

## Whooping Cough Deaths California, 2010

### Step 1. Outline

<b>What</b>	Problem(s)	Whooping cough misdiagnosis, death
<b>When</b>	Date	2010
	Different, unusual, unique	Difficult to diagnose, infants under 3 months old
<b>Where</b>	State	California
	Task being performed	Treatment for respiratory issues

### Impact to the Goals

<b>Patient Safety</b>	8 infants died
<b>Community Health</b>	Spread of whooping cough
<b>Compliance</b>	?
<b>Organization</b>	?
<b>Patient Services</b>	Delay in treatment
<b>Environmental</b>	?
<b>Property, Equip, Mtls</b>	?
<b>Labor, Time</b>	?

Frequency	8 deaths in California so far this year	This incident	?
Annualized Cost			?

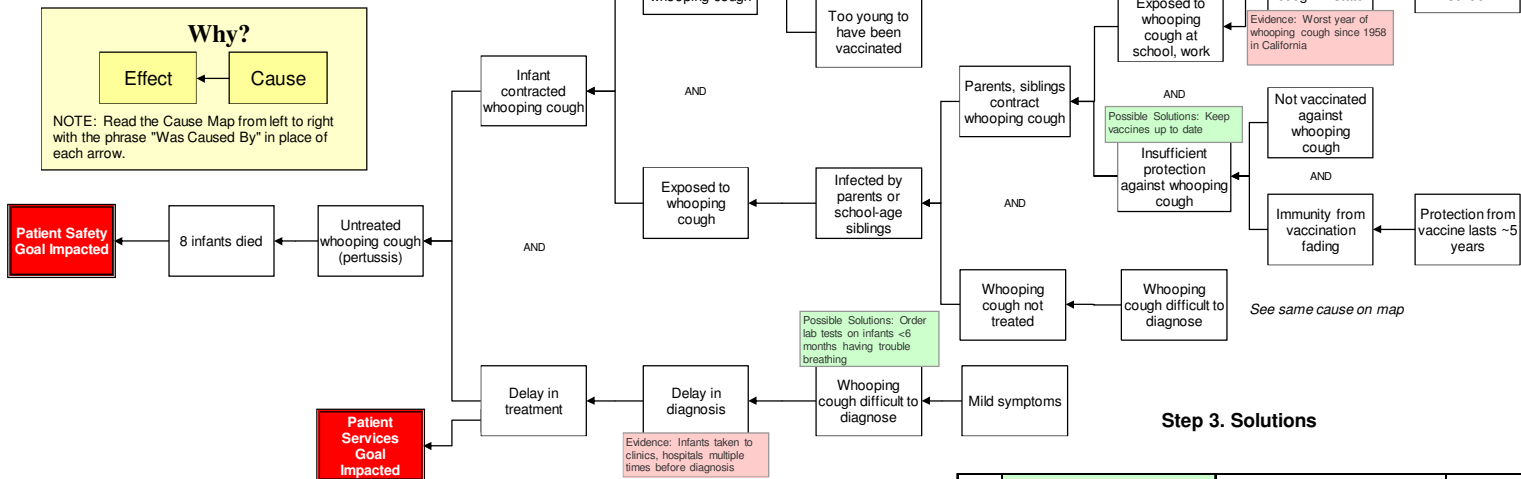
Amidst an epidemic of whooping cough (or pertussis) in California, which is the worst since 1958, eight infants have died of the disease. Infants are prone to catching whooping cough when they are exposed to it, as they have not completed their first round of inoculations and have weak immune systems. Because the symptoms of early sickness are so mild, whooping cough is very difficult to diagnose based on symptoms alone. In each of the cases of the eight deaths, the infants had been seen by multiple care providers before an appropriate diagnosis was made.

Exposure to infants is generally from parents or school-age siblings, who may themselves not know they are infected because of the mild symptoms. Because the protection from the vaccine that protects against whooping cough lasts only about 5 years, many adults may find they're no longer properly immunized against the disease. Some children have never been immunized against whooping cough because their parents have chosen not to vaccinate their children. Because of the lack of immunity of some members of the community, and the difficulty of diagnosing whooping cough, the problem may continue unless steps are taken.

Some of the solutions being considered are to not allow unvaccinated children to school. The responsibility of this would fall to school or state officials. Recommendations are made to keep vaccines for children and adults up to date, but this responsibility ultimately lies with the individual and/or parent. This may make healthcare providers feel somewhat helpless. But a recommendation for them has been given - children less than six months old who present breathing difficulties should be given lab tests that would show whooping cough. This would not prevent infants from getting whooping cough, but would ensure that the disease is discovered, and so can be treated, as soon as possible, hopefully reducing deaths.

### Step 2. Cause Map

Detail Level



### Step 3. Solutions

No.	Action Item	Cause	Owner
1	Do not allow vaccinated children at school	Unvaccinated children at school	School/State Officials
2	Keep vaccines up to date	Insufficient protection against whooping cough	Individuals/ Parents
3	Order lab tests on infants <6 months having trouble breathing	Whooping cough difficult to diagnose	Healthcare Providers

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