**Supplemental Digital Content 1- Table 1.** The number and incidence of IPD cases per age group and vaccine-serotype group from 2007-08 to 2017-18

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 | % Diff | IRR | 95%CI | P value |
| n | IR | n | IR | n | IR | n | IR | n | IR | n | IR | n | IR | n | IR | n | IR | n | IR | n | IR |  |  |  |  |
| **<2 years** | **49** | **38.48** | **34** | **24.55** | **21** | **14.52** | **18** | **12.28** | **12** | **8.27** | **16** | **11.09** | **13** | **9.26** | **13** | **9.66** | **20** | **15.33** | **14** | **11.10** | **17** | **13.47** | **-65** | **0.35** | **0.20-0.61** | **0.0002** |
| PCV7 | 35 | 27.49 | 25 | 18.05 | 4 | 2.77 | 3 | 2.05 | 2 | 1.38 | 2 | 1.39 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 1 | 0.79 | 1 | 0.79 | -97 | 0.03 | 0.00-0.21 | 0.0005 |
| PCV13-7 | 9 | 7.07 | 5 | 3.61 | 13 | 8.99 | 8 | 5.46 | 2 | 1.38 | 6 | 4.16 | 3 | 2.14 | 2 | 1.49 | 6 | 4.60 | 1 | 0.79 | 2 | 1.58 | -78 | 0.22 | 0.05-1.04 | 0.0558 |
| Non-PCV | 5 | 3.93 | 4 | 2.89 | 4 | 2.77 | 7 | 4.78 | 8 | 5.52 | 8 | 5.55 | 10 | 7.12 | 11 | 8.17 | 14 | 10.73 | 12 | 9.51 | 14 | 11.09 | +180 | 2.82 | 1.02-7.84 | 0.0463 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **2-4 years** | **20** | **10.92** | **16** | **8.62** | **12** | **6.3** | **11** | **5.49** | **10** | **4.74** | **14** | **6.54** | **15** | **7.05** | **4** | **1.9** | **13** | **6.27** | **11** | **5.36** | **12** | **6.05** | **-40** | **0.55** | **0.27-1.13** | **0.1057** |
| PCV7 | 14 | 7.64 | 12 | 6.47 | 5 | 2.62 | 2 | 1.00 | 1 | 0.47 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | -100 | 0.00 | 0.00-0.53 | 0.0165 |
| PCV13-7 | 6 | 3.28 | 3 | 1.62 | 7 | 3.67 | 7 | 3.49 | 6 | 2.84 | 8 | 3.74 | 4 | 1.88 | 2 | 0.95 | 3 | 1.45 | 2 | 0.97 | 1 | 0.50 | -83 | 0.15 | 0.02-1.28 | 0.0831 |
| Non-PCV | 0 | 0.00 | 1 | 0.54 | 0 | 0.00 | 2 | 1.00 | 3 | 1.42 | 6 | 2.80 | 11 | 5.17 | 2 | 0.95 | 10 | 4.82 | 9 | 4.39 | 11 | 5.54 | - | - | 1.25-360.30 | 0.0344 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **5-15 years** | **7** | **1.11** | **7** | **1.08** | **11** | **1.67** | **5** | **0.75** | **7** | **1.03** | **8** | **1.16** | **5** | **0.71** | **12** | **1.68** | **9** | **1.24** | **12** | **1.63** | **8** | **1.07** | **+14** | **0.97** | **0.35-2.67** | **0.9506** |
| PCV7 | 1 | 0.16 | 1 | 0.15 | 5 | 0.76 | 3 | 0.45 | 0 | 0.00 | 1 | 0.15 | 1 | 0.14 | 1 | 0.14 | 0 | 0.00 | 2 | 0.27 | 2 | 0.27 | +100 | 1.69 | 0.15-18.65 | 0.6667 |
| PCV13-7 | 2 | 0.32 | 5 | 0.77 | 4 | 0.61 | 1 | 0.15 | 5 | 0.74 | 5 | 0.73 | 2 | 0.29 | 1 | 0.14 | 2 | 0.28 | 2 | 0.27 | 2 | 0.27 | 0 | 0.85 | 0.12-6.02 | 0.8685 |
| Non-PCV | 4 | 0.63 | 1 | 0.15 | 2 | 0.3 | 1 | 0.15 | 2 | 0.3 | 2 | 0.29 | 2 | 0.29 | 10 | 1.40 | 7 | 0.97 | 8 | 1.09 | 4 | 0.54 | 0 | 0.85 | 0.21-3.39 | 0.8148 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **0-15 years** | **76** | **8.07** | **57** | **5.87** | **44** | **4.43** | **34** | **3.35** | **29** | **2.81** | **38** | **3.63** | **33** | **3.13** | **29** | **2.74** | **42** | **3.95** | **37** | **3.47** | **37** | **3.46** | **-51** | **0.43** | **0.29-0.64** | **<0.0001** |
| PCV7 | 50 | 5.31 | 38 | 3.92 | 14 | 1.41 | 8 | 0.79 | 3 | 0.29 | 3 | 0.29 | 1 | 0.09 | 1 | 0.09 | 0 | 0.00 | 3 | 0.28 | 3 | 0.28 | -94 | 0.05 | 0.02-0.17 | <0.0001 |
| PCV13-7 | 17 | 1.80 | 13 | 1.34 | 24 | 2.42 | 16 | 1.58 | 13 | 1.26 | 19 | 1.82 | 9 | 0.85 | 5 | 0.47 | 11 | 1.04 | 5 | 0.47 | 5 | 0.47 | -71 | 0.26 | 0.10-0.70 | 0.0079 |
| Non-PCV | 9 | 0.96 | 6 | 0.62 | 6 | 0.60 | 10 | 0.99 | 13 | 1.26 | 16 | 1.53 | 23 | 2.18 | 23 | 2.17 | 31 | 2.92 | 29 | 2.72 | 29 | 2.71 | +222 | 2.84 | 1.34-5.99 | 0.0063 |

PCV7 denotes serotypes (4, 6B, 9V, 14, 18C, 19F, 23F); PCV13-7 denotes the additional serotypes included in PCV13 but not in PCV7 i.e. PCV13-7 serotypes (1, 3, 5, 6A, 7F, 19A) and non-PCV13 serotypes denotes all other serotypes and non-typeable isolates. IR denotes the incidence rate of typed isolates per 100,000 population per epidemiological year. n= number of isolates typed per epidemiological year. Incidence Rate Ratio (IRR) denotes the ratio between the incidence rate of typed isolates in the epidemiological year 2017-18 comparison to the pre PCV-vaccine epidemiological year 2007-08. 95% CI denotes the 95% confidence interval of the IRR.