Is there a Roadmap to Universal Health Coverage?

Dr Jolene Skordis
Background

• Majority of the world’s population does not have access to sufficient, safe and affordable health care
• Funders have invested over £37 million identifying disease control priorities globally
• The past two decades have seen experiments with mixed markets and the private sector to expand service provision
• Growing consensus now among global actors that the most effective and equitable form of provision is likely to lie with the state
• Significant political momentum around Universal Health Coverage: The provision of a defined package of services to a whole population, ideally free at the point of use.
Why the need to further prioritise interventions?

• DCP3 selected 218 interventions that form a model concept of Essential Universal Health Coverage (EUHC)

• LICs and LMICs may not be able to fund all 108 recommended interventions as mentioned in the recent Lancet review

• DCP3 list for EUHC creates and facilitates the opportunity for country-level analyses

• Different countries’ burdens of disease, cost-structures, and political considerations will all influence the list of interventions that can be implemented
Can we achieve allocative efficiency in UHC Spending?

Help countries make the **best possible investment decisions**

Support demand for and **delivery of services** to the **best feasible standards**: for the right **people** in the right **places** at the right **time** in the right **ways**

For the greatest **health impact**

While moving early and urgently to **institutionalize and sustain services**
Existing TB and HIV models suggest we can!

Findings from an allocative efficiency study in Belarus: Compared with the 2016 TB budget allocation, the optimized budget increased financial support for:

- Active case finding by reducing funding for indiscriminate mass-screening
- Outpatient over inpatient treatment
- New and shorter DR-TB drug regimens

The optimized budget minimized new infections, active TB cases and TB-related deaths
So what is the idea?

- Use our collective experience developing disease-specific optimisation models, to develop a cross disease allocation model with an online interface.

- Build on the foundations laid by DCP, IHME, Tufts, iDSI, WB, WHO, NGOs and country and other stakeholders.

- Develop an open access, user-friendly, high impact resource to optimise UHC program design at the country level. ‘UHC Satnav...’
How will this work in practice?

• Automatically upload country’s (e.g. Afghanistan) disease burden
• Import the best available evidence for health program effectiveness and cost effectiveness
• Afghanistan will be able to select an objective to;
  • Minimise DALYs
  • Maximise Equity
  • Maximise Financial Risk Protection
  • Decide the relative importance of these objectives
• Current spending and impact compared against optimal UHC spending and impact (optimisation algorithm)
• Powerful graphical output in charts and diagrams
‘Screen grabs’ of how this might look...
### Manage projects

<table>
<thead>
<tr>
<th>Burden project</th>
<th>Country</th>
<th>Created on</th>
<th>Last modified</th>
<th>Actions</th>
</tr>
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<tbody>
<tr>
<td>Default GBD</td>
<td>Afghanistan</td>
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<td>2017-06-02 5:41:15am</td>
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<td>2017-06-08 5:14:52pm</td>
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### What health problems cause the most disability?

<table>
<thead>
<tr>
<th>Disease Category</th>
<th>2005 Ranking</th>
<th>2010 Ranking</th>
<th>% Change 2005-2010</th>
<th>Non-communicable, mental, and nutritional diseases</th>
<th>Communicable, vaccine-preventable, and nutritional diseases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depression</td>
<td>1</td>
<td>2</td>
<td>6.5%</td>
<td>21.2%</td>
<td>27.8%</td>
</tr>
<tr>
<td>Diabetes</td>
<td>2</td>
<td>1</td>
<td>5.3%</td>
<td>16.1%</td>
<td>21.4%</td>
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<tr>
<td>Low birth weight</td>
<td>3</td>
<td>4</td>
<td>7.6%</td>
<td>24.4%</td>
<td>32%</td>
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<tr>
<td>Non-communicable infections</td>
<td>4</td>
<td>3</td>
<td>9.9%</td>
<td>35.2%</td>
<td>45.1%</td>
</tr>
<tr>
<td>Communicable, vaccine-preventable, and nutritional diseases</td>
<td>5</td>
<td>5</td>
<td>8.3%</td>
<td>29.8%</td>
<td>38.1%</td>
</tr>
<tr>
<td>Diarrhea</td>
<td>6</td>
<td>6</td>
<td>7.6%</td>
<td>29.8%</td>
<td>37.4%</td>
</tr>
<tr>
<td>Malaria</td>
<td>7</td>
<td>7</td>
<td>8.3%</td>
<td>31.2%</td>
<td>39.5%</td>
</tr>
<tr>
<td>Malaria</td>
<td>8</td>
<td>8</td>
<td>8.3%</td>
<td>31.2%</td>
<td>39.5%</td>
</tr>
<tr>
<td>Malaria</td>
<td>9</td>
<td>9</td>
<td>8.3%</td>
<td>31.2%</td>
<td>39.5%</td>
</tr>
<tr>
<td>Malaria</td>
<td>10</td>
<td>10</td>
<td>8.3%</td>
<td>31.2%</td>
<td>39.5%</td>
</tr>
</tbody>
</table>

### What causes the most premature death?

<table>
<thead>
<tr>
<th>Disease Category</th>
<th>2005 Ranking</th>
<th>2010 Ranking</th>
<th>% Change 2005-2010</th>
<th>Non-communicable, mental, and nutritional diseases</th>
<th>Communicable, vaccine-preventable, and nutritional diseases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower respiratory infections</td>
<td>1</td>
<td>1</td>
<td>53.8%</td>
<td>27.8%</td>
<td>30.9%</td>
</tr>
<tr>
<td>Lower respiratory infections</td>
<td>2</td>
<td>2</td>
<td>53.8%</td>
<td>27.8%</td>
<td>30.9%</td>
</tr>
<tr>
<td>Lower respiratory infections</td>
<td>3</td>
<td>3</td>
<td>53.8%</td>
<td>27.8%</td>
<td>30.9%</td>
</tr>
<tr>
<td>Lower respiratory infections</td>
<td>4</td>
<td>4</td>
<td>53.8%</td>
<td>27.8%</td>
<td>30.9%</td>
</tr>
<tr>
<td>Lower respiratory infections</td>
<td>5</td>
<td>5</td>
<td>53.8%</td>
<td>27.8%</td>
<td>30.9%</td>
</tr>
<tr>
<td>Lower respiratory infections</td>
<td>6</td>
<td>6</td>
<td>53.8%</td>
<td>27.8%</td>
<td>30.9%</td>
</tr>
<tr>
<td>Lower respiratory infections</td>
<td>7</td>
<td>7</td>
<td>53.8%</td>
<td>27.8%</td>
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<td>10</td>
<td>53.8%</td>
<td>27.8%</td>
<td>30.9%</td>
</tr>
</tbody>
</table>

### What risk factors drive the most death and disability combined?

- **Child and maternal nutrition deficiencies:** 10%
- **Diabetes:** 5%
- **HIV/AIDS and its complications:** 5%
- **High blood pressure:** 5%
- **High body mass index:** 5%
- **Hypertension:** 5%
- **Lung cancer:** 5%
- **Obesity:** 5%
- **Osteoporosis:** 5%
- **Tuberculosis:** 5%
- **Typhoid:** 5%
- **Yaws:** 5%

Top 10 causes of DALYs with key risk factors, 2015.
**Open project: Afghanistan**

<table>
<thead>
<tr>
<th>Benefits package</th>
<th>Country</th>
<th>Burden project</th>
<th>Potential intervention set</th>
<th>Edit</th>
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<tbody>
<tr>
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<td>Afghanistan</td>
<td>GBD w updated NCDs</td>
<td>Default set</td>
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<td>Rename</td>
</tr>
<tr>
<td>Final package</td>
<td>Afghanistan</td>
<td>Default GBD</td>
<td>Default set</td>
<td>Edit</td>
<td>Copy</td>
<td>Delete</td>
<td>Rename</td>
</tr>
</tbody>
</table>

**Create new**

- Select burden
- Select intervention set

**Annual health resources to be available**

- $...
- $...
- $...
- $...

- Enter time-varying resource availability

- **Generic**
- **Recommended**

- **Maximize DALYs averted**
  - Weight: 60%
- **Maximize Financial Risk Protection**
  - Weight: ....%
- **Maximize Equity**
  - Weight: 40%

- **Start year**: 2017
- **End year**: 2030

**Calculate corresponding HBP**
Open project: Afghanistan

Manage projects
Burden of disease
Interventions
Equity
Financial risk protection
Define health packages

Bring to front
- Ideal UHC
- Equal dist by disease
- Current investment
- Defined HBP

Click on segment:
Interventions in package

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Total cost</th>
<th>Est. DALY avert</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technology A</td>
<td>$xx</td>
<td>yy</td>
</tr>
<tr>
<td>Service B</td>
<td>$xx</td>
<td>yy</td>
</tr>
<tr>
<td>...</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Download all packages
Download defined package
However, this is very much a work in progress...pending case studies include Afghanistan and Ethiopia among others