YELLOW FEVER: A MAJOR CONCERN FOR PUBLIC HEALTH

SANOFI PASTEUR OPERATES IN THE FIGHT AGAINST YELLOW FEVER

- Yellow fever is a serious acute viral hemorrhagic disease transmitted by infected mosquitos. There is no cure for yellow fever. Treatment is symptomatic, aimed at reducing the symptoms for the comfort of the patient, but it does not stop the evolution of the disease, which can be lethal.

- According to the World Health Organization (WHO), vaccination is the most effective means of prevention against yellow fever.²

- The Sanofi Pasteur vaccine against yellow fever produced in France:
  - has been used for more than 30 years
  - is registered in more than 100 countries with more than 300 million doses distributed to residents and travelers to endemic areas
  - provides high levels of protection against yellow fever in children and adults in different countries, including endemic areas
  - requires a single injection, making it practical and easy to use
  - is prequalified by the WHO for purchase by the United Nations.³

- Sanofi Pasteur significantly invested in yellow fever vaccine production to:
  - optimize vaccination campaigns by providing the most appropriate presentation
  - increase production capacity to meet the unusually high demand in 2011

- Since 2003, Sanofi Pasteur has provided the majority of the 6 million doses of yellow fever vaccine for the stockpile funded by the Global Alliance for Vaccines and Immunization (GAVI) to fight against epidemics in Africa.⁴

- Sanofi Pasteur is one of the key partners of the Yellow Fever Initiative that makes an effort on yellow fever prevention.⁵
WHO recommends for endemic areas:  
- integration of the vaccine against yellow fever in the national child immunization programs;
- the implementation of preventive vaccination campaigns to protect susceptible older groups;
- vaccination for travelers to and from areas at risk.

To support vaccination against yellow fever, several international initiatives have been established:  
- The elaboration of an emergency stockpile of yellow fever vaccine to ensure rapid response to outbreaks reported in high-risk countries.
- The Yellow Fever Initiative foundation, a preventive vaccination effort led by WHO and supported by UNICEF and national governments. This initiative recommends:
  - including the yellow fever vaccine in mass vaccination campaigns in high-risk areas for all people 9 months and older
  - to maintain surveillance and rapid response capacity to face outbreaks.
The fight against mosquitoes; essential until vaccination takes effect. 

- In fact, the risk of the transmission of yellow fever can be reduced in urban areas by eliminating potential mosquito breeding places.
- Applying spray insecticide to kill adult mosquitoes during urban epidemics, combined with emergency vaccination campaigns, reduces or interrupts the transmission of yellow fever, “buying time” for vaccinated populations to develop immunity.

ABOUT YELLOW FEVER

- Yellow fever is transmitted by infected mosquitoes. The term "yellow" refers to the jaundice that affects some patients.
- There are three types of disease transmission cycles: sylvatic, rural and urban.
- Once someone has contracted the virus, the incubation period lasts from 3 to 6 days and is followed by the development of the disease, which may have one or two phases:
  - The acute phase:
    - Fever, muscle aches (back pain, headache), chills, loss of appetite, nausea or vomiting.
    - Most patients see their state of health improve and their symptoms disappear after 3 to 4 days.
The “toxic” phase:

- 15% of patients have a second phase following the initial remission.
- High fever comes back and several organ systems are affected. The patient quickly shows signs of jaundice and complains of pain appearing in the mouth, nose, eyes and stomach. When this is the case, blood can be found in vomit and feces. The renal function also deteriorates.
- Half of the patients with this phase die within 10 to 14 days, and the others recover without significant organ damage.

References:

1. WHO website – Yellow Fever, accessed on 09/01/2014
   http://www.who.int/mediacentre/factsheets/fs100/fr/index.html
2. WHO website – Relevé épidémiologique hebdomadaire, accessed on 09/01/2014
3. The WHO prequalification is a regulatory step that allows the purchase of vaccines by UN agencies (such as UNICEF or PAHO). The goal is to help developing countries to ensure and improve access to vaccines against diseases with a high burden of morbidity that meet international standards of quality, safety and efficiency.
4. Social responsibility of Sanofi Pasteur’s website – Yellow Fever, accessed on 02/06/2013
5. WHO website – Yellow Fever Initiative brochure, accessed on 09/01/2014
   http://www.who.int/csr/disease/yellowfev/YFbroschure.pdf

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