



Pertussis (Whooping Cough) Cases in the Medi-Cal Population

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**Research and Analytical Studies Section
California Department of Health Care Services**

Question

How many cases of pertussis have been diagnosed among the Medi-Cal population?

Background

Between January and July 2010, 1,495 pertussis cases have been reported in California, and another 700 possible cases are currently being investigated. Peaks of pertussis generally occur every 2-5 years, with the last peak in California occurring in 2005. The number of pertussis cases reported this year is five times higher than for the same period last year. If current trends continue, California may see more cases of pertussis than it has in over 50 years.

Source

This study used Medi-Cal Fee-for-Service Monthly Claims and Managed Care Monthly Encounter Data - as of July 23, 2010. Encounters are records of services provided to beneficiaries enrolled in Medi-Cal managed care health plans that are pre-paid under capitated arrangements.

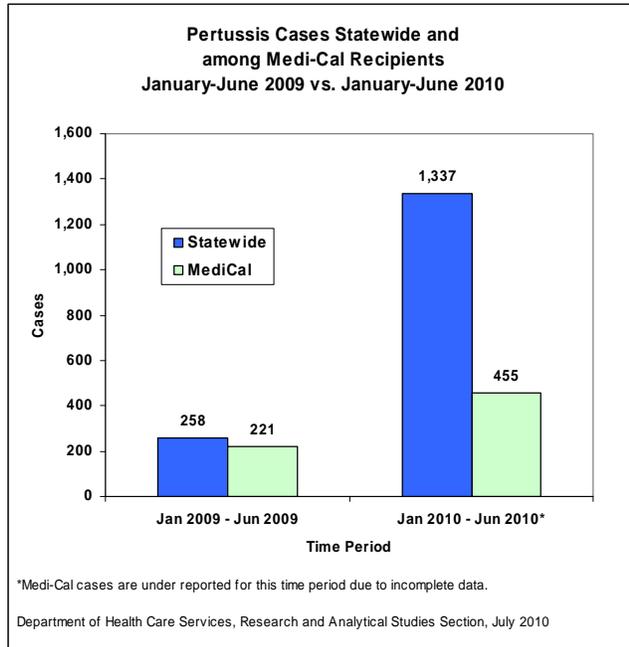
Methods

Medi-Cal Fee-for-Service claims and Medi-Cal Managed Care encounter files from July 2008 through June 2010 were

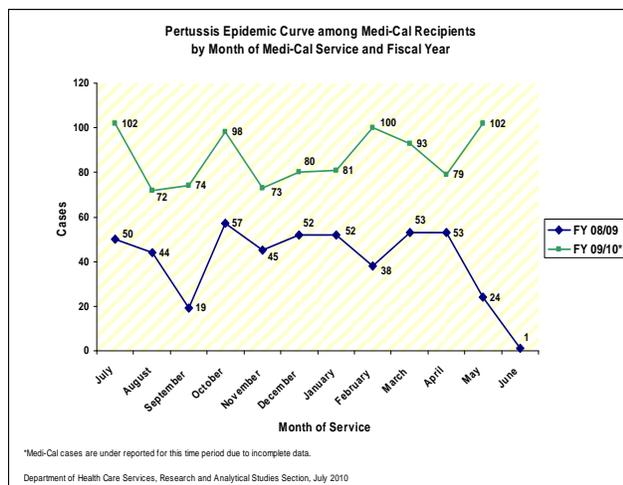
examined. Pertussis was identified using ICD-9 codes (033, 033.0, 033.1, 033.8 and 033.9) reported in the primary or secondary diagnosis fields of records reflecting services received in FY (Fiscal Year) 2008-2009 and FY 2009-2010. Because patients may be seen multiple times during the year for whooping cough/pertussis symptoms, only one record indicating a pertussis diagnosis was retained per patient per fiscal year. Records were unduplicated using the Beneficiary Medi-Cal Identification number, known as the Client Index Number or CIN. Frequency counts of pertussis cases were prepared by month in which the patient received services.

Results

Approximately, 1,442 cases of pertussis were identified among the Medi-Cal population between July 2008 and June 2010. In particular, Medi-Cal beneficiaries accounted for 85.6% of all pertussis cases reported to the state from January to June 2009 (a period for which Medi-Cal data is the most complete).

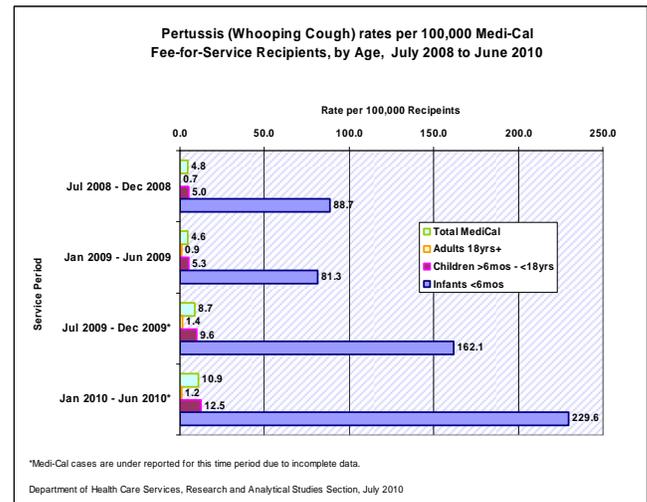


Pertussis cases among Medi-Cal recipients grew from 488 cases in FY 08/09 to 954 cases in FY 09/10, a nearly 2-fold increase. The average monthly case count for FY 08/09 was 41 cases (range: 1-57), while in FY 09/10 average pertussis cases among Medi-Cal recipients rose significantly to 87 cases per month (range: 72-102, $p < .0001$).



The majority of pertussis cases were identified among infants less than 6 months of age (53%) and children under

the age of 18 (37%). Only a small proportion of the identified Medi-Cal cases were among adult recipients (10%). The age composition of pertussis cases among Medi-Cal recipients varied little from FY 08/09 to FY 09/10.



Limitations

The 954 pertussis cases identified in the Medi-Cal data for FY 09/10 may represent only a fraction of the cases that we will be able to identify in future months as more claims and encounter records for this time period are processed and our database becomes more complete. Medi-Cal encounter records for managed care recipients are notably under reported and will always affect our final counts.

Additionally, since symptoms of pertussis among adolescents and adults may be similar to a cold or flu, many may not seek medical attention. For this reason, there is a high potential for this illness to go undiagnosed. But with heightened awareness of the current epidemic among Californians and their healthcare providers, seeking out care for these symptoms and diagnostic testing for pertussis may increase in the coming months.

Conclusions

Medi-Cal recipients are a large proportion of California's pertussis cases. The incidence of pertussis continues to rise among Medi-Cal recipients, but at a slower rate than is seen statewide. This is due, in part, to the lag in processed Medi-Cal claims and encounter data. The Department of Health Care Services will continue to monitor pertussis cases among its beneficiaries, and will provide updated information when it becomes available.