Sustainable Transition from Aid-towards value for money for equitable outcomes and moving beyond “disease silos”: the case of NCDIs in Ethiopia

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Outline

1. Background
2. Disease burden
3. Health care Financing
4. NCDIs services
5. Priority setting of NCDI interventions
6. Integration of NCDI services into existing health care system
7. Fiscal space and budget expansion
8. Conclusions and recommendations
Background

• Estimated population > 107 million in 2018  
  (UNPD)

• Life expectancy at birth in Ethiopia is 65 years
  — Male: 63 years  
  — Female: 67 years  
  (WHO, 2015)

• In the last decade, Ethiopia’s GDP is expanding at around 10% per year and had a GDP per capita of $US 707 in 2016  
  (World Bank)

• With the current trend, Ethiopia is expected to become LMIC by 2025 and MIC by 2035.
Disease burden in Ethiopia

- The population of Ethiopia suffers from triple burden of disease:
  - Communicable, maternal, neonatal and nutritional (CMNN)
  - Noncommunicable diseases (NCDs)
  - Injuries

  (IHME, 2016)

- The burden of NCDs is on the rise, accounting for 38% of the total DALYs lost in 2016 (18% in 1990) and projected to rise to 65% by 2040.

  (IHME and Bollyky et al, 2017)
Disease burden in Ethiopia

Trend of Disease burden in DALYs, Ethiopia

CMNN Conditions | NCDs | Injuries

- 1990
- 2016
- 2040
Health care Financing in Ethiopia

• Ethiopia has endorsed “one plan”, “one budget” and “one report” approach since 2007.

• All actors in the health sector are expected to harmonize and align their actions with the country’s priorities.

• The government and most development partners in Ethiopia are signatories of IHP+ and have a Joint Financing Arrangement (JFA) for pooling of health funds.
Health care Financing in Ethiopia...

Per capita health expenditure in Ethiopia, 1995/96-2013/14

Amount in $US

Health Accounts Years

1995/96 1999/00 2004/05 2007/08 2010/11 2013/14

4.5 5.6 7.1 16.1 20.77 28.65
Health care Financing in Ethiopia...

Financing sources of health expenditures in Ethiopia

Expenditure in $US (billions)

<table>
<thead>
<tr>
<th>Health Accounts Years</th>
<th>Government</th>
<th>Household</th>
<th>Rest of the World</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007/08</td>
<td>0.2</td>
<td>0.4</td>
<td>0.4</td>
</tr>
<tr>
<td>2010/11</td>
<td>0.3</td>
<td>0.5</td>
<td>0.5</td>
</tr>
<tr>
<td>2013/14</td>
<td>0.8</td>
<td>0.7</td>
<td>0.8</td>
</tr>
</tbody>
</table>
Health care Financing in Ethiopia...

• Total health expenditure (THE) in 2013/14 in Ethiopia was US$ 2.52 billion.
• This was 4.73 percent of the country’s GDP and 6.7 percent of the total government expenditure (TGE).
Health care Financing in Ethiopia...

- HIV/AIDS and other STDs, Tuberculosis and Malaria receive 21% of the THE but account only to 10% of the total disease burden (DALYs) in 2016 in Ethiopia.

- NCDs and Injuries account to 46% of the total disease burden in 2016 in Ethiopia but receive only 15% of the THE.

- 70% of NCD services in Ethiopia are financed by OOP expenditures.
NCD services in Ethiopia

• Access to quality NCDs services is very low in Ethiopia:
  • 60% of patients with high blood pressure in Ethiopia were never diagnosed.
  
  • Among identified cases with hypertension, only 28% were taking medications and most (74%) had poor control.
  
  • 84% of individuals (particularly in rural areas) with high fasting blood sugar were undiagnosed.
  
  • Among identified cases as having DM and received treatment, only 24% achieved blood sugar control
NCD services in Ethiopia...

- Ethiopia is among countries experiencing the most rapid shift on NCD burden
- Low priority for NCDs and least prepared to tackle the fast expanding burden.
- Recognizing these facts and to address the problem, FMoH-Ethiopia in 2016 established a National NCDIs commission to assess the magnitude of the problem and to come up with recommendations. The commission has produced a report.
- The FMoH has also decided to revise the 2005 Essential health services package commensurate with recent developments
NCD services in Ethiopia...

• The inclusion of NCDI services in the essential health services package (EHSP) is a step forward on the path to UHC

• Primary health care will be the main delivery platform for EHSP in Ethiopia

• Quality, equity, financial risk protection and efficiency are core issues
Priority setting of essential NCDI interventions in Ethiopia

• NCDIs encompass many different conditions, and a large number of effective interventions could be considered for scale up.

• Among the available interventions, many are expensive and resource demanding, such as haemodialysis for CKD or advanced cancer treatment, therefore priority setting is key.

• Selection of a package of essential interventions were based on WHO recommendations and more recent evidence from the Disease Control Priorities (DCP) project.
Priority setting - principles

• Three general principles were used:

1. CEA: helps maximize total population health by selecting highly CE interventions for scale-up

2. Priority to the worse off: extra weight to the needs of those who are disadvantaged in regards to health outcomes, access to care, etc

3. Financial risk protection
Priority setting process

Step 1:
Identify relevant interventions and evidence

Step 2:
Select a package of priority services
(apply principles + deliberation)

Step 3:
Estimate costs and fiscal space

Step 4:
Review package

Final package
Priority setting

• Three categories of interventions were identified:

  1. Highest priority NCDI interventions: interventions with CE ratio of $<0.5 \times \text{GDP per capita}$
  2. High priority NCDI interventions: interventions with CE ratio of $<0.5-1 \times \text{GDP per capita}$
  3. NCDI interventions to be implemented at a later stage: interventions with CE ratio of $>1 \times \text{GDP per capita}$
Priority setting-Result

• An initial list of 235 relevant interventions were identified.
• 90 interventions were identified as highest priority NCDI interventions on conditions including cancer, diabetes, cardiovascular diseases, chronic respiratory diseases, mental, neurologic and substance use disorders, essential surgery and multi-sectoral interventions.
• Around 70 interventions were classified as high priority interventions.
• The rest were classified as interventions to be implemented at an even later stage.
• The highest priority NCDI interventions were then selected for costing using OneHealth tool assuming 30% coverage level over the next five years.
Priority setting-Result

• When the scale up is completed, the annual additional cost of the package is estimated at 550 million USD, corresponding to 4.7 USD per capita.
## Priority setting-Result

Incremental costs by major category. Costs are reported in 1000 USD.

<table>
<thead>
<tr>
<th>Interventions</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cancer</td>
<td>7 494</td>
<td>15 406</td>
<td>23 748</td>
<td>32 496</td>
<td>41 649</td>
</tr>
<tr>
<td>Cardiovascular diseases and diabetes</td>
<td>46 438</td>
<td>95 429</td>
<td>147 017</td>
<td>201 292</td>
<td>258 307</td>
</tr>
<tr>
<td>Mental, neurological and substance use disorders</td>
<td>12 231</td>
<td>25 773</td>
<td>40 708</td>
<td>57 106</td>
<td>75 025</td>
</tr>
<tr>
<td>Surgery</td>
<td>22 377</td>
<td>45 865</td>
<td>70 526</td>
<td>96 424</td>
<td>123 622</td>
</tr>
<tr>
<td>Other interventions: Provision of glasses for severe refractive disorders</td>
<td>127</td>
<td>258</td>
<td>392</td>
<td>529</td>
<td>668</td>
</tr>
<tr>
<td>Total intervention cost</td>
<td>88 667</td>
<td>182 731</td>
<td>282 392</td>
<td>387 846</td>
<td>499 271</td>
</tr>
<tr>
<td>Programme cost</td>
<td>8 867</td>
<td>18 273</td>
<td>28 239</td>
<td>38 785</td>
<td>49 927</td>
</tr>
<tr>
<td>TOTAL COSTS</td>
<td>97 533</td>
<td>201 004</td>
<td>310 631</td>
<td>426 631</td>
<td>549 198</td>
</tr>
<tr>
<td>Cost per capita (USD per capita)</td>
<td>0,9</td>
<td>1,8</td>
<td>2,8</td>
<td>3,7</td>
<td>4,7</td>
</tr>
</tbody>
</table>
Integration of NCDI services into existing Health Care System (HCS)

- Delivery of the NCDI services is primarily at primary care level (80%), but some are delivered at higher levels.
- Services will be delivered integrated with existing ones.
Integration of NCDI services into existing Health Care System (HCS)...

- HCS, especially PHC in Ethiopia is designed to address emergencies and health conditions that require acute care
- HCS strengthening is key for ensuring UHC for NCDIs
- The concept of chronic care was introduced to PHC through HIV services:
  - Decentralized care
  - Multidisciplinary approach through task shifting and task sharing
  - Simplification of protocols and guidelines
  - Availing essential drugs and diagnostic packages
  - Laboratory networking
  - Harmonized recording and reporting systems
  - Facilitated referral
Integration of NCDI services into existing Health Care System (HCS)...

- Opportunities and challenges across each of the six key health-systems components during NCDI services integration and scale-up in Ethiopia

<table>
<thead>
<tr>
<th>Health systems component</th>
<th>Opportunities</th>
<th>Challenges</th>
</tr>
</thead>
</table>
| Leadership and governance                    | • NCD prevention and control unit established at FMoH                         | • Not replicated at regional level  
• Multi-sectoral coordination                   |
| Health workforce                              | • Much to be gained by improving efficiency  
• Some NCDs guidelines are available  
• Some PHC are providing the NCD services    | • Inadequate number and staff mix  
• Knowledge and skill gap  
• Staff attrition  
• CRC                                         |
| Medical products, vaccines and technologies   |                                                                                | • Essential drugs and technologies list  
• Weak supply chain and high wastage  
• Weak/non-functional DTC                    |
| Health information management, surveillance   | • HMIS is in place  
• Some NCD indicators already included       | • Weak HMIS                                                                             |
Integration of NCDI services into existing Health Care System (HCS)...

<table>
<thead>
<tr>
<th>Health systems component</th>
<th>Opportunities</th>
<th>Challenges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service delivery</td>
<td>• Rapid expansion of PHC</td>
<td>• Quality and safety</td>
</tr>
</tbody>
</table>
Fiscal space and budget expansion

- GoE recognizes the obligation to devote the maximum available resources to health from domestic sources, and not simply rely on international assistance, in order to achieve the progressive realization of UHC.

- The budgetary room is largely determined by two factors: the level of TGE and the percentage of TGE devoted to health.

- By defining reasonable assumptions and targets, projections for fiscal space were made.
Fiscal space and budget expansion...

<table>
<thead>
<tr>
<th>Assumptions and targets</th>
<th>Base case</th>
<th>Best case</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP growth</td>
<td>5%</td>
<td>7%</td>
</tr>
<tr>
<td>Increase in actual government total health expenditure to x % of GDP</td>
<td>5%</td>
<td>6%</td>
</tr>
<tr>
<td>Change in external funding for health to % of total government expenditure</td>
<td>13%</td>
<td>15%</td>
</tr>
<tr>
<td>Out-of-pocket expenditure to % of total health expenditure</td>
<td>20%</td>
<td>20%</td>
</tr>
<tr>
<td>Other private health expenditures as % of total health expenditure</td>
<td>1.5%</td>
<td>1.5%</td>
</tr>
<tr>
<td>Increase in government allocation to NCDI interventions from the current to x%</td>
<td>25%</td>
<td>25%</td>
</tr>
</tbody>
</table>
Fiscal space and budget expansion...

Per Capita health expenditure US$ (Base case)

Per Capita health expenditure US$ (Best case)

- OOP expenditures per Capita in US$
- Other private expenditure as per Capita in US$
- External Resources per Capita in US$
- GHE per Capita in US$
Fiscal space and budget expansion...

![Projected per capita government expenditure on NCDI and CMNN ($) (Base case)](chart1)

![Projected per capita government expenditure on NCDI and CMNN ($) (Best case)](chart2)
Conclusions

• NCDIs comprise a large burden of disease in Ethiopia.
• Low NCDI services access and utilization.
• OOP expenditures for NCDIs is very high.
• Current investment for NCDI is low.
• There are proven cost-effective NCDI interventions that can be scale-up in LIC.
• These interventions could be delivered integrated into the existing health system, particularly using PHC
• Government resources could play a critical role in financing NCDI interventions.
Conclusions...

• External resources will have a vital role as countries transit to MIC
• The work also demonstrates that it is possible to approach priority setting in a systematic way even in resource constrained settings.
Acknowledgement

- The FMoH for the leadership and commitment in the preparation of the report.
- I would like to acknowledge all the commission members involved in producing the NCDI report.
- Special thanks to Prof. Ole F. Norheim for his critical role in the realization of the report
Thank you