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Addendum to my February 23 Commentary for the March NAS meeting on GOF:
Toward absolute probabilities for escape from a laboratory

My February 23 Commentary presents a calculation of "direct" or "absolute" probability of escape from a laboratory of a potential pandemic pathogen, specifically mammalian-airborne-transmissible, highly-pathogenic avian influenza viruses (matHPAI). Absolute probabilities are necessary to calculate the probability of a laboratory escape and subsequently the likelihood of a pandemic from an escape, a key goal of Gryphon Scientific's risk-benefit (RBA) analysis.

To obtain data for my calculation, I employed Table D-7 of reported lab incidents collected for the *Final Supplementary Risk Assessment for the Boston University National Emerging Infectious Diseases Laboratories (NEIDL).* (http://www.bu.edu/neidl/files/2013/01/SFEIR-Volume-III.pdf) This 2,716 page risk assessment is abbreviated as the SFEIR (Supplemental Final Environmental Impact Report)*.*

Table D-7 lists and summarizes 118 exposure or potential exposure incidents in BSL3 labs, up to the year 2010. Although not a large data set, there was enough data in Table D-7 to carry out a preliminary estimate of the likelihood or probability of escape from a lab, which I did in my February 23 Commentary.

This small data set can be considerably strengthened in several ways:

(1) It can be brought up to date by including data from 2011 through 2015.

(2) The original incident reports to NIH should be read to clarify the few cases where summaries were confusing. I assume Table D-7 was prepared by the group carrying out the SFEIR analysis, so it is a secondary source.

(3) Similar data should be available from the European Union, and should be included.

Gryphon Scientific should be well positioned to carry out these three tasks quickly. They may already have much of the data. The original reports to the NIH (and the EU) should be made publically available by Gryphon, with names redacted of course, so we can make our own assessments.

Since the absolute or direct probability of escape for a matHPAI is the most important probability in the risk analysis, every attempt should be made to find a reasonable estimate of it. The method I demonstrated in my preliminary analysis seems to me to be a good way of finding a reasonable estimate.