ACIP Prevention of Human Rabies Work Group

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On behalf of the
ACIP Rabies Work Group

Advisory Committee on Immunization Practices

June 26, 2019
Work Group Purpose and Goals

- To provide a forum for discussion to update the 2008 and 2010 ACIP recommendations on human rabies prevention
- Members have been reviewing new and existing data and providing individual input on topics that may inform changes to recommendations
- Work group first met in October 2018 and has been meeting monthly
Need for Updated Recommendations

- Rabies is an acute and fatal encephalomyelitis but is preventable
- > 200,000 persons in US exposed to rabies suspect animals / year
- >30,000 persons receive post-exposure prophylaxis (PEP) / year
- Rabies PEP is safe and efficacious but costs are high
- 2008: ACIP recommendations comprehensively updated; 2010: PEP schedule updated
- In interim, new data available and World Health Organization (WHO) updated recommendations
Terms of Reference

- Determine the epidemiology and burden of rabies exposures and PEP administration in the United States

- Evaluate and revise previous recommendations as needed for rabies vaccination schedules, deviations in schedules, and monitoring of immunity by taking into consideration efficacy, immunogenicity, safety, cost-effectiveness, route and location of PrEP and PEP; this evaluation will consider evidence generated to inform the rabies recommendations of other global organizations and new data to identify areas where additional evidence may be necessary to inform discussions

- Review rabies exposure risk and risk assessment guidelines for the general population and by specific occupational and recreational groups (e.g., veterinarians, laboratorians, and travelers)
Terms of Reference continued

- Evaluate ACIP serological and monitoring recommendations including whether recommendations should differ depending on the degree of rabies risk for a person and whether adequate antibody titers are needed to confirm immunization.

- Consider whether any recommendations should differ for healthy adults compared to other populations based on available data in immunocompromised persons, children, and pregnant women.

- Clarify any confusing recommendations in the latest ACIP rabies recommendations and update the recommendations with information about the 2 rabies immune globulin products approved by the US FDA during 2018.

- Identify areas in need of further research for informing future vaccine and immune globulin recommendations.
Tentative Timeline (Subject to Change)

**PHASE I**
- Begin systematic reviews

**PHASE II**
- Begin work group meetings

**PHASE III**
- Update guideline recs

**PHASE IV**
- Begin presenting to ACIP

**PHASE V**
- Update guideline recs

- Mid 2018
- October 2018
- October 2019 to 2020
- 2020 or 2021
Work Group Members

**ACIP Members**
Sharon Frey (chair)
José R. Romero

**Liaison Representatives**
AAP- Elizabeth Bennett
AAFP- James Stevermer
NACCHO- Matt Zahn
APhA- Karl Hess
NACI- Julie Emili and Linlu Zhao
FDA- Paula Agger and Robin Levis
NASPHV- Katie Brown and Sally Slavinski

**APHL-Michael Pentella**

**Additional Subject Matter Experts**
Susan Moore
Deborah Briggs

**CDC**
Rabies Work Group leads – Jesse Blanton and Agam Rao
Division of Global Migration and Quarantine- Kristina Angelo
Immunization Safety Office – Pedro Moro
Completed to date

- Identified work group members, evaluated conflicts of interest
- Provided background presentation about rabies to work group members of different backgrounds
- Completed 7 meetings dedicated to PrEP
- Listserv email exchanges with work group members in between meetings to ensure continued discussion
- Table wording and recommendations were updated according to input received from the work group and shared for continued input
- Advice for sections that require more clarification solicited from work group members and other stakeholders (e.g., NASPHV)
- Repeated discussions with manufacturers of both rabies vaccines and all rabies immune globulin products in US to ensure all unpublished data is considered
Pre-exposure Prophylaxis discussions

- Healthy Adults: Schedules and Primary Response
- Healthy Adults: Duration of Immunity and Effectiveness
- Healthy adults: Serological Monitoring (frequencies and cut-offs) and Risk Group Recommendations
- Special Populations: Determine if recommendations decided above (i.e., schedules, duration of immunity, frequency of serologic monitoring) should be different from those of healthy adults
- Rabies vaccine safety and administration considerations
- Miscellaneous topics including co-administration of rabies vaccine with other vaccines and anti-malarials
Next Steps

- Continue monthly work group calls focused on PEP
- Continue to review systemic review of data (including unpublished and new), manufacturer input, and information that might inform decisions
- PEP topics will include:
  - Schedule
  - PrEP and PEP schedule deviations
  - Rabies Immune Globulin administration around wound vs. around wound + IM
  - Recommendations for special populations including immunocompromised
  - Internationally administered PEP
  - PEP for mass bat exposures
Tentative Timeline (Subject to Change)

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Acknowledgements

CDC Technical Work Group and Subject Matter Experts

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Anna Mandra
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Erin Whitehouse
Thank you!

For more information, contact CDC
1-800-CDC-INFO (232-4636)

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.