

**A USPHS Program for  
Emerging Infectious Diseases  
in the Blood Supply**

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# Reasons for Emerging Infectious Diseases

- International travel
  - between dense population centers
  - to remote or undeveloped areas
- Increased population in the cities
- Cultural changes
- Environmental changes

# **“Initiation and Promotion”**

- Initiation: Jumping a species barrier or achieving a new level of virulence
- Promotion: Dissemination due to cultural changes

# What Makes An Emerging Agent a Threat to Blood Safety?

- Symptomatic donors would be too sick to feel like donating or would be excluded by the questionnaire or taking temperature
- Asymptomatic donors with viremia/bacteremia might be accepted
  - Incubation period (window period)
  - Chronic asymptomatic infections

# PHS Goals

- Anticipating emerging agents that could threaten the blood supply
- Monitoring reports of emerging agents
- Evaluating the degree of risk for blood
- Focusing PHS funding and lab resources

# The USPHS Response

- Emerging Infectious Diseases Committee
- Database of agents
- A paradigm for coordinated action

# Emerging Infectious Diseases Committee

- Started in 1997
- Reports to USPHS Inter-Agency Working Group on Blood Safety and Availability
- FDA, CDC, NIH, HHS representation
- Subject experts and observers

# EID Committee Meetings

- Quarterly meetings
- Ad hoc meetings for new emerging agents
- Convene PHS subject experts
- Identify questions to answer and problems to address
- Find lab resources



# Focusing PHS Resources on Emerging Infectious Agents

- What intramural studies are being done by CDC, FDA, NIH?
- What intramural labs can be redirected?
- What extramural studies are currently funded by NIH? What repositories exist?
- Is new extramural funding available?

# Database of Infectious Agents Potentially Transmitted by Transfusion

- Incubation period for blood transmission
- Disease severity
- Estimated transfusion risk in U.S.
- Current preventive measures, if any  
(donor history; serologic tests)

# Database of Infectious Agents Potentially Transmitted by Transfusion

- 29 viruses or virus groups
- 11 bacteria
- 8 parasites
- 2 prions

**Paradigm for  
Coordinated Action on  
Emerging Infectious Diseases**

# I. Detecting the Problem

- Finding reports in scientific literature, lay press, or scientific contacts
- Establishing what is known about the agent and its epidemiology
  - Literature search
  - Input from subject experts
  - Field investigations

## II. Establishing Risk for Blood

- Is the agent blood-borne?
- Asymptomatic viremia/bacteremia?
- What is the prevalence among donors?
- Are there known risk factors that could be criteria for donor exclusion?

## III. Laboratory Efforts

- Is there a suitable serological test or NAT?
- Obtaining field samples to test
- Obtaining archived or repository samples
  - Donor/recipient paired samples
  - Linked donor samples
- Identifying laboratories outside or inside government where testing could be done
- Encouraging test development if none exist

## IV. Outreach

- Interactions with blood and plasma industry
  - AABB, ABC, ARC, PPTA etc.
- Letters to blood and plasma establishments
- Scientific workshops
- Presentations at BPAC
- Development of guidelines



# EID Committee Members

FDA	Edward Tabor
CDC	Matthew Kuehnert
NIH	George Nemo (NHLBI)
	Harvey Alter (DTM)
	Paul McCurdy (HHS)