WHO role in helping governments to attain equity and justice in the provision of cancer care

Dr Marily Corbex
Division of Non Communicable Diseases

Conflict of interest: none to declare
Disaggregating the UHC cube: Putting equity into the picture

The UHC cube: a national average

Variation by socio-economic status

Roberts et al. 2015 - “Disaggregating the UHC cube: Putting equity into the picture”
Inequalities are not decreasing

Share of national income for the 50% poorer people in each region/country

In 2016, 12% of national income was received by the Bottom 50% in Sub-Saharan Africa.
Equity is a political choice

% of GDP dedicated to health

- Denmark
- Belgium
- Finland
- Greece
- Romania

Adult in good health / personal income level

- Low income
- Total population
- High income

EU country profiles: https://ec.europa.eu/health/state/country_profiles_en
Evolution of life expectancy by quintile of income since 1980 in the USA

Inequality in life expectancy widens for women
Wealthier women can expect to live longer than their parents did, while life expectancy for poor women may have declined.

Life expectancy for 50-year-olds in a given year, by quintile of income over the previous 10 years

Source: National Academies of Science, Engineering and Medicine
How can you help -with help of WHO- your government to deliver UHC for cancer?

• Advocacy to get more resources for cancer
• Attention to inequalities
  → Data «by socio-economic level»

• How to best spend the money (WHO guidance)
  → track suboptimal resource allocation
Frequent inefficiencies in countries

Great way to waste resources 1: No / bad NCCP
- No / wrong prioritization
- NCCP without action plan, without budget (90%)

Great way to waste resources 2: Screening
- Non-evidence based screening (wrong cancers, wrong age groups)
- Prioritize screening over early diagnosis
- Screening offered, diagnosis and/or treatment not covered
Frequent inefficiencies (2)

Great way to waste resources 3: Techno-mania
• Costly machines (without buildings / training / maintenance…)

Great way to waste resources 4: Drugs
• No national protocols, no HTA, no/outdated list of essential medicine
• Under-developed of palliative care
Increasing cost of cancer medicine

Why? The pharma industry has the power to dictate the price

Median monthly cost of new cancer drugs (USA)

TRIPS agreements on Intellectual property

Why? The pharma industry has the power to dictate the price
**Myth 1:**
“New cancer medicines are expensive to produce”

<table>
<thead>
<tr>
<th>Medicine</th>
<th>Originator price introduction (UK or US)</th>
<th>Cost of production</th>
</tr>
</thead>
<tbody>
<tr>
<td>pomalidomide</td>
<td>£115,800 (1 year)</td>
<td>£100</td>
</tr>
<tr>
<td>imatinib</td>
<td>$30,000 - -&gt;$100,000 (1 year)</td>
<td>$119-159</td>
</tr>
<tr>
<td>trastuzumab</td>
<td>$54,000 (1 year)</td>
<td>$242</td>
</tr>
</tbody>
</table>

www.medicineslawandpolicy.org
Myth 2: “cancer medicines are expensive because R&D costs have to be recovered”

Lazonick et al., 2016
Myth 2: “cancer medicines are expensive because R&D costs have to be recovered”

- Carl June, the principal inventor of Kymriah (tisagenlecleucel), placed its introduction cost at $20,000 per infusion to ideally cover the R&D disbursement and production costs.
Conclusion

High price cancer medicine:

«the industry has no interest in discussing or negotiating»
→ need for global advocacy

Beware!

• Waste of resources
• Inequalities

→ Principle of progressive universalism:

“Progress should benefit the poorest at least as much as the richest”
THANK YOU
Private wealth and public wealth in rich countries
Top 1% and Bottom 75% shares of global wealth, 1980–2017: China, Europe and the US


In 2016, 33% of global wealth was owned by the Top 1%. The evolution of global wealth groups from 1980 to 2017 is represented by China, Europe and the US.
Inequalities are not decreasing

Share of national income for the top 10% richer people in each region/country

In 2016, 55% of national income was received by the Top 10% earners in India, against 31% in 1980.
«Early diagnosis» prepare «screening»

Time:
- Initial Screening test
- First symptoms
- First visit to Doctor
- Screened positive
- Health system ready to deal with it
- Diagnosis
- Treatment

Available, rapid, efficient,
Increasing cost of cancer medicine

Part disbursed on cancer drugs increase in all countries

<table>
<thead>
<tr>
<th>Country</th>
<th>% of total medication budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>France</td>
<td>8%</td>
</tr>
<tr>
<td>Spain</td>
<td>12%</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>20-30%</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>&gt;30%</td>
</tr>
</tbody>
</table>
High cost

= high value?

Monthly and Median Costs of Cancer Drugs at the Time of FDA Approval
1965-2016

Source: Peter B. Bach, MD, Memorial Sloan Kettering Cancer Center
Lobbying expenses to influence political decisions

US: $200M /year

EU: €40M /year
Orphanization
“Personalized medicine”

40% for cancer (2018)

Outrageous prices of orphan drugs: a call for collaboration
Implementation of priority interventions

- Vaccination
- Cervical screening
- Pathology
- Cancer centre
- Radiation therapy
- Surgery
- Chemotherapy

Services available & Coverage >50%
The road towards universal health coverage: Attaining equity and justice in the provision of cancer care

Role of Partnerships in Cancer Care

Carlos Rodriguez-Galindo, MD
EVP and Director, St. Jude Global
Chair, Department of Global Pediatric Medicine
St. Jude Children’s Research Hospital

No conflicts of interest
Pediatric Cancer in Context
Global Disparities

**WHY IT MATTERS**

**MORE THAN 300,000 CHILDREN AND ADOLESCENTS** are diagnosed with cancer worldwide each year.

The greatest indicator of cure for children with cancer **IS WHERE THEY LIVE.**

**Low- and middle-income countries**

240,000 DIAGNOSED

1 out of 5 are CURED

**High-income countries**

60,000 DIAGNOSED

4 out of 5 are CURED

**WHY ARE CURE RATES LOW IN SOME NATIONS?**

- Limited access to high-quality, affordable treatment
- High treatment refusal and abandonment rates due to socioeconomic and cultural barriers
Pediatric Cancer In Context
Prioritization and Resource Allocation

Healthcare Priorities in LMIC

Communicable Diseases
- Vaccination and Prophylaxis
- Sanitation
- Clean Water
- ...

Non Communicable Diseases
- Heart diseases
- Diabetes
- Obesity
- Cancer
- ...

Pediatric Cancer
Due to high-stakes in pediatric oncology, POU attempt to offer subspecialty care that is inherently:
- Demanding
- Complex
- Time-consuming
- Expensive
- Multi- and inter-disciplinary

The government is dealing with:
- High volumes
- Competing needs
- Population changes
- Increased burden of non-communicable diseases
- Political changes
- Budgetary constraints
- Fragmentation concerns
- Accountability issues
Building Pediatric Oncology Programs
Role of Partnerships in Cancer Care

Partnerships can facilitate building sustainable programs through:

• Training, education
• Prioritization of resources
• Goal setting and timelines
• Technology transfer
• Promote leadership, management
• Build research capacity
• Change medical culture to one that fosters planning, multidisciplinary care, communication and team work
Building Pediatric Oncology Programs
Role of Partnerships in Cancer Care

Education
- Early diagnosis
- Public awareness
- Early referrals
- Education
- Basic treatment guidelines
- Palliative care

Capacity Building
- "Cure the Curable"
- Build infrastructure
- Improve diagnosis
- Maximize twinning
- Palliative care

Research
- National/Regional Center of Excellence

Level 1
Level 2
Level 3
Level 4

% Cure
Building Pediatric Oncology Programs
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Level 1 Level 2 Level 3 Level 4

% Cure

Building Pediatric Oncology Programs
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**Research**
- Modern treatments
- Multidisciplinary
- Advanced technology
- Palliative care

**Level 1**
Increase in institutional self-esteem

**Level 2**
Increase in strength of pediatric health care systems

**Level 3**
“Contagious” effect on other programs

**Level 4**
National/Regional Center of Excellence

**Govern**
Government

**Local Foundation**
International Partners

**Hospital and Pediatric Oncology Unit**

**Department of Global Pediatric Medicine**
St. Jude Children's Research Hospital

St. Jude Global
Modern treatments
Multidisciplinary technology
Palliative care

Early diagnosis
Public awareness
Early referrals
Education
Basic treatment guidelines
Palliative care

“Cure the Curable”
Build infrastructure
Improve diagnosis
Maximize twinning
Palliative care

National/Regional Center of Excellence

B

Financial Support (%)

0 20 40 60 80 100

0 1 2 3 4 5 6 7 8 9 10

Time (years)

International agencies
Local grassroots organizations
Government agencies

Modern treatments
Multidisciplinary
Advanced technology
Palliative care

“Cure the Curable”
Build infrastructure
Improve diagnosis
Maximize twinning
Palliative care

Early diagnosis
Public awareness
Early referrals
Education
Basic treatment guidelines
Palliative care

National/Regional Center of Excellence

The Efficiency Curve

Net benefit: Survival

Financial Support (%)

Net cost: $$, Human resources, etc.

Little gain with major investment

Medium gain with moderate investment

Great gain with minimal investment

Friedrich, P, Rodriguez-Galindo, C Work in progress
Building Pediatric Oncology Programs
Role of Partnerships in Cancer Care: Foundations

Government
• Regulation: rights, drugs, services, policies
• Financial support: personnel, drug procurement
• Infrastructure: public services, primary care
• Early diagnosis: education, referrals

Foundation
• Advocacy: local, national, international
• Patient support: psychosocial, education
• Financial support: in partnership with government and hospital
• Support for growth

Hospital
• Patient care
• Organization of referrals, satellites, networks
• Implementation of quality systems
• Academia

Governance:
Government
Foundation
Hospital
Local Foundations & International Partners
Hospital and Pediatric Oncology Unit

Role of Partnerships in Cancer Care: Foundations

Department of Global Pediatric Medicine
St. Jude Children’s Research Hospital

St. Jude Global
# Building Pediatric Oncology Programs

## Role of Partnerships in Cancer Care: St. Jude Model

<table>
<thead>
<tr>
<th>Financial Support</th>
<th>St. Jude</th>
<th>Foundation</th>
<th>Government</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personnel</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physicians</td>
<td>+++</td>
<td>+/-</td>
<td>+++</td>
</tr>
<tr>
<td>Nurses</td>
<td></td>
<td>+</td>
<td>+++</td>
</tr>
<tr>
<td>Data Managers</td>
<td>+++</td>
<td>+/−</td>
<td>−</td>
</tr>
<tr>
<td>Nurse Educators</td>
<td>+++</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>+++</td>
<td>−</td>
<td>+/-</td>
</tr>
<tr>
<td>Data Management</td>
<td>+++</td>
<td>+/-</td>
<td>+/-</td>
</tr>
<tr>
<td>Treatment</td>
<td>+/-</td>
<td>++++</td>
<td>++++</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>−</td>
<td>+++</td>
<td>++++</td>
</tr>
<tr>
<td>Psychosocial Support</td>
<td>+/-</td>
<td>++++</td>
<td>+/-</td>
</tr>
</tbody>
</table>
Role of Partnerships in Cancer Care
The Central American Example

1962

1990s

Central America

Twinning

Improved Hospital Infrastructure
Dedicated Pediatric Oncologists
Dedicated Oncology Nurses
Infection Control
Multidisciplinary Care
Evidence-based medicine
“best possible treatment”
Social Support - Foundations

Decreased Abandonment
Decreased Toxicity
Improved Cure Rates
Role of Partnerships in Cancer Care
The Central American Example

- **1962**: Central America
- **1990s**: Guatemala, Honduras, El Salvador, Nicaragua, Costa Rica
- **2000s**: Training workforce, Strategic planning, Research capacity, Protocol development, Financial support, Advocacy

**AHOPCA**
Asociación Hemato-Oncológica Pediatría CentroAmericana

**Location**
- Guatemala
- Honduras
- El Salvador
- Nicaragua
- Costa Rica
- Panama
- Dominican Republic
- Haiti
- Cuba
The Central American Example
AHOPCA Context-Adapted Clinical Trials

Hodgkin Disease


Wilms Tumor

The Central American Example  
Decreasing the Workforce Gap: Partnership in Training

Central America Fellowship Training Program  
(UNOP, Guatemala)

- 2003 – 2018: 23 graduates
- 90% of pediatric oncologists in the region
- > 50% increase in number of patients
- ACGME-I accreditation in progress
THREE RELATIVE PERFORMANCE SCENARIOS:

- **Low relative performance**
  - Scenario 1: ACM is higher than expected based on U5M accomplishments

- **Proportional performance**
  - Scenario 2: ACM is proportional to that expected based on U5M accomplishments

- **High relative performance**
  - Scenario 3: ACM is lower than expected based on U5M accomplishments

P. Friedrich, unpublished
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P. Friedrich, unpublished
Role of Partnerships in Cancer Care

- Regional and international partners, and local foundations play a key role in the development of sustainable models in partnership with government
  - Capacity-building, education and research
  - Advocacy, priority setting, financial support

- Key dimensions where partnerships may help
  - Level-adjusted objectives
  - Incorporation of metrics and performance
  - Gradual implementation of initiatives and progression through levels
  - Sustainability and business models
  - Key dimensions
    - Quality assessment and implementation
    - Training and capacity building
    - Incorporation of research methods
Thank You!

carlos.rodriguez-galindo@stjude.org