**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.