## CDC: Centers for Disease Control and Prevention or Centers for Data Censorship and Propaganda?

## Gary S. Goldman, Ph.D

The Pediatric Infectious Diesease Journal's seemingly unwillingness to address the deficiencies outlined and the CDC's seemingly selective publication of data, have raised questions of regulatory misconduct and flawed study conclusions.

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PRLog (Press Release) – Oct 29, 2009 – The review below concerns the newly published paper: The Incidence and Clinical Characteristics of Herpes Zoster Among Children and Adolescents After Implementation of Varicella Vaccination. Civen R, Chaves S, Jumaan A, Wu H, Mascola L, Gargiullo P, Seward JF. The Pediatric Infectious Disease Journal 2009 Nov; 28(11):1-6.

There are both methodological and statistical problems in this study that lead the authors to invalid conclusions. Interestingly, the published shingles (herpes zoster) incidence rates among vaccinated and unvaccinated children, as well as adolescents reported by VASP/CDC authors in this current study nicely agree with prior research findings by Goldman who served as Research Analyst for the Varicella Active Surveillance Project (VASP) in 2002 and published the incidence rates in 2005 (Universal Varicella Vaccination: Efficacy Trends and Effect on Herpes Zoster. Goldman GS. International Journal of Toxicology 2005 Jul/Aug; 24(4):203-213).

The VASP/CDC authors attempt to explain that the shingles incidence rate increase of 63% among10-19 year-olds parallels the increase reported in other studies (see 1st col. of page 5, top narrative), yet the 31% increase between 1979 and 1997 reported by Brisson et al. represents only a 1.6% (31%/19 years) per year increase (among adults)—and this is explainable in terms of the continually aging population. The approx. 35% increase in the shingles incidence rate in the study by Ragozzino et al. over the years 1944-1959 (16 years) similarly yields about a 2.2% increase per year (again typical of an aging population). This in no way compares with the 63%

increase over 7 years (or 9% increase per year) in an adolescent cohort!

Furthermore, important data from the VASP project that is entirely absent, include (1) shingles cases in the Antelope Valley population aged greater than 50 years demonstrated a statistically significant increase of 27.5% from 316 reported cases in 2006 to 403 cases in 2007 (giving a rate ratio of 1.275 with 95% C.I. of 1.1 - 1.5); and (2) additional data from the VASP project for the period from 2000 to 2002, years during which Goldman served as the Research Analyst for the VASP, indicate a statistically significant 56.1% increase in shingles among adults aged 20 years and over, with 237 cases of shingles reported in 2000 and 370 cases reported in 2002 (giving a rate ratio of 1.4 with 95% C.I. 1.2 - 1.7).

Next, consider the fact that the current CDC study reports the shingles incidence rate among unvaccinated children who have had a history of natural or wild-type "varicella" disease is 239 cases per 100,000 person-years (95% C.I. 193-295). This rate assumes there was 100% enumeration of reported shingles cases (which rarely occurs in surveillance studies). After applying capture-recapture to the reported cases of shingles, the ascertainment-corrected rate is approximately double, or over 400 cases per 100,000---a shingles rate typically found among adults aged 40 years and older.

This result has foreboding consequences for adults who also have had a previous history of natural "varicella" disease (usually when they were children). Their cell-mediated immunity is declining in the absence of exogenous (outside) exposures (boosts) to children with chickenpox, and this is demonstrated by the increases in reported HZ cases among adults from data collected from the same VASP project.

The conclusion of the current CDC paper is overstated and misleading: "Varicella vaccine substantially decreases the risk of herpes zoster among vaccinated children and its widespread use will likely reduce overall herpes zoster burden in the United States." While the paper's conclusion does include the statement, "The increase in herpes zoster [shingles] incidence among 10- to 19-year-olds could not be confidently explained and needs to be confirmed from other data sources", additional data from the same VASP project during the same study also demonstrate large increases in HZ incidence rates among adults in all age groups except those over 70.

In the 2nd to the last paragraph of the conclusion, VASP/CDC authors concede: "The possible reasons for this increased incidence [63% among those 10 to 19 years of age] cannot be confidently explained." However Goldman provided a biologically plausible explanation (to some of these VASP/CDC authors) back in 2002 as follows:

In historical shingles studies, shingles incidence generally increases with age. In his 1965 paper, Dr. Hope-Simpson suggested, "The peculiar age distribution of zoster may in part reflect the frequency with which the different age groups encounter cases of varicella and because of the ensuing boost to their antibody protection have their attacks of zoster postponed."

Lending support to this hypothesis that contact with children with chickenpox boosts adult cell-mediated immunity to help postpone or suppress shingles, is the study by Thomas et al. (Contacts with varicella or with children and protection against herpes zoster in adults: a case-control study. Thomas SL, Wheeler JG, Hall AJ. Lancet 2002 Aug 31;360(9334):678-82) that reported adults in households with children, had lower rates of herpes zoster (HZ) than households without children. Also, the study by Terada et al. (Incidence of HZ in pediatricians and history of reexposure to varicella-zoster virus in patients with HZ. Kansenshiogaku Zasshi 1995 Aug.; 69(8):908-912) indicated that pediatricians reflected incidence rates from ½ to 1/8 that of the general population their age. Older parents, in their late 50s, who no longer have children in their household, demonstrate HZ at an incidence rate of 550/100,000 person-years. (Of course, those very elderly adults do experience a sharp rise in shingles incidence due to age-related decline in immunity.)

Conclusion: The VASP/CDC's selective and clearly misleading interpretation of the reported data should not dictate the conclusion, let alone attempt to guide the national policy for a vaccination program that currently requires a booster varicella vaccination and a shingles vaccine (that serves to boost older adults, some of which previously received natural boosting through exogenous exposures in the community). Mass vaccination of children provides at best 70 to 90% immunity that is temporary and of unknown duration and is shifting chickenpox to a more vulnerable adult population where "chickenpox carries 20 times more risk of death and 15 times more risk of hospitalization compared to children."

## Important Reference:

The incidence of varicella and herpes zoster in Massachusetts as measured by the Behavioral Risk Factor Surveillance System (BRFSS) during a period of increasing varicella vaccine coverage, 1998-2003.(BMC Public Health. 2005 Jun 16;5(1):68 [Epub ahead of print]) W. Katherine Yih, et al.

Age-standardized estimates of overall herpes zoster occurrence increase d from 2.77/1,000 to 5.25/1,000 (90%) in the period 1999-2003, and the trend in both crude and adjusted rates was highly significant.