supplementary Table 2. Clonal complex/serotype combinations of serotype-switch variants within 2015-2016 ABCs that have been documented from isolates recovered during 2002 or later.

| CC | putative replaced serotype | Progeny serotype | No. progeny isolates | Predominant or representative<sup>a</sup> | pen, ery, cli phenotypes (no. isolates) | PCV escape | PCV13 serotype | progeny | category |
|----|---------------------------|------------------|----------------------|-----------------------------------------|-----------------------------------------|------------|----------------|--------|----------|
| 338 | 23A | 23B | 101 | 1373 | 0-1-1 | penI (101) | no | no | 1 |
| 19F | 1 | 338 | 0-1-1 | penI, eryR (1) | no | yes | 2 |
| 35B | 1 | 13255 | 0-1-1 | penI (1) | no | no | 3 |
| 15C | 1 | 13504 | 0-1-2 | susceptible (1) | no | no | 4 |
| 15A | 1 | 338 | 36-1-69 | penI (1) | no | no | 5 |
| 19A | 2 | 8197 | 17-1-22 | penI (2) | no | yes | 6 |
| 6C | 3 | 5241 | 0-86-80 | penI (3) | no | yes | 7 |
| 156 | 9V, 19A, 19F | 40 | 3811 | 1-0-0 | susceptible (39); penI, eryR (1) | yes | no | 8 |
| 15BC | 22 | 162 | 1-0-0 | susceptible (21); eryR (1) | yes | no | 9 |
| 23B | 2 | 162 | 0-0-0 | susceptible (2) | yes | no | 10 |
| 11A | 4 | 166 | 15-12-18 | penI, eryR, cliR (3), penI (1) | yes | no | 11 |
| 31 | 1 | 156 | 15-12-18 | penI, eryR (1) | yes | no | 12 |
| 13 | 1 | 156 | 15-12-173 | penI (1) | yes | no | 13 |
| 35B | 27 | 156 | 4-12-7 | penI, eryR (26); susceptible (1) | yes | no | 14 |
| 3280 | 23F | 59 | 3280 | 7-8-9 | penI, eryR (8); penI, eryR, cliR (1) | yes | no | 15 |
| 244 | 4 | 19A | 48 | 695 | 8-0-11 | penI (34); penI, eryR (14) | no | yes | 16 |
| 19F | 1 | 899 | 0-0-3 | susceptible (1) | no | yes | 17 |
| 439 | 23A | 4 | 28 | 10172 | 1-0-0 | susceptible (28) | no | yes | 18 |
| 100 | 33F | 5 | 8 | 10457 | 2-0-6 | susceptible (6); eryR (2) | no | yes | 19 |
| 6C | 1 | 10471 | 2-0-6 | penI (1) | no | yes | 20 |
| 23A | 1 | 10492 | 0-0-1 | penI, eryR (1) | no | no | 21 |
| 177 | 19F | 1 | 177 | 23-0-139 | susceptible (1) | yes | no | 22 |
| 17F | 1 | 177 | 23-0-0 | susceptible (1) | yes | no | 23 |
| 7C | 4 | 177 | 2-0-3 | susceptible (4) | yes | no | 24 |
| 24F | 1 | 177 | 0-0-1 | susceptible (1) | yes | no | 25 |
| 63 | 15A | 19F | 1 | 861 | 24-27-192 | penI, eryR, cliR (1) | no | yes | 26 |
| 8 | 1 | 63 | 24-27-28 | penI, eryR, cliR (1) | no | no | 27 |
| 9N | 1 | 2543 | 1-27-2 | eryR, cliR (1) | no | no | 28 |
| 17F | 1 | 63 | 0-27-3 | penI, eryR, cliR (1) | no | yes | 29 |
| 15BC | 2 | 12024 | 24-62-11 | penI, eryR, cliR (2) | no | no | 30 |
| 35B | 1 | 11818 | 13-31-114 | penI, eryR, cliR (1) | no | no | 31 |
| 23A | 2 | 12363 | 7-31-8 | penI, eryR, cliR (2) | no | no | 32 |
| 433 | 22F | 5 | 433 | 1-2-0 | susceptible (5) | no | no | 33 |
| 31 | 1 | 433 | 1-2-0 | susceptible (1) | no | no | 34 |
| 11A | 1 | 433 | 1-2-2 | susceptible (1) | no | no | 35 |
| 193 | 21 | 15B | 3 | 10227 | 0-0-0 | eryR (3) | no | yes | 36 |
| 23A | 1 | 3689 | 0-0-1 | penI (1) | no | no | 37 |
| 376 | 6A, 6C | 19A | 3 | 2268 | 27-36-8 | penI, eryR (3) | no | yes | 38 |
| 81 | 19F, 23F | 6A | 1 | 282 | 15-12-18 | penR, eryR (1) | no | yes | 39 |
| 15A | 1 | 11576 | 15-12-18 | penR, eryR (1) | yes | no | 40 |
| 15C | 1 | 83 | 15-12-18 | penR, eryR (1) | yes | no | 41 |
| 473 | 6C | 10A | 1 | 473 | 0-34-2 | eryR (1) | yes | no | 42 |
| 320 | 19F | 3 | 21 | 271 | 17-16-47 | penI, eryR, cliR (2) | no | yes | 43 |
| 1092 | 6C | 34 | 1 | 1092 | 6-101-8 | penI (1) | yes | no | 44 |
| 35B | 1 | 1092 | 6-7-36 | penI (1) | yes | no | 45 |
| 230 | 19A | 20 | 2 | 276 | 17-15-18 | penR, eryR, cliR (2) | yes | no | 46 |
| 62 | 11A | 3 | 1 | 62 | 2-6-0 | susceptible (1) | no | yes | 47 |
| 242 | 23F | 6A | 1 | 242 | 13-31-146 | penR, eryR, cliR (1) | no | yes | 48 |
| 392 | 17F | 34 | 1 | 392 | 11-0-0 | susceptible (1) | no | no | 49 |
| 395 | 6C | 10A | 1 | 11803 | 1-6-0 | susceptible (1) | yes | no | 50 |
| 432 | 21 | 19A | 1 | 432 | 0-0-2 | susceptible (1) | no | yes | 51 |
| 504 | 23F | 8 | 1 | 504 | 3-2-5 | susceptible (1) | yes | no | 52 |
| 558 | 35B | 6B | 1 | 558 | 4-7-7 | penI (1) | no | yes | 53 |
| 568 | 31 | 23B | 1 | 568 | 0-0-0 | eryR (1) | no | no | 54 |
| 1201 | 19A | 7C | 1 | 10460 | 2-4-3 | susceptible (1) | no | yes | 55 |
| 1292 | 6C | 16F | 1 | 10464 | 19-31-8 | penI, eryR (1) | yes | no | 57 |

<sup>a</sup> CCs (clonal complexes) are listed in order of decreasing number of progeny isolates. The MLST/PBP type combinations within each CC are listed such that existing PBP relationships are optimally aligned.