TEPHINET
TEPHINET: A Global network

- Training Programs in Epidemiology and Public Health Interventions
- Strengthen capacity from the inside out
- Rapid alert, response and surveillance capability
TEPHINET: Development

- History & development
- Outline the problem which it was designed to address
- Preventing, controlling and responding to communicable diseases
The problem:

- 70 years ago...
  - 1929: Penicillin
  - 1945 commercial production

- Infectious diseases beaten!!
  - Strep throat, pneumonia, septicemia, skin infections, wound infections, scarlet fever

- 1940’s & 1950’s:
  - Streptomycin, Chloramphenical, and Tetracycline
Emerging diseases: 1950s

- Confidence in new drugs
- Public health measures discontinued
- Capacity poor, fragmented
- Reliance antibiotics absolute

- *M. tuberculosis* resistant to Streptomycin

- 1953: multi-resistant *Shigella*
Vaccines:

- Salk and Sabin polio vaccines
- Measles, diphtheria, pertussis, Hib, tetanus
- Smallpox eradication (1979)
- **AIDS:** 51 countries by 1985
Building Capacity to Respond:

- Fear of biological warfare
- Lack of national and global capacity
- Radical US training program
  - apprentice-ship
  - field-based service
  - technical support
- Epidemic Intelligence Service
Field Epidemiology Training Model:

- Two years full-time
- National Health Departments,
- Service focus
- Skills:
  - surveillance,
  - outbreak alert & response
  - public health practice
Not just a training program!

- Build public health capacity
- System-wide changes
- Change system from within
- Strengthen public health institutions
Competencies of a Field Epidemiologist

- Epidemiologic methodology and analyses
  - outbreak investigation
  - disease surveillance systems
  - other public health projects
- Communication
  - written and oral
  - professional, bureaucratic, media, general public
- Professionalism
- Public health management
International developments

- Field Epidemiology Training Programs (FETPs)
- Support from CDC
- PHSWOWS, EPIGEPS
- The Rockefeller foundation
- Regional training:
  - Thailand, EPIET
Field Epidemiology Training Programs 1975 - 2001

1975
1980 - 90
Canada
Thailand
Indonesia
The Philippines
Peru
Saudi Arabia

1991 – 2001
Australia
Colombia
Italy,
Egypt
Zimbabwe
Spain
Uganda
EU (EPIET)
Hugary
Cote D'Ivoire
Germany
Ghana
Vietnam
Jordan
Japan
WHO
Brazil
Central
America
Korea
India
China
Field Epidemiology Training Programs

- EIS
- FETP
- EPIET
- PHSWOWS

- Graduates: >1,000
- Current fellows: 130
- EIS: >2,300
- EIS: 144
Global Challenges

- Methicillin resistant S. aureus
- HIV
- MDR-TB
- Ebola
- Hanta Virus
- HUS: E. coli O157, O111
- Equine Morbillivirus
- Nipah virus
Emerging infections: Outbreaks & surveillance, Australia

- Melioidosis humans; Milking goats
- Autochthonus melioidiosis
- Ross River Virus
- Gonococcal conjunctivits
- Ross River Virus / Barma Forest Virus
- Meningococcal disease serogroup A vaccine)
Emerging infections: Outbreaks & surveillance Australia

- Acute Post Streptococcal Glomerulo Nephritis
- Q fever (abattoir)
- Hendra virus
- Q fever (feral goats)
- Psittacosis
- Mycobacterium ulcerans
- Invasive non-toxigenic *C. diphtheria* endocarditis
- Pediatric Hemolytic Uremic Syndrome: *E. coli* O111

*feral goats*
Australia:

70 Graduates (11 Indigenous)
- 90% in workforce
- 216 outbreak investigations
- 125 surveillance evaluations
- 28 systems established
- 239 peer-reviewed papers
- 137 conference presentations
- 14 major projects - Indigenous health
- Impact on policy:
  - Immunisation, Food, emerging infections
Canada: trainees and graduates

- Health Canada
- Strengthened capacity
- Responsible for:
  - Outbreaks (waterborne, foodborne zoonoses)
  - Emerging infections (Hantavirus Pulmonary Syndrome (HPS))
  - HPS surveillance
  - Rapid response
- Policy:
  - E. coli O157, cyclospora, Raccoon Rabies, WNV
The Philippines: trainees and graduates

- Outbreak surveillance
- HIV seroprevalence, behavioural risks
- Earthquake in Bangio: rapid assessment
- Mt Pinatubo 1991:
  - active surveillance > 100,000 evacuees
Uganda and Thailand

- Uganda:

- Thailand:
  - National Program Managers
  - HIV control program
  - Measles
  - Hepatitis B
  - Regional training
A New Initiative

- David Heymann, WHO
- Mark White, CDC
- 1997 - Merieux Foundation
- Global Rapid Response
- Global Partnerships
- 1998: TEPHINET
TEPHINET Mission

To strengthen international public health capacity through initiating, supporting, and networking of field-based training programs that enhance competencies in applied epidemiology and public health practice.
TEPHINET Goals

- Support and strengthen existing programs
- Improve response to public health emergencies
  - link professionals with competencies in field epidemiology to responding agencies
- Assist the development of new programs
- Enhance applied research activities of programs
TEPHINET Structure

- Secretariat:
  - Executive Director
  - Program Officer

- Board of Directors:
  - Chair
  - 6 regional representatives
  - 2 ex-officio members
Factors Enabling TEPHINET

- Grass roots
- Critical mass
- Maturity of some programs
- Credibility and impact of individual programs in own countries
- Service- and action-oriented paradigm
- Common needs
- Support from key agencies
What's New at the TEPHINET Website!

TEPHINET Training Materials CD

EPIET Sixth Scientific Seminar and European Regional Meeting of TEPHINET

Location: Veyrier-Du-Lac, France
Date: October 19-20, 2001

TEPHINET 2002 Second International Conference

Location: Madrid, Spain
Date: June 2-6, 2002
Activities 2000-2001

- Participation of trainers in learning modules to advance technical skills
- Regional scientific conferences
  - Amman, Harare, Taipei, Cuzco, Annecy
- Workshops
  - developing case studies
  - writing manuscripts for peer-reviewed journals
- Quality assurance
  - standards, criteria, tools
TEPHINET members:

- Link individuals, institutions, governments
- Support Global responses
- Help establish new programs
- Share training resources
- Reinforce Global core competencies
- Build Global capacity for disease prevention and control
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