



# JE Newsbriefs

***A periodic update on Japanese encephalitis (JE) disease, JE vaccines, and PATH's Japanese Encephalitis Project***

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*Welcome to the inaugural issue of JE Newsbriefs. In general we will focus mainly on news, but this issue includes background information on JE and the rationale for PATH's JE Project (a five-year initiative supported through a grant from the Bill & Melinda Gates Foundation). Japanese encephalitis is a deadly virus, transmitted by mosquitoes, that infects the brain of susceptible children. It can be found throughout Asia. Even those lucky enough to survive JE often face serious health problems for the rest of their lives. The little girl in the photo (above) looks healthy, but in fact her bout with JE resulted in extensive brain damage-sometimes she cannot recognize her own mother. JE is preventable through vaccination, but the current vaccine is not available in sufficient quantities to immunize everyone who needs it. The good news is that new vaccines are on the way, and one of PATH's chief goals is to accelerate availability of improved JE vaccine in all endemic areas.*

*Each issue we will introduce you to project partners-this time we highlight the JE Core Working Group. We will help you get to know our team members too. Plus, do not miss the JE resource list on the last page!*

*We hope you enjoy the newsletter. Please feel free to recommend it to friends and colleagues (it is easy for them to subscribe, or unsubscribe, using the links on the last page). Please write us with questions or comments. We would love to hear from you!*

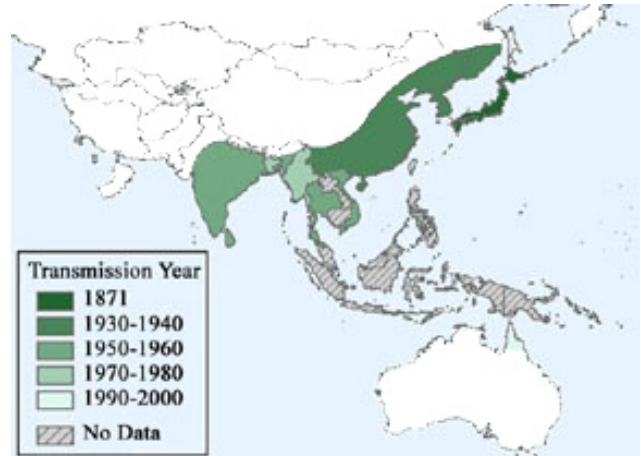
*Dr. Julie Jacobson, Project Director, and the JE team*  
[JEproject@path.org](mailto:JEproject@path.org)

### Japanese encephalitis--a disease on the move

Japanese encephalitis is the leading viral cause of encephalitis and disability in Asia. The disease primarily infects children under the age of 15, leaving up to 70 percent of those who develop illness either dead or with a long-term neurological disability. Since the first case of JE was documented in the late 19th century, JE has spread beyond its early domain--traveling as far south as Australia and as far west as Pakistan. To date JE has not appeared in Africa, Europe, or the Americas.

JE vaccine was first used in 1941, but it still is not widely available in many affected countries. Over the past 60 years JE has infected an estimated 10 million children, killing 3 million and causing long-term disability in 4 million more. JE control has been hindered by poor surveillance, limited and unstable vaccine supply, lack of guidance and programmatic support for JE immunization, and low political awareness of the disease.

### JE transmission 1871 to 2000



*JE has spread steadily since it was first diagnosed in 1871. By 1995, it had arrived in Australia.*

#### JE Project goals

- Improve JE disease burden data.
- Speed development of an improved JE vaccine.
- Introduce the vaccine where it is most needed.
- Promote investment in JE immunization.

#### PATH's JE Project

We envision a world where every affected country has the information and political will needed to effectively, efficiently, and safely control JE. And where every child at risk of JE infection is protected early in life by a safe, efficacious, and affordable vaccine. PATH designed the project to pave the way for control of clinical JE and to help halt the devastating death and disability JE causes. By adding JE vaccine to the roster of other vaccines given to infants, we believe that clinical JE can be eliminated in Asia and the Pacific. By the end of this project, a second-generation JE vaccine will be available for use throughout Asia. Increased awareness of JE will result in greater regional and national commitments to JE vaccine introduction. And as a result of project advocacy initiatives, the international donor community will assist more countries with JE control.

For more information about the project visit our website: [www.JEproject.org](http://www.JEproject.org)

#### China adds JE vaccine to childhood immunization program

The People's Republic of China recently decided to add JE vaccine to their routine childhood immunization program in 14 high-risk provinces. This means that approximately 14 million children will be vaccinated each year, using locally developed and produced vaccines. One of the Chinese products, a single-dose vaccine, is a promising candidate for later introduction worldwide. The Ministry of Health also plans to increase JE surveillance and outbreak control.

#### Innovative, interactive JE reporting system to debut in India

By pressing a few buttons on a phone keypad, health workers in the Kurnool district of Andhra Pradesh, India, soon will be able to report timely information to better respond to encephalitis outbreaks. And if they have web access, they--and colleagues worldwide--can review the updated data immediately. Voxiva Inc., a global provider of health information solutions, is designing the phone and internet system with support from PATH. The goal is to track--and ultimately reduce--the incidence of Japanese encephalitis through improved surveillance and response.

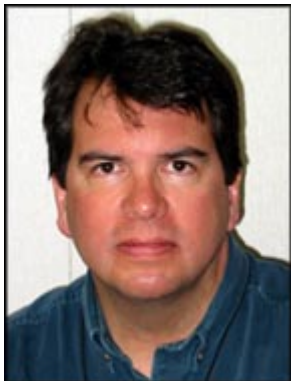
## Indonesia plans first nationwide assessment of JE burden

Historically, lack of data have made it difficult to assess JE disease burden in Indonesia, but that is about to change. The Indonesian Ministry of Health and PATH are launching an exciting new initiative to collect information from 14 hospitals in six provinces, representing a variety of geographical, cultural, religious, and climatic areas. The International Vaccine Institute, a JE Project partner, will work in two additional provinces. The new data will be extremely useful for estimating the national burden of disease and for making informed decisions about JE control.

## JE-West Nile connection

Many people do not know that JE is a member of the same viral family as the West Nile virus (they both are flaviviruses). And about the same time that JE emigrated to Australia, West Nile arrived in North America. So far this year there have been over 1,600 reported cases of West Nile in the United States.

The West Nile virus commonly is found in Africa, West Asia, and the Middle East. It can infect humans, birds, mosquitoes, horses, and some other mammals. Like JE, West Nile is spread by mosquitoes, can cause inflammation of the spinal cord and brain, and can be fatal. Understandably, West Nile has been getting a lot of attention in the last few years. While interest in a West Nile vaccine has increased since the disease struck the United States, work on a better vaccine against JE--a disease still largely limited to the developing world--has not benefited from the same level of effort. PATH designed the JE project to address that situation.



## Who's who at the JE Project: Dr. Anthony (Tony) Marfin

Tony Marfin is an M.D. and medical epidemiologist, temporarily assigned to PATH from the U.S. Centers for Disease Control and Prevention (CDC). Tony recently relocated to Seattle with his wife Amy Bode, also an M.D. and medical epidemiologist. Tony has been working on JE-related issues since 1991 when he was an Epidemic Intelligence Service Officer at CDC. In addition to JE and other vector-borne infectious diseases, Tony has spent several years working on the epidemiology, public health, clinical, and molecular aspects of other pathogens that affect the central nervous system--the agents for meningococcal meningitis, syphilis, and AIDS. Prior to joining CDC in 1991, Tony served in the Indian Health Service in southern Arizona for four years; trained in internal medicine; and obtained a Masters of Public Health. Since coming to CDC, Tony has trained in infectious diseases, pulmonary medicine, and critical care medicine.

Tony was born in Oakland, California, and was raised in San Diego. He is very happy about being back on the West Coast and working on such an important project. Tony and Amy have two daughters and three grandchildren.

## Partner profile: The JE Core Working Group

Following a bi-regional JE meeting in Bangkok in 2002, countries demanded more help with JE control. As a result, several development partners decided to meet regularly to share news and information and to brainstorm strategies for effective JE interventions. This was the birth of the "JE Core Working Group."

Core Working Group members include:

- WHO (headquarters, South East Asia and Western Pacific Regional Offices)
- UNICEF (headquarters and South Asia Regional Office)
- U.S. Centers for Disease Control and Prevention
- International Vaccine Institute
- PATH
- University of Liverpool
- USAID's Environmental Health Project

The Core Working Group seeks to move the JE control agenda forward as rapidly as possible. Currently PATH functions as chair of the Core Working Group, but this position may be rotated to other partners in the future. Group meeting summaries will be added to the [JE Project website](#) soon. Questions about the JE Core Working Group may be sent to [JEproject@path.org](mailto:JEproject@path.org).

## **JE resources**

### **JE Project web site**

Check out the "Resources" section of the website.

[www.JEproject.org](http://www.JEproject.org)

### **CDC Japanese encephalitis home page**

A comprehensive overview of the disease.

[www.cdc.gov/ncidod/dvbid/jencephalitis/index.htm](http://www.cdc.gov/ncidod/dvbid/jencephalitis/index.htm)

### **WHO Position Paper on JE**

[www.childreenvaccine.org/files/JE\\_position\\_paper\\_WHO.pdf](http://www.childreenvaccine.org/files/JE_position_paper_WHO.pdf)

### **Preformatted PubMed searches:**

#### **General Japanese encephalitis search**

[www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=search&db=pubmed&term=japanese+encephalitis](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=search&db=pubmed&term=japanese+encephalitis)

#### **JE vaccine search**

[www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=search&db=pubmed&term=japanese+encephalitis+vaccines](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=search&db=pubmed&term=japanese+encephalitis+vaccines)