Advisory Commission on Childhood Vaccines (ACCV)
5600 Fishers Lane, Room 5N76, Rockville, MD 20857
and
Teleconference and Adobe Connect
March 8, 2019

Members Present
Karlen E. (Beth) Luthy, D.N.P., ('19), Chair
Cody Meissner, MD, ('19), Co-Chair
Kathleen F. Gaffney, PhD, RN, ('19)
John Howie, J.D., ('19)
Tina Tan, MD, ('19)
Alexandra Stewart, J.D., ('19)
Martha Toomey, ('19)

Division of Injury Compensation Programs (DICP), Health Resources and Services Administration (HRSA), U.S. Department of Health and Human Services (HHS)

Narayan Nair, M.D., Director, DICP,
Andrea Herzog, Principal Staff Liaison, ACCV

Welcome and Report of the Chair, Beth Luthy, ACCV

Ms. Luthy called the meeting to order, welcomed the commission members, DICP staff, ex officio members, and guests in the room and on the teleconference call. A role call confirmed the presence of a quorum. Ms. Luthy noted that she and the co-chair received a response to the ACCV December 2019 recommendations on behalf of the Secretary of HHS. The response indicated that the recommendations would receive careful review and that the Secretary appreciates the commission's contribution to improving the National Vaccine injury Compensation Program (VICP).

Public Comment on Agenda Items, Ms. Beth Luthy, Chair

The conference operator invited comments from the public on the meeting agenda items; however, there were not any.

Approval of September and December 2018 ACCV Meeting Minutes, Ms. Beth Luthy, Chair

Ms. Luthy invited approval of the September 6, 2018 ACCV meeting minutes and on motion duly made and seconded, the ACCV unanimously approved the September 28, 2018 meeting minutes.

Ms. Luthy invited approval of the December 6, 2018 ACCV meeting minutes and on motion duly made and seconded, the ACCV unanimously approved the December 6, 2018 meeting minutes.

Report from the Division of Injury Compensation Programs, Dr. Narayan Nair, Director, DICP

Dr. Nair outlined the meeting agenda, which included HRSA VICP updates, a report from the Department of Justice, brief reports from ex officio members (FDA, CDC, NIH, and NVPO), and a report from the ACCV Work Group.

Dr. Nair reported the number of petitions filed in the VICP from fiscal year 2009 to date in Fiscal Year (FY) 2019. During FYs 2009 through 2013 , the average number of petitions filed was 427. There were significant increases in claims filed in FY 2014 (633), FY 2015 (803) and FY 2016 (1,120). FYs 2017 and 2018 had filing numbers similar to FY 2016 and FY 2019 is on track to have a similar number of claims. So far, in FY 2019, 508 claims have been filed. Funding support for HRSA to administer the program was $6.45 million in FY 2014 and increased to $7.5 million for FY 2015 through FY 2017. The funding increased in FY 2019 to $9.5 million.

The increased workload has resulted in a backlog of cases awaiting review in the VICP. The VICP has cleared the backlog of cases from FY 2017. The number of cases in the backlog from FY 2018 and FY 2019 increased to 371 and 366 respectively. Dr. Nair clarified, the claims in the backlog are those for which the VICP has received all medical records; however, a medical officer has not completed a review of the claim. Reviewed claims that are awaiting adjudication are not included in the HRSA VICP backlog count.

Dr. Nair discussed awards paid for FY 2018, approximately $200 million to petitioners and $27 million to attorneys for fees and costs. For FY 2019 (from October 1, 2018 –March 1, 2019), VICP paid slightly over $100 million for petitioners, awards and $10 million for attorney's fees and costs.

The number of adjudications in FY 2018 was 726, of which 538 were compensable and 188 were dismissed. As of March 6, 2019, the number of adjudications for FY 2019 is 204, of which 165 were compensable, and 39 were dismissed. Regarding the adjudication categories for these claims, the annual breakdowns are:

Adjudication Category	2017	2018	2019
Compensable	696	538	165
Court decision	183	189	55
Settlement	487	319	102
Non-compensable	183	188	39
Total	879	726	204

*October 1, 2018 – March 6, 2019

Dr. Nair gave a brief update on the Vaccine Injury Compensation Trust Fund (Trust Fund). The balance of the Trust Fund is $3.8 billion. The Trust Fund pays for the administrative costs of the program, petitioners' awards, and attorneys' fees and costs. In the first three months of FY 2019 about $76 million was received, $20 million from interest on the Trust Fund's balance, and $56 million from excise tax.

The most significant activity occurring during the first part of the fiscal year was the Notice of Proposed Rulemaking (NPRM) to add the category of vaccines recommended for

pregnant women to the Vaccine Injury Table. The public comment period for the NPRM ended on October 1, 2018 and 49 comments were received and are being reviewed.

Dr. Nair concluded by reminding the commissioners that, in addition to the VICP, HRSA administers programs that care for individuals with HIV, provides funding for community health centers to provide health care services to uninsured individuals, organ donation, poison control, and programs that address the opioid crisis and others.

During the discussion following the VICP update, Dr. Nair confirmed, although the program has no control or influence on the pace of the court's processing of claims, staffing shortages have caused delays in medical officer reviews of VICP claim. Dr. Nair added, attorneys' fees and costs are separate from the petitioners' awards and in general are paid whether or not the petitioner is awarded any compensation for a claim.

Report from the Department of Justice, Ms. Catharine Reeves, Deputy Director, Torts Branch

Ms. Reeves welcomed the commissioners. Ms. Reeves noted that the reporting period for the Department of Justice (DOJ) is different from that of the Division of Injury Compensation Programs. Ms. Reeves referenced the DOJ PowerPoint materials as part of her presentation for the three-month period from November 16, 2018 through February 15, 2019. As noted after the meeting, the time frames from petition filing to settlement filing in the slides listing adjudicated settlements were inadvertently miscalculated, so these notes reference the amended presentation circulated on May 3, 2019 (Amended DOJ PP). During this reporting period, 307 petitions were filed. (Amended DOJ PP at 2.) Of those 307 petitions, 10 (3%) were filed on behalf of minors and 297 were filed by adults (97%). (Amended DOJ PP at 2.) Ms. Reeves noted that the number of petitions filed was 68 less than the previous reporting period, but similar to the number of petitions filed during this quarter last year.

Ms. Reeves noted that 153 petitions were adjudicated during this reporting period, which was 28 fewer than the previous reporting period. (Amended DOJ PP at 3.) However, Ms. Reeves noted that the Department of Justice suffered a lapse in appropriations and most staff were furloughed for five weeks during this quarter, which may explain the lower number of adjudications. One hundred twenty-five cases were compensated, the majority of which were resolved by settlement. (Amended DOJ PP at 3.) Twenty-eight cases were not compensated. (Amended DOJ PP at 3.) Of those, 27 were non-OAP cases that were resolved by decisions dismissing the petition, and one was an OAP case that was resolved by a decision dismissing the petition. (Amended DOJ PP at 3.) Four petitions were voluntarily withdrawn. (Amended DOJ PP at 4.)

Ms. Reeves discussed recently decided and pending cases in the U.S. Court of Appeals for the Federal Circuit (CAFC). The CAFC affirmed the U.S. Court of Federal Claims's (CFC) determination on entitlement in three appeals by petitioner. (Amended DOJ PP at 5.) One appeal by respondent was dismissed on respondent's unopposed motion. (Amended DOJ PP at 5.) Seven appeals by petitioner and one appeal by respondent remain pending at the CAFC. (Amended DOJ PP at 6.)

Ms. Reeves next discussed appeals at the CFC and noted that 11 appeals by petitioners were decided by the CFC during this reporting period. (Amended DOJ PP at 7.) Nine of those 11 appeals involved entitlement and two involved attorneys' fees and costs. (Amended DOJ PP at

7.) Ms. Reeves noted that eight appeals by petitioner and two appeals by respondent remain pending at the CFC. (Amended DOJ PP at 9.)

Ms. Reeves noted that one oral argument in R.K. v. HHS, which involves attorneys' fees and was appealed by petitioner, was scheduled at the CAFC on March 11, 2019. (Amended DOJ PP at 10.)

Finally, Ms. Reeves provided a list of cases that were settled during the reporting period, which are listed in the DOJ PowerPoint presentation in order of the time they took to resolve from the date of filing to the date the stipulation is filed. (Amended DOJ PP at 11-18.) Ms.

Reeves noted that most of these settled cases alleged Shoulder Injury Related to Vaccine Administration (SIRVA) injuries, and that most resolved within two years.

Ms. Toomey inquired about vaccine cases that had gone to the Supreme Court. Ms. Reeves responded that two cases have gone to the Supreme Court in the Program's history. In Shalala v. Whitecotton, 115 S. Ct. 1477 (1995), the government prevailed in a case involving whether petitioners demonstrated entitlement to compensation for an alleged encephalopathy after a vaccine. In Sebelius v. Cloer, 133 S. Ct. 1886 (2013), the government did not prevail in a case involving a discrete attorneys' fee issue. The Supreme Court disagreed with the government and held that a petitioner could still be awarded attorneys' fees despite the untimely filing of the underlying claim.

Ms. Luthy inquired about abbreviations for injuries referenced in the adjudicated settlements, including TM (transverse myelitis), CIDP (chronic inflammatory demyelinating polyneuropathy), and ADEM (acute disseminated encephalomyelitis).

Mr. Howie inquired about two adjudicated settlements that were noted to have occurred within two months and nine months. As noted above, after the meeting it was determined that the time frames for the adjudicated settlements were miscalculated; these settlement time frames have been corrected in the Amended DOJ Presentation. Mr. Howie then inquired about the rationale for not including the names of cases for the adjudicated settlements. Ms. Reeves explained that that information is provided on the Court's website, and would take additional time to compile for this presentation. Mr. Howie also asked whether DOJ tracks the time between the resolution of a case and the payment of attorneys' fees. Ms. Reeves responded that DOJ does not track that information.

Update on ACCV Work Group Activities, Martha Toomey, chair

Ms. Toomey began her presentation explaining the work group's purpose is to improve the petition process. One issue the workgroup discussed is the backlog of cases in the VICP that delays the resolution of claims. The work group recommended providing additional funding to the VICP, DOJ and Court to alleviate the problem in December 2018.

The work group has also looked at ways to more efficiently process claims and has developed a recommendation for the VICP to develop a questionnaire, administered to petitioners, to gather information to help determine areas for program improvement. After Ms. Toomey introduced the recommendation, there was a discussion about the purpose, potential impact, and language of the recommendation among the ACCV members.

A commissioner commented that the questionnaire must comply with the Americans with Disabilities Act, including translations into various languages. It was also noted that, since the ACCV does not have expertise in developing questionnaires, that a qualified contractor should be enlisted. The ACCV should also be involved in developing the contract specifications,

methodology, and creation of the survey questions. Ms. Toomey commented that those involved in answering the questionnaire would be individuals involved in the claims process prospectively, after the questionnaire is implemented.

Ms. Luthy invited approval of the recommendation below to the full Commission, if approved, Ms. Luthy, as the ACCV Chair would submit it to the Secretary. The recommendation:

"The ACCV recommends the development of an exit questionnaire to determine petitioners' opinions related to their experiences with the Program. The VICP will develop the questionnaire which is to be routinely administered to prospective petitioners whose petitions have been adjudicated."

The six Commission members present unanimously approved the recommendation.

Update on the Immunization Safety Office (ISO), Centers for Disease Control and Prevention (CDC), Vaccine Activities, Dr. Michael McNeil, CDC

Dr. McNeil reported on the February 2019 meeting of the Advisory Committee on Immunization Practices (ACIP) and discussed selected publications. The influenza session at the ACIP meeting summarized the current flu season findings. Influenza activity remains elevated for the 2018-2019 season, with Influenza A (H1N1) pdm09 viruses predominant overall. However, in the Southeast, H3N2 viruses were detected more commonly than H1N1. For the 2019–2020 flu season, the World Health Organization's (WHO) flu vaccine combination recommendation for the Northern Hemisphere has been delayed until March 2019 to allow more time to collect and test data on the H3N2 virus.

Interim-pooled results from the Influenza Vaccine Effectiveness Group indicate 47% vaccine effectiveness against any influenza virus, 46% against H1N1pdm09 and 44% against H3N2. The 2018-2019 season flu vaccine is most effective in children 6 months to 17 years (61% against any flu, 62% against H1N1). In adults, the 2018-2019 seasonal flu vaccine effectiveness is age 18-49, 37% against any flu and 45% against H1N1. In older adults 50 years and older there is no statistically significant estimate.

The vaccine manufacturer, Seqirus, made a presentation on a Phase 3 randomized, observer blinded and comparator-controlled trial of Afluria, their QIV influenza vaccine. The vaccine showed non-inferior immunogenicity to a US-licensed comparator, and the safety and tolerability of Afluria QIV is similar to the US-licensed QIV in children 6-59 months.

Dr. McNeil discussed a 3-year (2012-2015) case-controlled study of inactivated flu vaccine and spontaneous abortion in the Vaccine Safety Datalink. The study showed no significant association between flu vaccine and spontaneous abortion. These findings also support safety of influenza vaccine in early pregnancy.

Dr. McNeil reported several licensure changes. The age recommendation for Afluria trivalent and quadrivalent increased from greater than 5 years to greater than 6 months, and children now receive smaller doses (.25 mL versus 0.5 mL for children over three). Finally, Fluzone quadrivalent vaccine was previously prescribed at 0.25 mL for children 6-35 months; in January 2019 that changed to 0.5 mL for all ages.

The ACIP is considering extending the recommended age limit for human papillomavirus vaccine from the present early 20s to the mid-adult age range (up to 49 years). Dr. McNeil explained the rationale for this new recommendation that was presented at the ACIP meeting:

- There is rapid acquisition of HPV in the late teens and early 20s;
- Progression from initial infection to cervical cancer can be a few years;
- Over 90% of infections clear and 30%-40% of cervical cancers clear;
- Progression of precancer to cervical cancer can be greater than 20 years; and
- Less is known about HPV at non-cervical sites, and about progression from infection to cancer in males.

The current HPV vaccination program is predicted to reduce the HPV disease burden significantly. Extending vaccination to 45-year-old adults is predicted to produce only a small reduction in disease burden. Most studies found that the overall value and acceptability of the vaccine was about 50% in adults; however, adults with low perceptions of risk (married, monogamous relationships, few sex partners) do not value HPV vaccine highly. The ACIP work group on HPV will continue to review economic modeling results.

Dr. McNeil discussed an ACIP presentation on the pediatric hexavalent vaccine, Vaxelis, which contains DTaP, IPV, Hep B and Hib. The vaccine was licensed by the FDA on December 21, 2018 with a recommended administration of three doses (2, 4 and 6 months). Vaxelis is being considered for the Vaccines for Children Program (VFC). A VFC vote is tentatively planned for June 2019. A Morbidity and Mortality Weekly Report (MMWR) publication on Vaxelis is anticipated in the fall of 2019. Supply of Vaxelis will not be available until at least 2020. Vaxelis was tested in six Phase 3 clinical trials and demonstrated robust immunogenicity and acceptable safety. It is currently being used in the European Union. Since May 2017 there have been no safety signals after 1.5 million doses distributed.

Dr. McNeil also discussed Haemophilus Influenzae type B. Infection rates of Haemophilus Influenzae type B are higher in Native American children than in other children. There are two vaccines available in the U.S., PEDVAX-HIB and ActHib. Post vaccination immunogenicity for the hexavalent vaccine is unknown, although confirming data on immunogenicity would be important for the high-burden Native American populations.

The ACIP recommended thirteen valent pneumococcal conjugate vaccine 13 (PCV13) in 2014 with the intent to re-evaluate its impact in 2019. Since then, there have been two new products that are presently in Phase 3 trials, PCV 15 and PCV 20. Serotype 3 (ST3) causes most of the PCV13-type disease in the U.S. and PCV13 vaccine may provide some direct protection against invasive pneumococcal disease and pneumonia. To date, there is no evidence of a population-level impact of the vaccine on ST3 disease, and there is significant uncertainty as to the efficacy of the vaccine. Although apparently very effective in children, the efficacy of PCV13 vaccine against community-acquired pneumonia (CAP) is only about 6-11%. Since there are new vaccines being tested, which may be more effective, there is a policy question of whether PCV13 vaccine should be administered to all immunocompetent adults 65 and older.

Dr. McNeil reminded the Commission that meningococcal type B infection had been responsible for a number of college campus outbreaks. The ACIP work group recommends that meningococcal B booster vaccine be administered to persons at high risk (those who have persistent complement component deficiencies, complement inhibitor use, functional or anatomic asplenia, and microbiologists who may be exposed to the virus); and persons at risk during an outbreak.

ACIP passed three recommendations related to Japanese encephalitis vaccine (JE-VC). First, JE vaccine is recommended for persons moving to a JE-endemic country, long-term and/or frequent travelers who visit JE-endemic countries. Second, a new recommendation for the adult primary vaccination schedule: two doses are administered on day zero and one additional dose during the period day 7 through day 28. Third, a new recommendation for a booster dose at one year after completion of the JE-VC primary series if a person(s) anticipates ongoing exposure to JE virus.

As an informational item, Dr. McNeil commented that the Anthrax Vaccine Work Group looked at a new anthrax vaccine, AVA7909 (NuThrax) which is the current anthrax vaccine adsorbed (AVA) with added CPG 7909 adjuvant. The current AVA can be administered prophylactically or post-exposure, but the scheduling is complex and difficult to maintain – five priming doses and annual boosters. AVA7909, will only be available for emergency use and is expected to enter the national pharmaceutical stockpile replacing the current inventory of AVA. There is limited safety data on the new adjuvanted version of the anthrax vaccine.

The ACIP also voted 15-0 to recommend anthrax vaccine use for pre-exposure prophylaxis in persons not at current high risk of exposure to anthrax. A booster dose of AVA may be given every 3 years to those who have been previously vaccinated with AVA.

Finally, demand continues to outpace supply for the new recombinant zoster vaccine (RZV). The ACIP recommended that individuals who received the prior live vaccine (Zostavax) also receive this recombinant vaccine. The CDC is conducting rapid cycle analysis that has revealed a preliminary signal for *Guillain-Barré Syndrome* (GBS) following RZV and further signal refinement work is underway.

Dr. McNeil included the following recent publications in his presentation slides but did not discuss them during his presentation.

1. DeStefano F, Bodenstab HM, Offit PA. **Principal controversies in vaccine safety in the United States.***Clin Infect Dis*. 2019 Feb 12.

KEY POINTS: Concerns about vaccine safety can lead to decreased acceptance of vaccines and resurgence of vaccine-preventable diseases. The main current controversies about the safety of vaccines are not supported by the available biological and epidemiologic evidence.
Available at: https://www.ncbi.nlm.nih.gov/pubmed/?term=destefano%2C+offit\

2. McClure DL, Jacobsen SJ, Klein NP, Naleway AL, Kharbanda EO, Glanz JM, Jackson LA, Weintraub ES, McLean HQ. **Similar relative risks of seizures following measles containing vaccination in children born preterm compared to full-term without previous seizures or seizure-related disorders.** *Vaccine*. 2019 Jan 3;37(1):76-79.

CONCLUSION: Vaccination with a measles-containing vaccine in the second year of life is associated with a similar relative risk of a first seizure in children born preterm as in those who were born full-term.
Available at: https://www.ncbi.nlm.nih.gov/pubmed/30478005

3. Kochhar S, Excler JL, Bok K, Gurwith M, McNeil MM, Seligman SJ, Khuri-Bulos N, Klug B, Laderoute M, Robertson JS, Singh V, Chen RT; Brighton Collaboration Viral

Vector Vaccines Safety Working Group (V3SWG). **Defining the interval for monitoring potential adverse events following immunization (AEFIs) after receipt of live viral vectored vaccines.***Vaccine*. 2018 Nov 26.
KEY POINTS: Challenges and available options for choosing an appropriate risk window for AEFI are reviewed.Depending on the infrastructure, human resources and databases available in different countries, the appropriate option or combination of options can be determined by regulatory agencies and investigators.
Available at:
https://www.ncbi.nlm.nih.gov/pubmed/?term=Defining+the+interval+for+monitoring+potential+adverse+events+following+immunization+(AEFIs)+after+receipt+of+live+viral+vectored+vaccine

4. McNeil MM, Duderstadt SK, Sabatier JF, Ma GG, Duffy J.**Vaccination and risk of lone atrial fibrillation in the active component United States military.** *Hum Vaccin Immunother*. 2018 Nov 16.
RESULTS: We did not find an increased risk of lone atrial fibrillation after AVA, influenza or smallpox vaccine. These findings may be helpful in planning future vaccine safety research.
Available at: https://www.tandfonline.com/doi/abs/10.1080/21645515.2018.1549453

5. Landazabal CS, Moro P, Lewis P, Omer SB. **Safety of 9-valent human papillomavirus vaccine administration among pregnant women: adverse event reports in the Vaccine Adverse Event Reporting System (VAERS), 2014-2017**. *Vaccine*. 2019 Feb 21;37(9):1229-1234.
RESULTS: No unexpected adverse events were observed among these pregnancy reports.
Available at: https://www.sciencedirect.com/science/article/pii/S0264410X18316414

6. Su JR, Duffy J, Shimabukuro TT (2019). Chapter 1: **Essentials of Vaccine Safety.** In Poland GA and Whitaker JA (Eds.), **Vaccinations**. St. Louis, MO: Elsevier.
Available at: https://www.elsevier.com/books/vaccinations/9780323554350

7. Su J, Moro PL, Ng CS, Lewis PW, Said MA, Cano MV. **Anaphylaxis after vaccination reported to the Vaccine Adverse Event Reporting System, 1990-2016**. J Allergy Clin Immunol. 2019 Jan 14.
CONCLUSION: Anaphylaxis after vaccination is rare in the United States and can occur among persons with no history of hypersensitivity. Most persons recover fully with treatment, but serious complications, including death, can occur.
Available at: https://www.ncbi.nlm.nih.gov/pubmed/30654049

8. Hesse EM, Shimabukuro TT, Su JR, Hibbs BF, Dooling KL, Goud R, Lewis P, Ng CS, Cano MV.**Postlicensuresafety surveillance of recombinant zoster vaccine (Shingrix) –United States, October 2017--June 2018**. *MMWR* Feb. 1, 2019: 68 (4); 91-94.
RESULTS: Although VAERS data are subject to the limitations inherent in passive surveillance, the initial safety data from VAERS monitoring during the first 8 months of

RZV use are consistent with the safety profile observed in pre-licensure clinical trials. No adverse events reported for RZV were disproportionate to adverse event reporting patterns observed for other vaccines in the VAERS database.
Available at: https://www.cdc.gov/mmwr/volumes/68/wr/mm6804a4.htm

9. Haber P, Moro PL, Ng C, Dores GM, Lewis P, Cano M. **Post-licensure surveillance of trivalent adjuvanted influenza vaccine (aIIV3; Fluad), Vaccine Adverse Event Reporting System (VAERS), United States, July 2016-June 2018.** *Vaccine*. 2019 Feb 7.

CONCLUSION: Although our review of aIIV3 in VAERS did not identify any unexpected health conditions of concern, more than twice the expected number of reports were submitted regarding administration of the vaccine to persons outside of the age range for which the vaccine is approved in the U.S. Health care providers should be educated on the age groups for whom aIIV3 is recommended.
Available at: http://authors.elsevier.com/sd/article/S0264410X19301288

10. Tartof SY, Qian L, Liu IA, Tseng HF, Sy LS, Hechter RC, Lewin BJ, Jacobsen SJ. **Safety of Influenza Vaccination Administered During Hospitalization.** *Mayo Clin Proc*. 2019 Jan 3

CONCLUSION: Findings provide reassurance about the safety of influenza vaccination during hospitalization. Every contact with a health care professional, including during a hospitalization, is an opportunity to vaccinate.
Available at: https://www.ncbi.nlm.nih.gov/pubmed/30635116

Update from the National Vaccine Program Office, (NVPO), Ann Aikin, NVPO

Ms. Aikin announced that the next public meeting of the National Vaccine Advisory Committee (NVAC) will be a virtual meeting on March 25, 2019. Future 2019 meetings will be on June 4-5 and September 17-18. On March 4, 2019, International HPV Awareness Day, the NVPO began its "Spring Push" for HPV awareness, which will continue through April 2019. Talking points, social media messages and graphics, and web tools for HPV awareness will be available on the NVPO web site (www.hhs.gov/nvpo).

Ms. Aikin also announced that NVPO is co-sponsoring the National Adult and Influenza Immunization Summit with CDC and the Immunization Action Coalition. The summit will be held at the Crowne Plaza Perimeter at Ravinia in Atlanta. She concluded her update.

Update on the National Institute of Allergy and Infectious Diseases (NIAID), National Institutes of Health (NIH) Vaccine Activities, Dr. Barbara Mulach, NIAID, NIH

Dr. Mulach announced that NIAID has been involved in a series of studies of an H7N9 influenza vaccine aimed at an influenza virus that originated in China in 2013. The early vaccines developed for the strain have not been as effective as hoped. Five trials of improved vaccines developed by Seguris and Sanofi Pasteur are ongoing.

The Infectious Disease Research Institute has developed a freeze-died temperature-stable tuberculosis vaccine, which reduces the issues related to long-term storage of the vaccine. It is now in its second clinical trial with an enrollment of 48 healthy adults.

Several institutes at NIH have collaborated on research into acute flaccid myelitis and Guillain-Barré Syndrome and issued a Notice of Interest in Advancing Research to encourage new applications for research support to identify causes, treatments, diagnostic procedures and prevention of neurological conditions of muscle weakness/paralysis triggered by infectious agents or related immune responses.

Dr. Mulach described the Helping to End Addition Long-Term (HEAL) Initiative, a longitudinal study consortium that focuses on antenatal opioid exposure. The Initiative will invite applications from consortia composed of a data coordinating center and two or more clinical sites to conduct prospective study of infants exposed to opioids in utero compared to unexposed infants. There will be a 2-year follow-up, including neuroimaging, medical, neurodevelopmental, behavioral and home, social and family life assessments.

Finally, NIH is developing a strategic plan to advance tick-borne disease research. The framework for the strategic plan will include basic research, diagnosis and detection, therapeutics, prevention and resources. The NIH has requested public input into tick-borne disease research priorities. Dr. Mulach concluded her comments.

Update on the Center for Biologics, Evaluation and Research (CBER), Food and Drug Administration (FDA) Vaccine Activities, CDR Valerie Marshall, CBER, FDA

CDR Marshall reported that in December 2018, the FDA approved a diphtheria and tetanus toxoids and acellular pertussis adsorbed, inactivated poliovirus, haemophilus influenzae b conjugate (meningococcal protein conjugate), and hepatitis B (recombinant) vaccine (VAXELIS). VAXELIS is indicated for active immunization to prevent diphtheria, tetanus, pertussis, poliomyelitis, hepatitis B and invasive disease due to Haemophilus influenzae (H. influenzae) type b. VAXELIS is approved for use as a 3-dose series in children 6 weeks through 4 years of age (prior to the 5th birthday) and was developed in a partnership between vaccine manufacturers, Sanofi and Merck.

In October 2018, the FDA approved a supplement to the biologics license application for IXIARO. The supplement included an alternate primary immunization series of two 0.5 mL doses of IXIARO administered at 7 days apart for individuals 18 through 65 years of age, and an updated package insert data supporting concomitant use of IXIARO primary immunization series (two 0.5 mL doses administered 28 days apart) with U.S.-licensed rabies vaccine (RabAvert®) administered for pre-exposure prophylaxis.

In February 2019, FDA approved a supplement to the biologic's application for Fluzone Quadrivalent to include the 2019 Southern Hemisphere formulation and associated labeling revisions.

On March 6, 2019, CBER's Vaccines and Related Biological Products Advisory Committee (VRBPAC) met in an open session to discuss and make recommendations on the selection of strains to be included in the influenza virus vaccines for the 2019-2020 influenza season. A majority on the committee voted to follow the WHO recommendations.

Finally, on March 7, 2019, VRBPAC met in open session to discuss and make recommendations on the safety and effectiveness of Dengue Quadrivalent Vaccine attenuated (DENGVAXIA) manufactured by Sanofi Pasteur. During that meeting Sanofi presented safety, efficacy and immunogenicity data to support the indication of prevention of disease caused by serotypes 1, 2, 3, and 4 for persons 9 to 45 years of age with laboratory-confirmed previous

dengue infection living in endemic areas. The FDA will issue a final decision in the spring of 2019. CDR Marshall concluded her report.

Public Comments

Ms. Luthy invited comments from the public in the room or on the telephone conference call. There was only one comment from Ms. Theresa Wrangham, Executive Director of the National Vaccine Information Center (NVIC).

Ms. Wrangham commented that since the last meeting of the ACCV, Congress has held hearings on exemptions for measles vaccines. For both of those hearings NVIC contacted Congressional committees to request an understanding of the premise of those hearings and an opportunity for NVIC to participate, as an organization of standing, representing vaccine safety and informed consent concerns that intersect policy discussions. Ms. Wrangham stated that the NVIC was told they could not submit questions or statements to the committees, and if the NVIC submitted questions and statements, they would not be a part of the record. Additionally, the NVIC was not allowed to participate in the hearings. NVIC has historically for almost four decades represented consumer concerns in this regard, as we did when we worked with Congress to pass the National Childhood Vaccine Injury Act of 1986.

As a result, these hearings were very one-sided in their representation of concerns of the current vaccine policy and laws with no representation of existing and significant vaccine safety research deficits and little information on the VICP and vaccine injuries. As a result, we will go on record here, where vaccine injuries to some extent are represented. As this commission well knows, those at risk for vaccine injury and death are rarely identified in advance of the administration of a vaccine. In addition, due to the vaccine safety research deficits, the characterizations of the mechanisms of injury are not well understood or recognized. As demonstrated by VICP awards, vaccine injuries can be lifelong and extremely debilitating and none of that information was presented at these hearings. We hope that this commission will explore this lack of representation.

It is critical that there be balanced information and representation in such hearings, as are risks to vaccinations given short shrift due to the absence of this balance. Vaccine injuries are real and significant acknowledgment of vaccine safety research deficits that prevents vaccine injury and death should have been a part of the conversation, as well as the human right to informed consent. This lack of balance serves only to demonize, discriminate and treat those injured by vaccines as acceptable collateral damage, affording an unrealistic one-size-fits all policy regardless of who is harmed. Such policy discriminates against a minority that is often invisible until harmed and prevents the exercise of a basic human right of autonomy in medical risk-taking procedures. Societally, this disadvantages this minority and incurs educational and possible employment barriers as already seen in California and in some health care facilities, and it deprives individuals of the exercise of religion and conscience, while unnecessarily pitting families against each other. It is our hope that this commission, like NVIC, has many questions about this lack of representation and its impact on trust in government and ongoing vaccine hesitancy. To be critical of vaccine non-policy does not necessarily equate to be anti-vaccine and this criticism is part of a healthy government and discharge of constitutional rights.

NVIC, in closing, appreciates the efforts of the process working group in creating the VICP exit questionnaire and hopes that a retroactive look at such a questionnaire to award

recipients is also considered, as recommended in previous federally commissioned reports to examine award adequacy. Such an effort would better inform compensation going forward.

There were no additional requests for public comment.

Future Agenda Items/New Business, Ms. Beth Luthy, Chair

Ms. Luthy noted that there were no suggestions for future agenda items for the June 6-7 commission meeting.

Adjournment

Ms. Luthy expressed appreciation to those on the call for their participation. There being no further business, on motion made and seconded, the meeting was adjourned.