**Table S1**. Algorithm of sequential multiplex polymerase chain reaction testing (PCR) for *Streptococcus pneumoniae* serotype determination for meningitis belt countries, with and internal positive control using *cps*A in each reaction.

|  |  |  |
| --- | --- | --- |
| Steps of multiplex PCR reactions | Serotypes included in each reaction | Size of PCR products(pb) |
|  | *cps*A | 160 |
| PCR 1  | 14112A/12B/12F25A/25F/38 | 189280376574 |
| PCR 2  | 6A/6B23F418A/18B/18C/18F  | 250384430573 |
| PCR 3  | 19F519A35B7F  | 304362478677826 |
| PCR 4  | 7B/7C/40 3 35F/47F 10A9A/9V  | 260371517628753 |
| PCR 5 | 834 11A/11D 31 | 294408463701 |
| PCR 6 | 33F15B, 15C \*22F16F | 338496643988 |
| PCR 7  | 15A 20 17F | 436514693 |

x/y indicates primers that cross-react between several serotypes

\* interconverting serotypes