Health Security in Southeast Asia

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Health Risks & Security

• What is health security?
  – Awareness of possible threats
  – Monitoring likely threats
  – Minimizing likely threats
  – Coping with realized threats

Protecting your people from infections follows the same formula for protecting them from crime, terrorism, war and natural disasters!
Health Security in Southeast Asia

• Provision of competent health care
• Provision of safe health products
• Provision of information, products and services minimizing threats of acquiring infections, injury in accident, or attack

Prevention of physical harm the cornerstone of health security, rather than coping with harm done.
Who’s responsible for health security?

- Medical providers take care of the stricken
- Health security prevents being stricken
- Prevention integrated into routine operations
- Relegating health security to care providers like relegating physical security to the police

Health security rests in the hands of security managers!
Health Security Practice

- Identify principal threats
- Understand mechanisms of threats
- Implement practices that diminish threat
- Monitor compliance to practice

Health security focused on managing the ill: Locking the barn after the horses are gone.
Health Security Threats in SEAsia

• Infection
• Accidents
• Inadequate healthcare services
• Counterfeited healthcare products
• Attack (economic or political)
The Math on Infections in SEAsia

- Tropical climate
  - Inadequate healthcare infrastructure
  - Inadequate public health infrastructure
  - Inadequate income for hygiene investments
  - Dense population

= High Risk of Infectious Diseases
Snapshot of Health in SEAsia

<table>
<thead>
<tr>
<th>Country</th>
<th>Infant Mortality</th>
<th>Maternal Mortality</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>5</td>
<td>9</td>
</tr>
<tr>
<td>Singapore</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>Indonesia</td>
<td>32</td>
<td>370</td>
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<tr>
<td>Thailand</td>
<td>19</td>
<td>37</td>
</tr>
<tr>
<td>Vietnam</td>
<td>25</td>
<td>411</td>
</tr>
<tr>
<td>Cambodia</td>
<td>59</td>
<td>450</td>
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</tbody>
</table>

/1000 births /100,000 births
Infection Risk Management

• Where does threat come from?
• What are the most likely threats?
• How will my people get harmed?
• What can I do to prevent it?
• What do I do when harm occurs?

Dealing with infection threats raises the same questions as dealing with any threat.
What is an endemic infectious disease?

- A microbe that infects people on a regular basis
- Exposure to the microbe occurs by these means:
  - Insects
  - Food & water
  - Contagious (casual contact with infected people)
  - Sexually transmitted
  - Zoonosis (through contact with animals)
  - Deliberate attack

Recognizing routes of infection is first step in managing risk
# The Health Threats in SEAsia

**Insect-borne**
- Malaria
- Dengue
- Filariasis
- Japanese encephalitis

**Food & Water-borne**
- Typhoid
- Amebic dysentery
- Bacterial dysentery
- Leptospirosis

**Contagious & Sexual**
- TB
- HIV
- Hepatitis
- Influenza

**Zoonoses**
- Bird flu
- Herpes B
- Nipah virus
- Hanta virus
The Most Prevalent & Dangerous

- MALARIA
- DENGUE
- INFLUENZA
- TUBERCULOSIS
Malaria in SEAsia

- Parasite of blood
- Endemic all nations
- Tens of millions of cases
- Tens of thousands dead
- Rural areas risky
- Highly dangerous
Malaria Risk
Most Dangerous Aspects of Malaria

- Very common
- Very lethal
- Symptoms similar to flu
- Tricky diagnosis
- Drug resistance high & complex
- Counterfeit drugs may be common
The Good News on Malaria

- Preventable
- Curable
- No risk in urban areas
Dengue Fever

- Virus transmitted by mosquito
- No vaccine, no drug
- Case fatality approx. 1%
- Sharply rising risk
Dengue Risk Rising: SEAsia Nations
Most Dangerous Aspects of Dengue

• Trend toward rising risk
• Urban risk at daytime
• Symptoms similar to flu
• No drug, no vaccine available
• About 1% fatality rate, worse without adequate supportive care
The Good News on Dengue

- Adequate clinical care drastically reduces risk of death
- Risk manageable by countermeasures against mosquito at home & worksite
Influenza

- A highly contagious virus prevalent around the world, with very many millions of cases each year
- Typically kills about 40,000 Americans each year, most young children & the elderly
- Also very common in Indonesia
- H5N1 influenza virus not yet highly contagious, but is deadly & endemic in Southeast Asia
Most Dangerous Aspects of Influenza

- Highly prevalent & dangerous to high risk groups
- Potential for emergence of pandemic strain dangerous to all
The Good News on Influenza

- Vaccines & drugs available
- Pandemic unlikely to carry CFR >5%
- 1919 event extraordinary with CFR 5%
- Typical pandemic CFR <0.1%

Bird flu (H5N1) is not now capable of pandemic, and no sound basis for extrapolating its CFR to a pandemic scenario!
Tuberculosis

- Bacterium causes TB
- Any organ or tissue affected
- Transmitted by direct contact or through air
- Highly prevalent in SEAsia
- Indonesia & Cambodia among the top 10 highest risk of 200 nations evaluated

TB is mostly likely infection to be acquired by expats
Tuberculosis Risk
Most Dangerous Aspects of TB

- Very common
- Very contagious
- Difficult diagnosis
- Difficult treatment regimen
- Emerging super drug-resistant strains
- Rising HIV/AIDS may prompt soaring TB rates among all
The Good News on TB

- Risk manageable
- Very slow progression
- Rarely a serious problem with access to adequate healthcare services
- Treatment inconvenient but requires no hospitalization or disruption of routines
- A person being treated is no longer contagious
The Bad News on the Good News

• Manageable risks demand management
• Failure to manage = Failed due diligence
• Poor outcomes = Culpability
MANAGING RISK

• Awareness of threats
• Educating workforce
• Implementing risk reduction
  – Infection risk management practice
  – Provision of tools that protect
  – Provision of competent medical care
Failure of Risk Management: A Case Study

- Expatriate with MNC in Jakarta
- Weekend at Ujung Kulon, West Java
- Wife & two sons fall ill with flu-like symptoms
- Clinic sends them home
- All 3 slip into coma within two days
- Two days later: one boy is fine, other suffers permanent neurological damage, and the mother is dead
How did this MNC fail its employee?

- Failed to inform & educate on malaria risk
- Failed to monitor risk in accessible areas
- Failed to provide access to drugs, supplies or equipment that would have prevented malaria
- Failed to ensure competent care from its contracted provider

Death & permanent disability occurred as a direct result of this MNC failing its security obligation to this employee.
A PERSPECTIVE

- Germs kill more Southeast Asians and visitors to Southeast Asia than all bombs, bullets, machetes, plane crashes, car wrecks, and capsized ferries COMBINED.

- A rational security plan in Southeast Asia includes health security and accounts for the risk of infectious diseases.
Conclusions

- Health security the responsibility of security professionals
- Probability of health threats dominant over conventional security threats
- Infection threats dominant in SEAsia
- Risk of principal infection threats manageable
- Awareness of threats required to manage risk
- Risk management integrated into operations
- Malaria, dengue fever, influenza & TB the most important threats in most settings