Overcoming Barriers to Access to Medicines and Health Technologies for Cancer

Stronger health systems. Greater health impact.

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UICC
Montreal, Canada
August 27-30, 2012
Outline

- **Barriers to access to cancer medicines and technologies**
- **Pharmaceutical systems approach**
- **Affordable access**
  - Price reduction strategies
  - Procurement options
  - Quality, safety, and regulation
  - Non-price barriers to palliation and pain control
- **Engaging the private sector**
  - Access to existing medicines, vaccines, and technologies
  - Product innovation
Cancer treatment is unaffordable in most low and many middle income countries

**Philippines:** cervical cancer treatment x2 annual income

**Pakistan:** chemotherapy for leukemia = $20,000, x7 annual income

**Rwanda:** treatment of some cancers, if available, x50+ annual income

- In most low income countries 50-90% of medicines out of pocket; includes those for chronic conditions
- 17/24 WHO essential cancer medicines unavailable or unaffordable in developing countries
- Cancer medicines remain unaffordable in sub-Saharan Africa, India, Latin America, and middle-income countries such as Egypt and Morocco.

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For many treatable cancers, chemotherapy costs are a major share of total treatment costs.

**Nigeria: Direct costs of treating a child with Burkitt’s Lymphoma**

<table>
<thead>
<tr>
<th>Cost per child treated (US $)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laboratory tests - First diagnosis</td>
<td>18.90</td>
</tr>
<tr>
<td>Cytotoxic drugs</td>
<td>103.80</td>
</tr>
<tr>
<td>Laboratory tests - Follow-up</td>
<td>9.60</td>
</tr>
<tr>
<td>Hospital and other costs</td>
<td>31.50</td>
</tr>
<tr>
<td>Total direct cost</td>
<td>163.80</td>
</tr>
</tbody>
</table>

Pharmaceutical systems approach to access

Information-sharing, networking, coordination of stakeholders for access to cancer care and control between WHO, IARC, GTF.CCC, IUCC, IAEA, INCTR, others

**Selection**
- Essential package for cancer care and control
- Guidelines for prevention, detection, treatment, and palliative care & essential medicines list for cancer
- Adapt guidelines for local settings; consider supply and maintenance for equipment
- Revise guidelines as needed based on feedback/experience

**Pricing**
- Price information exchange for cancer products
  - Generic/multi-source products: bulking purchasing, generic substitution
  - Brand/single-source products: price negotiation, donations, direct price controls
- All products: Elimination/reduction of tariffs, taxes, fees
- Manufacturer engagement for brand and generics
- Contain distribution and dispensing mark-ups
- Supply to national/local cancer programs

**Procurement**
- Innovative financing: local and global
- Develop global/regional procurement mechanism/s
- Use local procurement mechanism/s as appropriate
- Ensure supply and maintenance contracts for diagnostic, radiotherapy, other equipment
- Innovative service delivery

**Quality, Safety, Regulation**
- Include quality experience in global price monitoring
- Quality assurance process linked to procurement mechanism
- Expedited registration for products not available

**Global/Regional Level**

**National/Local Level**

Management Sciences for Health
Cost of cancer medicines – up to 10-fold variation in costs among generic sources

<table>
<thead>
<tr>
<th>Medicine</th>
<th>Cost Range ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vincristine (Kaposi's sarcoma)</td>
<td>$0 - $500</td>
</tr>
<tr>
<td>Methotrexate (ALL)</td>
<td>$0 - $1,000</td>
</tr>
<tr>
<td>Cyclophosphamide (Burkett's)</td>
<td>$0 - $1,500</td>
</tr>
<tr>
<td>Cisplatin (cervical)</td>
<td>$0 - $2,000</td>
</tr>
<tr>
<td>Vinblastine (Hodgkin's)</td>
<td>$0 - $2,500</td>
</tr>
<tr>
<td>Tamoxifen (breast)</td>
<td>$0 - $3,000</td>
</tr>
<tr>
<td>Asparaginase (ALL)</td>
<td>$0 - $3,500</td>
</tr>
<tr>
<td>Dacarbazine (Hodgkin's)</td>
<td>$0 - $4,000</td>
</tr>
<tr>
<td>Anastrozole (breast, hormonal)</td>
<td>$0 - $4,500</td>
</tr>
<tr>
<td>Carboplatin (ovarian)</td>
<td>$0 - $5,000</td>
</tr>
<tr>
<td>Mercaptopurine (ALL)</td>
<td>$0 - $5,500</td>
</tr>
</tbody>
</table>

Management Sciences for Health
99% reduction of ARV prices through “leap frog” of competition and differential pricing.
Price reduction strategies for cancer medicines and vaccines

Generic/Multi-Source
- Competitive purchasing
- Pooled procurement
- Transfer of technology

Brand/Single-Source
- Differential pricing
- Donations
- ‘Licensed competition’
- Compulsory licensing
# Global Procurement Mechanisms

<table>
<thead>
<tr>
<th>Program</th>
<th>Focus</th>
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</thead>
<tbody>
<tr>
<td><strong>Multilateral / Donor-Supported</strong></td>
<td></td>
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<tr>
<td>Stop TB/Global Drug Facility (GDF)</td>
<td>Tuberculosis</td>
</tr>
<tr>
<td>Global Fund Voluntary Pooled Procurement Program (VPP)</td>
<td>AIDS, TB, Malaria – medicines, diagnostics, bednets</td>
</tr>
<tr>
<td>PEPFAR/USAID Supply Chain Management System (SCMS), Partnership for Supply Chain Management</td>
<td>AIDS medicines and diagnostics</td>
</tr>
<tr>
<td>Asthma Drug Facility</td>
<td>Asthma medicines</td>
</tr>
<tr>
<td>UNICEF</td>
<td>Essential medicines, vaccines, health commodities for children</td>
</tr>
<tr>
<td><strong>Non-profit procurement agencies (illustrative)</strong></td>
<td></td>
</tr>
<tr>
<td>• Action Medeor • ECHO • IDA Foundation</td>
<td>Essential medicines and other health commodities; in some cases health-related equipment</td>
</tr>
<tr>
<td>• IMRES • Mission Pharma • Orbipharma • Trimed</td>
<td></td>
</tr>
</tbody>
</table>
Engaging the Private Sector — Examples of Current and Needed Actions

Access to existing medicines, vaccines, technologies

• South-south clinical trials using existing agents to treat other cancers – Cuba with 20 LMC, 7 developed countries with nimotuzumab
• North-south transfer of production technology – Eli Lilly technology transfer for off-patent MDR-TB to producers in China, India, S.Africa

Product innovation

• Expansion of oral formulations for existing generic agents would reduce burden on staff, patients, transport, and increase treatment completion
• Synthetic paclitaxel and synthetic derivatives (currently high cost because it’s sourced from the bark of the Pacific yew tree)
• Among 19 global health challenges, cancer received 2nd highest number of applications (26) to commercialize low cost health technologies (WHO)
• ‘Frugal innovation’ or ‘reverse innovation’ in/for India, Chinese, other large low-income markets for radiotherapy, ultrasound, mammography
Major Recommendations

1. **All products** – WHO/inter’l clinical guidelines and essential medicines lists
2. **Generic meds & vaccs** – sources & prices information, competitive pooled procurement from qualified suppliers
3. **Single-source meds & vaccs** – negotiation, donation, ‘licensed competition’
4. **Technologies for detection, diagnosis, treatment** – training, standardization, sources and prices info, support, telemedicine
5. **Procurement** – add cancer medicines to existing global and regional mechanisms – no new cancer-specific procurement organizations
6. **Quality, safety, regulation, palliation, pain control** – each are vital
7. **Private sector** – active engagement to expand access to existing products & encourage targeted ‘frugal’ innovation
Stronger health systems. Greater health impact.

Saving lives and improving the health of the world’s poorest and most vulnerable people by closing the gap between knowledge and action in public health.