



March 5<sup>th</sup>, 2019

Senate Hearing: Vaccines Save Lives. What is Driving Preventable Disease Outbreaks?

## This Hearing Should Be About Lack of Vaccine Effectiveness

**Despite the many news stories covering outbreaks of contagious diseases, the questionable effectiveness of some of our vaccines gets little press:**

In 2010, California experienced the largest pertussis epidemic since 1958. According to the CDC, the U.S. has experienced increased pertussis disease despite high levels of vaccine coverage. Researchers studying the pertussis outbreaks in adolescents determined Tdap vaccine effectiveness dropped to less than 9% by four years after vaccination (Klein et al., 2016).

Analogous to antibiotic resistance, the use of bacterial vaccines can lead to “strain replacement”, where vaccines targeting certain strains of a bacteria allow non-vaccine strains to become more prevalent. This has been demonstrated in multiple studies with vaccines for pertussis, haemophilus influenzae, pneumonia and bacterial meningitis (Martcheva et al., 2008).

In addition, changes in host viral strains have been demonstrated after both rotaviral (Seheri et al., 2018) and human papillomaviral vaccines (Peralta et al., 2014, Murall et al., 2014) though it remains to be seen what the effects will be on these diseases.

In 2016, large mumps outbreaks occurred at four Indiana universities. According to the CDC, there have been other recent outbreaks around the country often in colleges. Merck, who holds a monopoly on mumps vaccine (as a component of MMR) in the U.S. is facing multiple lawsuits over whistleblower claims by two of its former scientists that **Merck, "fraudulently misled the government and omitted, concealed, and adulterated material information regarding the efficacy of its mumps vaccine** in violation of the FCA [False Claims Act].” These fraudulent activities, say the whistleblowers, were designed to produce test results that would meet the FDA's requirement that the mumps vaccine was 95 per cent effective.

**Problems with vaccine effectiveness and the necessity for ongoing boosters to maintain immunity affect both the costs of our vaccine program and the risk/benefit analysis for our vaccines. These are ongoing issues that no vaccine mandates will resolve.**

Further information and full references are available on our website or by contacting CHD.