

\*Last updated: 30 September 2016

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## **CUMULATIVE INVASIVE PNEUMOCOCCAL DISEASE CASE NUMBERS REPORTED BY THE GERMS-SA SURVEILLANCE PROGRAMME, 2005 TO DATE**

### **GERMS-SA surveillance programme**

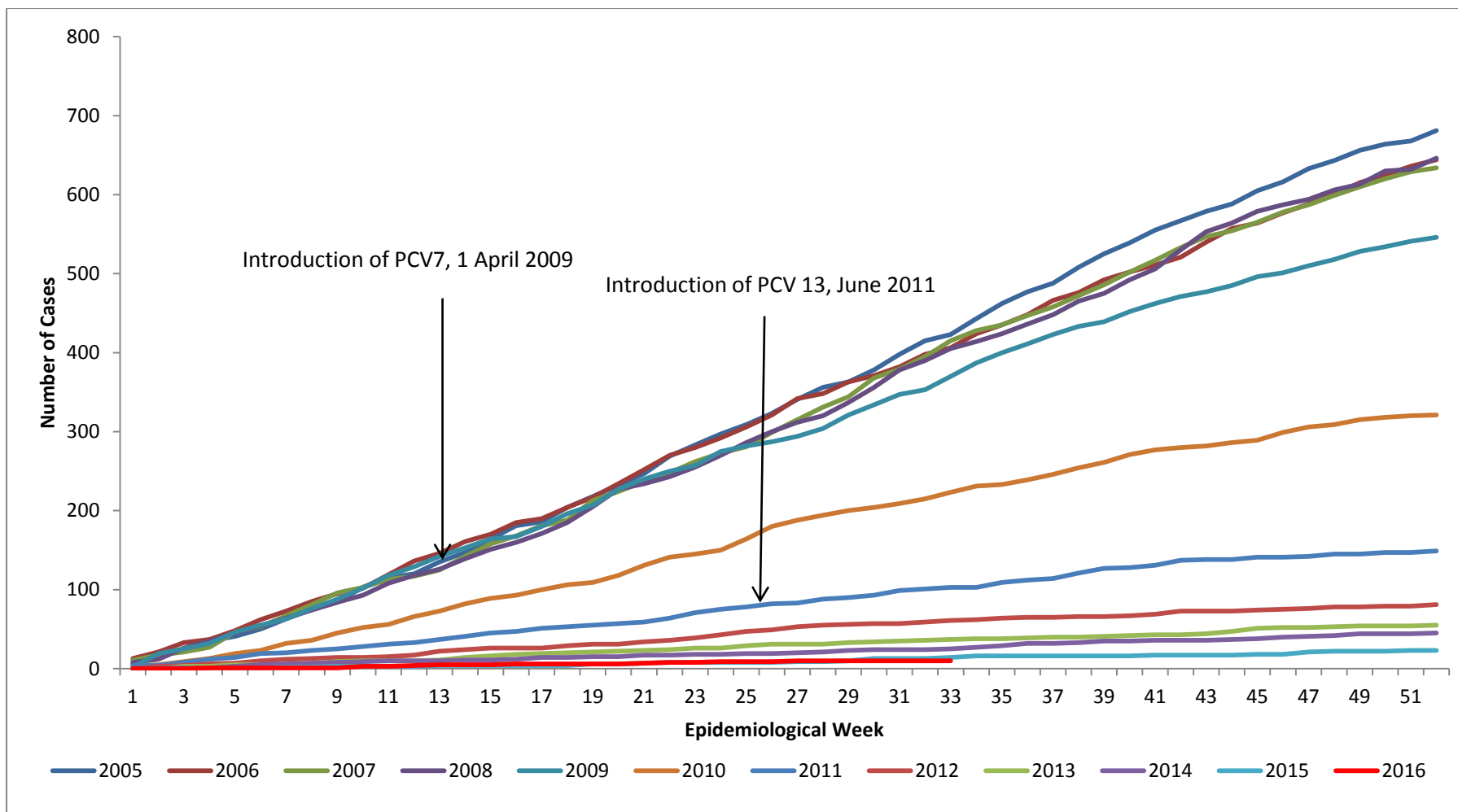
<http://www.nicd.ac.za/?page=germs-sa&id=97>

- National, active, laboratory-based surveillance initiated in 2003
- Invasive pneumococcal disease (IPD) cases defined as hospitalised individuals with *Streptococcus pneumoniae* cultured from normally sterile site specimens (e.g., cerebrospinal fluid, blood or joint fluid)
- Excluded repeat isolates from the same individual within 21 days
- ~270 laboratories each year send reports and isolates
- Age, sex, date of specimen collection, and source of specimen captured
- Pneumococci serotyped by Quellung reaction using specific antisera (Statens Serum Institut, Copenhagen, Denmark)
- Only viable isolates included in cumulative graph case numbers as molecular diagnostic techniques only introduced in 2007

### **PCV vaccine introduction in South Africa**

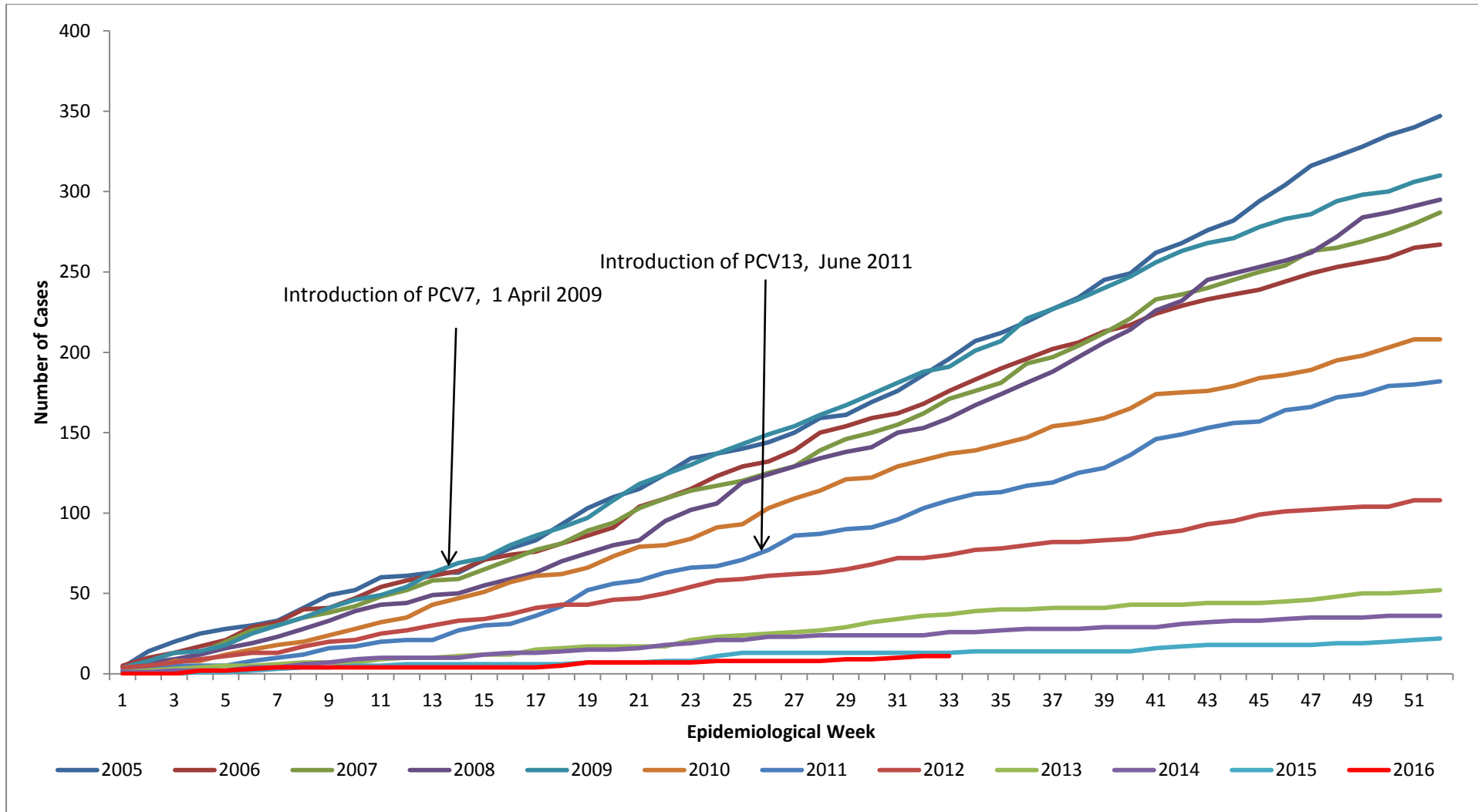
- 7-valent pneumococcal conjugate vaccine (PCV-7) introduced nationally in April 2009 with no catch-up vaccination campaign
- Graded replacement of PCV-7 by 13-valent pneumococcal conjugate (PCV-13) in 2011. By June 2011 all provinces using PCV-13
- Limited PCV-13 catch-up campaign in 2011 and 2012
- WHO/UNICEF coverage data for the third PCV dose in South Africa: 10% in 2009, 64% in 2010, 72% in 2011, 81% in 2012 and 62% in 2013 (1).





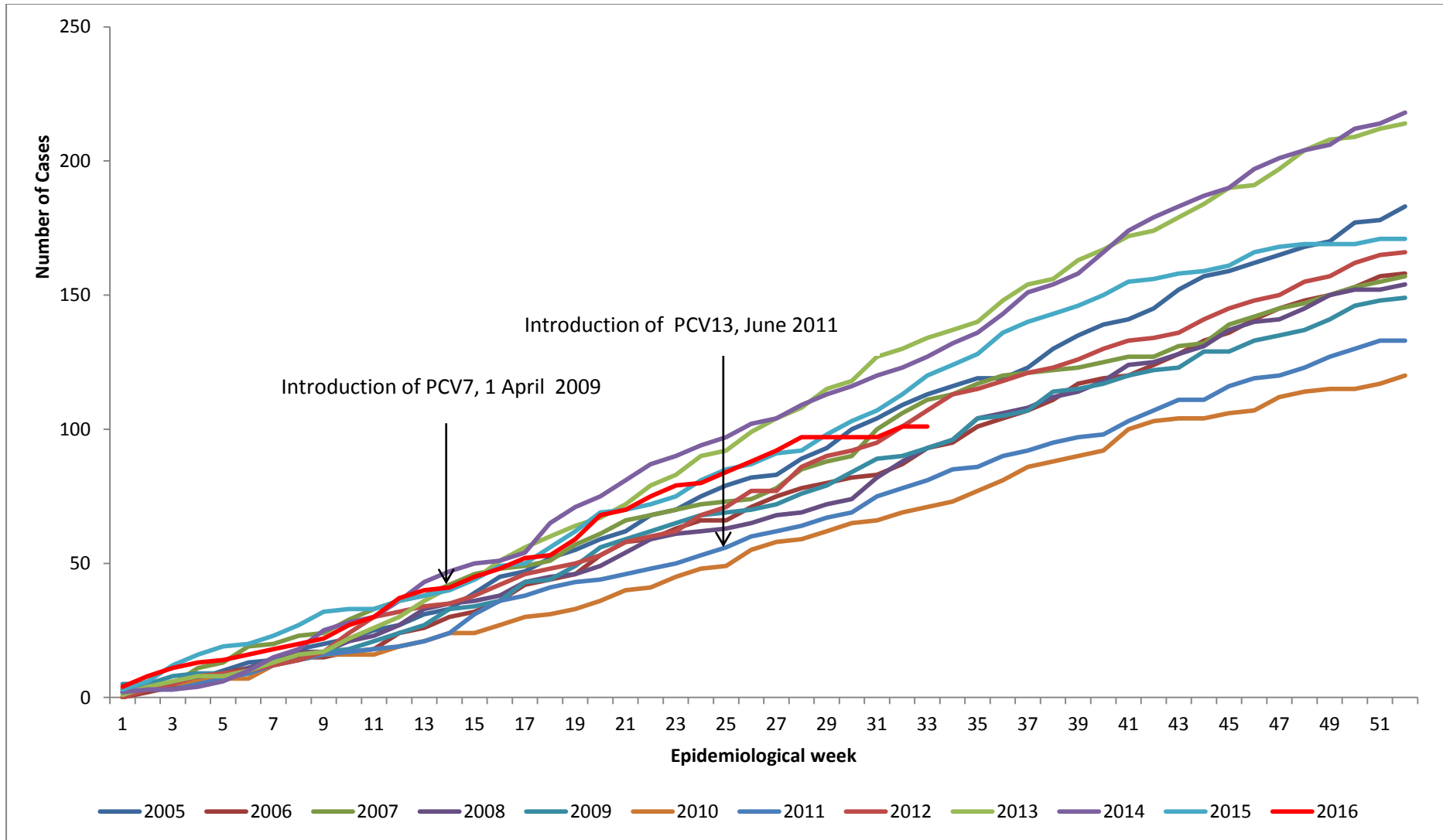
**Figure1:** Cumulative weekly number of cases of invasive pneumococcal disease due to any of the seven serotypes (4, 6B, 9V, 14, 18C, 19F and 23F) in PCV7: children < 5 years of age in South Africa, from 2005 to date. Only viable isolates were included.

Data are provisional as reported to date.



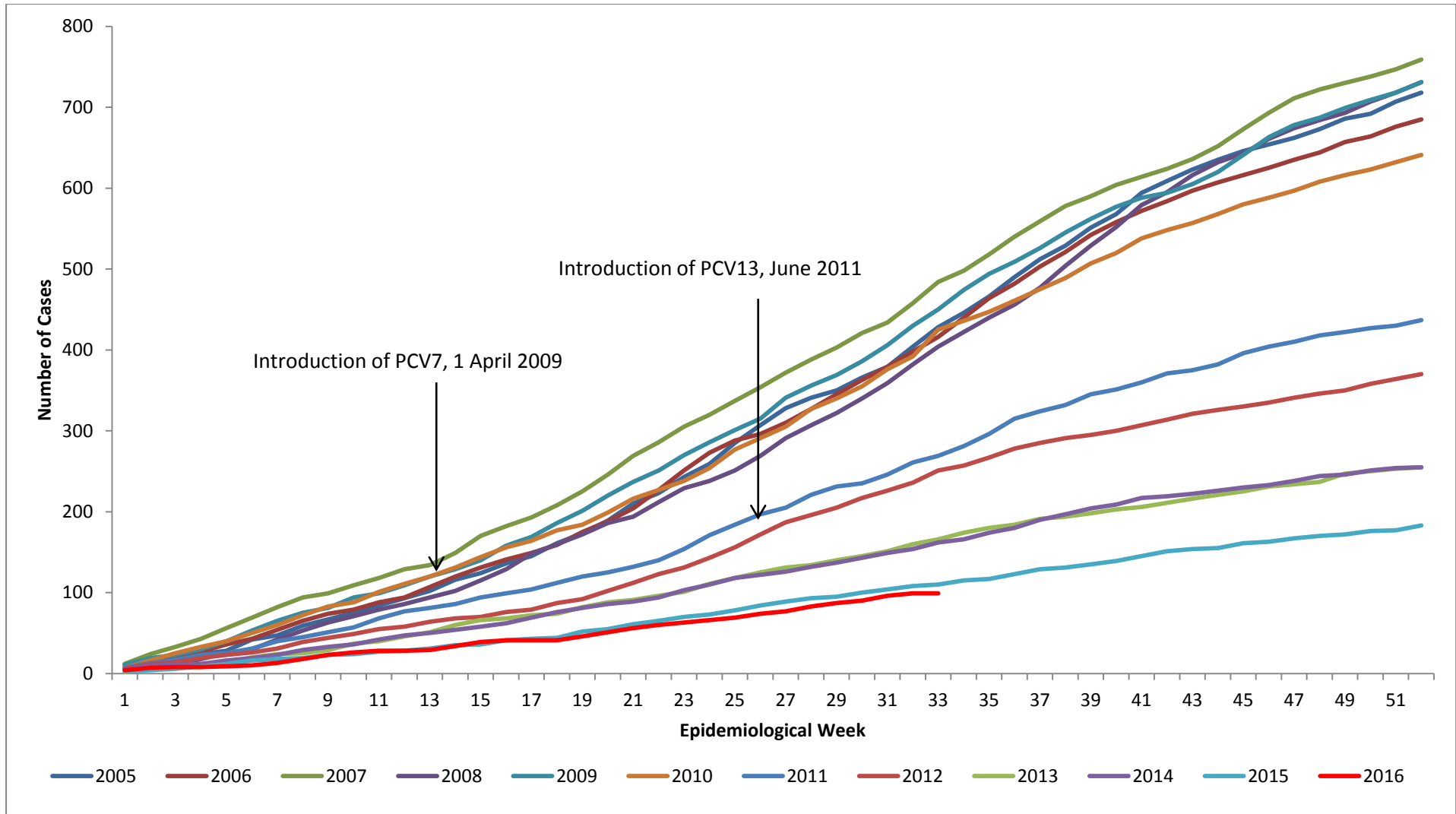
**Figure2:** Cumulative weekly numbers of cases of invasive pneumococcal disease due to any of the six additional (1, 3, 5, 6A, 7F, 19A) serotypes in PCV 13 but not in PCV7: children <5 years of age in South Africa, from 2005 to date. Only viable isolates were included. (Note: There is reported cross protection between 6A and 6B which is included in PCV-7 (2))

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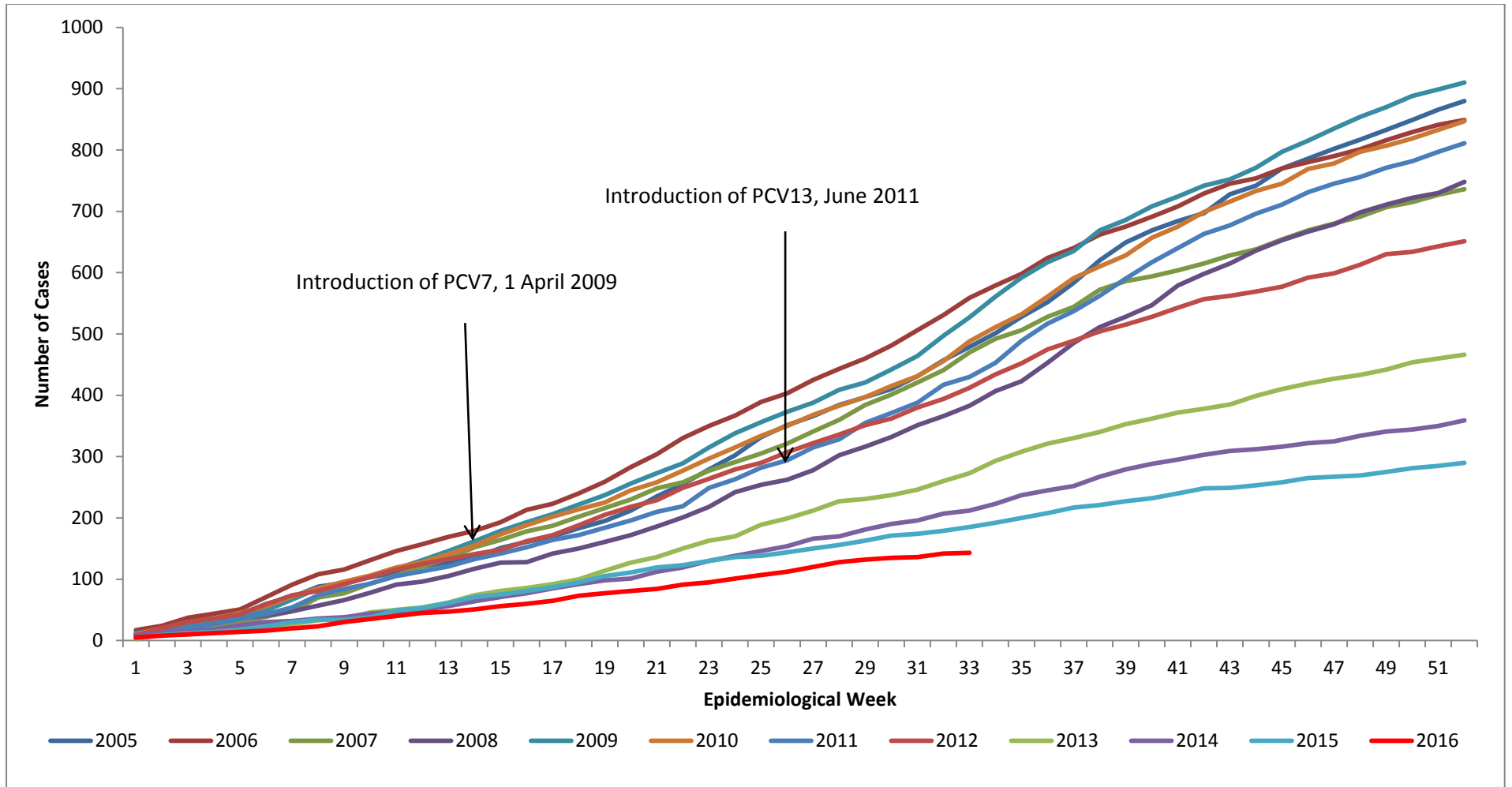
**Figure 3:** Cumulative weekly numbers of cases of invasive pneumococcal disease due to any of the serotypes not in PCV13: Children <5 years of age in South Africa, from 2005 to date. Only viable isolates were included.

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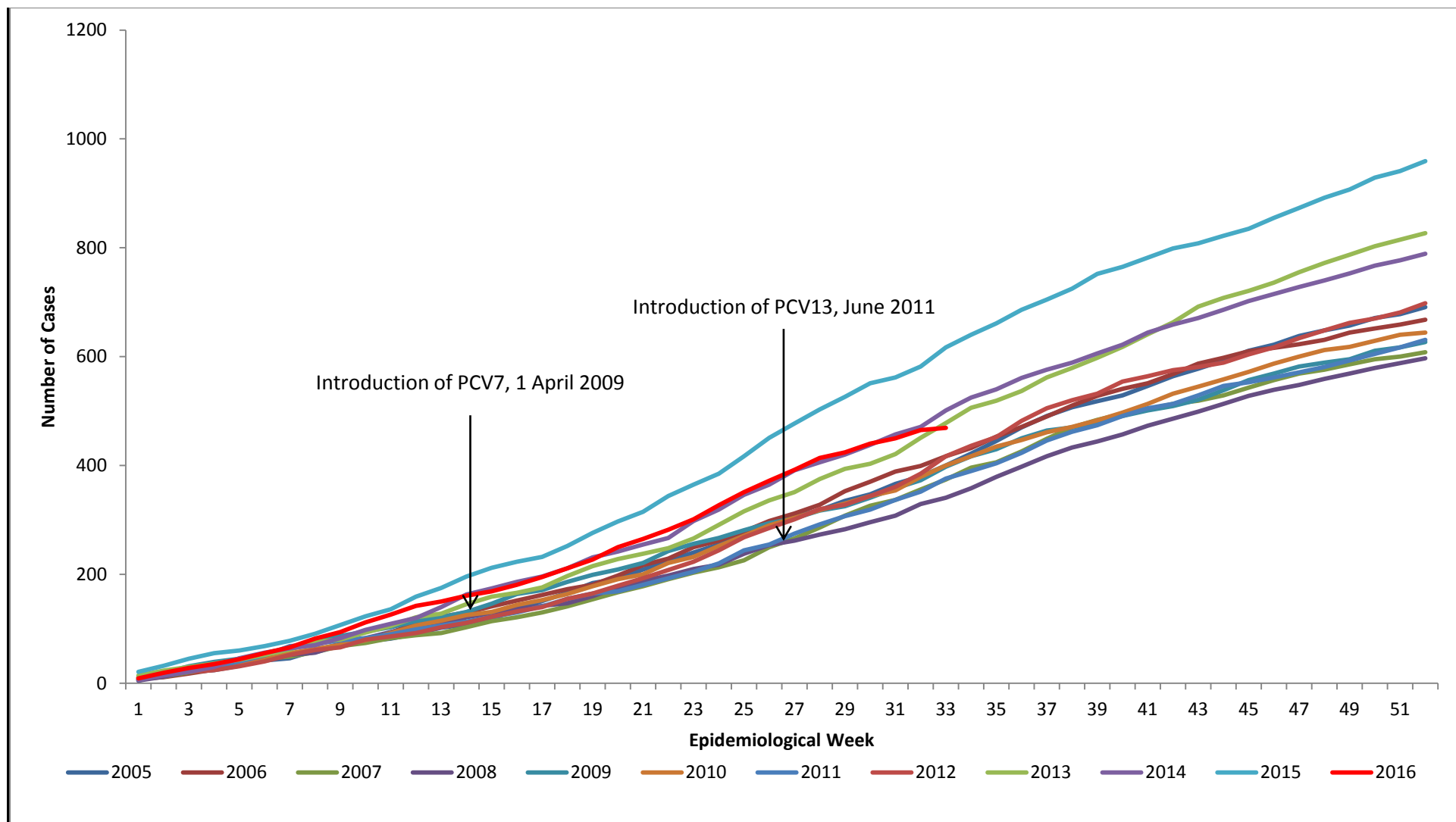
**Figure 4:** Cumulative weekly number of cases of invasive pneumococcal disease due to any of the seven serotypes (4, 6B, 9V, 14, 18C, 19F and 23F) in PCV7: Individuals  $\geq 5$  years old of age in South Africa, from 2005 to date. Only viable isolates were included.

Data are provisional as reported to date.



**Figure 5:** Cumulative weekly numbers of cases of invasive pneumococcal disease due to any of the six additional (1, 3, 5, 6A, 7F, 19A) serotypes in PCV 13 but not in PCV7: individuals  $\geq 5$  years of age in South Africa, from 2005 to date. Only viable isolates were included (Note: There is reported cross protection between 6A and 6B which is included in PCV-7(2))

Data are provisional as reported to date.



**Figure 6:** Cumulative weekly numbers of cases of invasive pneumococcal disease due to any of the serotypes not in PCV13: individuals  $\geq 5$  years of age in South Africa, from 2005 to date. Only viable isolates were included.

Data are provisional as reported to date.



## Data Source

National Institute for Communicable Diseases | GERMS-SA

## References

1. World Health Organization. WHO-UNICEF estimates of PCV3 coverage. Available at: [http://apps.who.int/immunization\\_monitoring/globalsummary/timeseries/tswucoveragepcv3.html](http://apps.who.int/immunization_monitoring/globalsummary/timeseries/tswucoveragepcv3.html); Accessed August 11, 2014.
2. Whitney CG, Pilishvili T, Farley MM, Schaffner W, Craig AS, Lynfield R, et al. Effectiveness of seven-valent pneumococcal conjugate vaccine against invasive pneumococcal disease: a matched case-control study. *Lancet*. 2006 Oct 28;368(9546):1495-502.
3. Von Gottberg A, de Gouveia L, Tempia S, Quan V, Meiring S, von Mollendorf C, et al. Effects of Vaccination on Invasive Pneumococcal Disease in South Africa. *N Engl J Med* [Internet]. 2014;371(20):141111140010002. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/25386897>

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