7 | 100 | 718 | 89.5 | 99.7 |
| **Nothwest** | **2012** | 392 | 90.63 | 99.7 | 302 | 89.5 | 98.9 | 694 | 90.2 | **0.019** | 99.3 | 0.201 |
| **2016** | 353 | 100 | 99.7 | 323 | 100 | 99.7 | 676 | 100 | 99.7 |
| **West** | **2012** | 398 | 100 | 99.7 | 294 | 100 | 99.55 | 692 | 100 | **0.002** | 99.7 | 0.246 |
| **2016** | 402 | 57.1 | 99.7 | 271 | 98.6 | 100 | 673 | 71.4 | 100 |
| **South** | **2012** | 321 | 56.25 | 99.5 | 152 | 61.1 | 96.9 | 473 | 58.8 | **0.002** | 98.5 | 0.298 |
| **2016** | 246 | 83.3 | 98.8 | 472 | 100 | 98.8 | 718 | 90.3 | 98.9 |
| **Southwest** | **2012** | 380 | 85.72 | 98.5 | 299 | 78.3 | 99.2 | 679 | 83.1 | **0.007** | 98.8 | **0.034** |
| **2016** | 411 | 95.5 | 99.1 | 300 | 97.3 | 100 | 711 | 96.6 | 99.7 |
| **National performance** | **2012** | 3734 | 84.02 | 99.5 | 2787 | 76.6 | 99.2 | 6521 | 81.2 | **<0.001** | 99.3 | **0.006** |
| **2016** | 3926 | 91.8 | 99.6 | 2921 | 90.8 | 99.8 | 6847 | 91.4 | 99.6 |

**Table 3: Comparison of extrinsic performances by geographical locations in 2012 vs. 2016.**

|  |  |  |  |
| --- | --- | --- | --- |
| **Region** | **Extrinsic performance** | **2012 assessment** | **2016 assessment** |
| Adamaowa | Positive predictive value | 87.1% | 91.3% |
| Negative predictive value | 99.1% | 99.8% |
| Centre | Positive predictive value | 100% | 96.3% |
| Negative predictive value | 97.1% | 99.8% |
| East | Positive predictive value | 96.9% | 96.5% |
| Negative predictive value | 98.6% | 98.7% |
| North | Positive predictive value | 88% | 89.5% |
| Negative predictive value | 98.7% | 99.7% |
| Littoral | Positive predictive value | 87.7% | 87.5 |
| Negative predictive value | 97.7% | 99.6% |
| South | Positive predictive value | 80% | 80% |
| Negative predictive value | 95.8% | 99.5% |
| West | Positive predictive value | 92.9% | 93.8% |
| Negative predictive value | 100% | 99.1% |
| Northwest | Positive predictive value | 92.0% | 95.5% |
| Negative predictive value | 99.2% | 100% |
| Southwest | Positive predictive value | 88.5% | 96.6% |
| Negative predictive value | 98.1% | 99.7% |
| Far-North | Positive predictive value | 84.4% | 100% |
| Negative predictive value | 99.7% | 99.2% |
| National performance | Positive predictive value | 90.2% | 93.5% |
| Negative predictive value | 98.7% | 99.5% |