Reviewer’s report

Title: Prevalence of diphtheria toxoid IgG antibodies in children, adolescents and adults in Poland

Version: 4 Date: 5 October 2013

Reviewer: Barbara Body

Reviewer’s report:

The manuscript describes a straightforward analysis of immunity to Diphtheria in the Polish population. The study is generally well-written and straightforward. I do have some questions for the authors the answers to which should be addressed in the discussion.

Major Compulsory revisions

1) For the population of children <2 the geometric mean is low but ~45% of this age group does show a level of basic immunity. So is the geometric mean low showing nonimmune status due to lack of adherance to the vaccination schedule vs inadequate protection despite adherance. Have the authors considered whether this is inadequate response to the whole cell vaccine in use and are there other studies that indicate that an alternate vaccine would provide better immunity in this age group?

2) For those >40 did the authors make any attempt at a survey of immunization practices of physicians to ascertain that physicians and/or patients are noncompliant with the recomendation for a booster every 10 years. Is vaccination offered by primary care physicians during annual exams. If this is a public health concern perhaps a better strategy for a general every 10 year recommendation would be an age related 40, 50, 60 etc so both patients and doctors would be keyed in when boosters are necessary.

Minor essential revisions

There is inconsistent use of a period vs comma as a decimal point or number divider when the number is >1,000 vs 1.000 look at p6,p7

p2 something is missing in the last sentence on the page

"reemergence of diphtheria__information campaign" perhaps a ', an'

Discretionary revisions

see if ref 11 is now published

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Needs some language corrections before being published
**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**
I declare that I have no competing interests