Whooping Cough Outbreak: A Public Health Perspective

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While today’s headlines in the media highlight the threat of Ebola and our local health care community has appropriately been planning and preparing for months should this risk materialize, we have a real infectious disease danger already here in Santa Barbara County. Thirteen cases of pertussis, or “whooping cough” have been identified just in the last few weeks. That makes almost 90 cases in our county so far this year – the most cases in one year since we have been collecting electronic reporting data which goes back over 10 years.

We hope that the children affected fully recover as whooping cough can cause serious illness. Of the almost 9,000 cases statewide this year, over 300 resulted in hospitalizations and there have been a handful of deaths. This is one of the largest epidemics of pertussis statewide in 60 years. What makes this particularly concerning is that whooping cough is largely a vaccine preventable disease.

Whooping cough is often cyclical in nature and there have been years of large outbreaks in the past. The vaccine isn’t perfect as even those that had the vaccine can sometimes come down with mild symptoms. But a closer look at our current cases and contact tracing finds that almost all of the recent cases were linked to Waldorf School. That could be an unfortunate coincidence as we always have some naturally occurring cases every year, but would it surprise anyone that this outbreak is occurring at a school where only 28% of the children are up to date on all of their vaccines? While Waldorf is particularly low in their vaccination rates, it would not be appropriate to assume this problem of unvaccinated children is isolated to that one school. In fact, many local schools fall below our target of having 90% of children fully vaccinated. This is the level at which you generally have “herd immunity”, meaning that the number of vaccinated individuals in a group is sufficiently high enough to prevent an outbreak when someone comes down with the illness. (To find out your school or child care center’s immunization rates, go to www.sbcphd.org under Public Health Programs/Services – Immunization Program.)

Why are there an increasing number of parents filing Personal Believe Exemptions (PBE) so they do not need to comply with school vaccination requirements? There are many reasons. A small percentage have legitimate medical conditions or a documented history of adverse reactions that preclude them from safely receiving all of the vaccines. A few may have religious beliefs that do not approve of immunizations. Other parents are simply not adequately informed and still falsely believe there is a link between vaccines and autism, despite countless research studies that have not found a causal association. Some believe that they don’t need to be vaccinated anyway because almost everyone else is vaccinated. As mentioned previously, herd immunity only holds when vaccination rates are typically
above 90% and many of the schools where PBE rates are common are well below this threshold. Some just don’t like seeing their little ones get all those shots (and I can relate as a parent of three young children myself – I still turn away when they get pricked).

And yet others are part of a growing group of parents who are highly educated, but still choose to file PBEs so their children do not need to get their vaccines upon school entry. For some of them, the miniscule risk, legitimate in their minds or not, is still not worth receiving immunizations because they would rather take the chance that their children catch the diseases naturally, hopefully have only mild symptoms, and develop their own immunity. There are even parties and playdates where parents intentionally expose their children to these vaccine preventable diseases in order for them to get infected and develop immunity. The problem with these attitudes is that the diseases can be serious and these parents are rolling the dice that their children will not be one of the unfortunate cases that ends up in the hospital or worse. In addition, there is risk to the larger community. Even if one of these unvaccinated children contracts the illness and recovers fully, others around them – pregnant women, infants too young to receive vaccines, children and adults with immunologic deficits or cancer – may contract the disease and not be so fortunate.

What can be done about this alarming trend? Several prominent local area pediatricians are taking their own measures and have decided they will no longer accept unvaccinated children with Personal Belief Exemptions into their medical practices. For them, the risk of vaccine preventable diseases coming in and sitting in their waiting rooms and possibly infecting other children is simply too great.

Public health professionals, the medical community, and schools also need to do a better job at education and outreach about the safety and efficacy of immunizations. After all, vaccines are one of the greatest public health successes in history. In the early 1900’s, here in the United States, there were typically 500,000 cases of measles annually with 8,000 deaths. There were 20,000 cases and 1,000 deaths from serious Haemophilus Influenzae B illnesses which cause meningitis and pneumonia in children under 5 years of age. There were 100,000 cases of pertussis and 5000 deaths. All of these diseases had been almost driven to zero at the start of the 21st century and maybe that’s why many current parents don’t feel the immediate threat, but those very diseases are re-emerging and we need to increase awareness of this fact. We can work with the schools to help us with this effort. Local pediatricians need to be ready for these discussions with facts and need some guidance on how to persuade reluctant parents. There is action at the state level to tighten up the PBE process to make it more difficult to exempt out of vaccines.

Ebola and other new infectious diseases like Enterovirus D-68 are scary and we need to prepare and find effective ways to control them, but there is no current vaccine to protect us against those threats. There is an immunization to prevent pertussis and many other communicable diseases. So, to the parents who choose not to vaccinate their children, I urge you to reconsider. This is not just for the health and wellbeing of your own children, but for the health of everyone around you – your friends, neighbors, and the community. It is the responsible thing to do.