Global Health Care Quality; a Public Health Perspective

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How do we define “Global” healthcare?

Matching capacity to care in Resource-limited settings

• Levels of capacity:
  • Basic safety: water, shelter, light
  • Sanitation, protective equipment, and disinfection
  • Microbiology laboratory capacity, sterilization, reliable water and electricity, medical records, professional nursing...

• Limited vs lost capacities
Prioritizing infection prevention capacity

Capacity should be tailored to activities, e.g.:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Additional Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral therapy</td>
<td>Security, record keeping</td>
</tr>
<tr>
<td>Wound care</td>
<td>+ gloves, suture, sharps management etc.</td>
</tr>
<tr>
<td>Obstetrics (uncomplicated)</td>
<td>+ PPE, placenta management</td>
</tr>
<tr>
<td>Surgical therapy</td>
<td>+ Sterilization, surgical PPE</td>
</tr>
<tr>
<td>ICU, hemodialysis, etc</td>
<td>+ Environmental control, water safety, microbiology</td>
</tr>
</tbody>
</table>

Translational Challenges:
Importation of technology without maintenance and related IPC capacity.
### Unsafe Injections:

<table>
<thead>
<tr>
<th>Region</th>
<th>Number of Injections per Person and per Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>South America</td>
<td></td>
</tr>
<tr>
<td>Central Europe</td>
<td></td>
</tr>
<tr>
<td>Russia</td>
<td></td>
</tr>
<tr>
<td>China and Pacific</td>
<td></td>
</tr>
<tr>
<td>South East Asia</td>
<td></td>
</tr>
<tr>
<td>East and Southern Africa</td>
<td></td>
</tr>
<tr>
<td>Eastern Europe and Central Asia</td>
<td></td>
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<tr>
<td>South Asia</td>
<td></td>
</tr>
<tr>
<td>Middle East Crescent</td>
<td></td>
</tr>
</tbody>
</table>

*Global burden of disease study, 2000*
Emerging diseases follow a consistent pattern:

1) Disturbance of, intrusion into, or importation from an ecologic system
2) Primary insertion into human host(s)
3) Secondary spread among humans
4) Amplification in healthcare settings
Outbreak Response vs Routine Practices

- Short term interventions for \textit{outbreak control}
  - Brief urgent effect
  - Importation of resources and personnel
  - Cohort and Isolate
  - Limited residual
- Establishment of \textit{new capacities}
  - Ongoing effect
  - Regional resources and personnel
  - Extensive training, commitment of leadership
  - \textit{Retention of capacity}

Yearly deaths attributable to AMR, 2050

- North America: 317,000
- Latin America: 392,000
- Africa: 1,156,000
- Europe: 4,730,000
- Other: 22,000

Source: Review on Antimicrobial Resistance 2014
AMR Action Package: Core Activities

- Develop sound national policies
- Detect AMR through improved lab testing
- Track AMR through surveillance and reporting
- Build workforce capacity for AMR prevention through strengthening infection prevention and control and stewardship
- Contain AMR by responding to outbreaks and threats

- Advocacy at the highest levels for stronger IPC to contain AR in healthcare
- Global policies for IPC, based on the level of care provided
- Country-level leadership to strengthen national and regional IPC programs
- Regional and global cooperation to track and prevent transmission of AR

Focus on long-term national programs:

<table>
<thead>
<tr>
<th>Technical Assistance Area</th>
<th>Countries (2015-2018)</th>
</tr>
</thead>
<tbody>
<tr>
<td>National policies and plans</td>
<td>Kenya, India, Thailand, Vietnam, Pakistan, Bangladesh, Ethiopia, Tanzania, Cambodia</td>
</tr>
<tr>
<td>Lab strengthening</td>
<td>India, Vietnam, Kenya, Georgia, Sénégal, Pakistan, Ethiopia, Tanzania</td>
</tr>
<tr>
<td>National surveillance systems</td>
<td>India, Vietnam, Kenya, Georgia, Thailand, Sénégal, Pakistan, Bangladesh, Ethiopia, Cambodia</td>
</tr>
<tr>
<td>Workforce strengthening- IPC and stewardship</td>
<td>Sierra Leone, Liberia, Kenya, Vietnam, India, Nigeria, Georgia, Thailand, South Africa</td>
</tr>
<tr>
<td>Outbreak response</td>
<td>India, Thailand, South Africa, Fiji</td>
</tr>
</tbody>
</table>

1. Policies, Plans, Guidelines

- Global level
- National level
  - National AMR action plan
  - National AMR surveillance strategy
  - National IPC guidelines
  - National healthcare policies
2. Lab strengthening
- Identify laboratories for national surveillance
- Assess current microbiology capacity
- Work with partners to target capacity building

Remote Training Program for Laboratorians

3. National Surveillance Systems
- Two main types of AMR surveillance:
  - Lab-based
  - Clinical/healthcare
- Submission of data
  - WHONet, DHIS2, other systems
- Analysis and utilization of data
Ministry of Health (MoH) Involvement in Capacity Building

- New AMR unit at MoH
  - Physician, IT officer, Epidemiologist, Planning officer
- Delegation to CDC
  - Vice Minister and other MoH and hospital leadership

Challenges for Infection Prevention

- Infrastructure
- Resources and Maintenance
- Personnel
  - Training and retention
- National priorities
  - Crisis response vs capacity building

Challenges for Infection Prevention

- Infrastructure
- Resources and Maintenance
- Personnel
  - Training and retention
  - Sustainability
- National priorities
  - Crisis response vs capacity building
Thank you!