Is Uganda ready to deal with the burden of Non-Communicable diseases?

CEHURD

December 6, 2012
What are Non-Communicable Diseases – NCDs?

• Diseases that are not passed from person to person
• They progress slowly
Age-standardized mortality in Sub-Saharan Africa
NCD Burden

• Globally - 35 million people die from NCDs each year
• This is over 65% of world deaths
• 80% of these deaths occur in low and middle income countries (29 million)
• Most of those that die are before the age of 60
The Four Main NCDs

- 4 main NCDs account for 80% of NCD deaths
  - Cardiovascular – 17.3 million
  - Cancers – 7.6 million
  - Respiratory Diseases – 4.2 million
  - Diabetes – 1.3 million
Risk Factors

• The 4 groups of diseases share risk factors
  – Tobacco use – 6 million deaths every year
  – Insufficient physical activity – 3.2 million deaths every year
  – Harmful use of alcohol – 1.65 million every year
  – Unhealthy diets (low fruit and vegetable consumption) – 1.7 million deaths every year
How do these risk factors manifest?

- Raised blood pressure
- Overweight
- High blood glucose
- High levels of fat in the blood
How to Prevent and Control NCDs?

Reduce the risk factors associated with NCDs
How?

- **Diet** – more fruit and more vegetable
- **Physical Activity** – 30 minutes per day for 5 days a week
- **Limit Alcohol**
- **Do not Smoke**
Prevalence of NCDs in Uganda

• Limited data is available
• 500% Increase in outpatient attendance at the Heart Institute (2005-2009)
• Upward trend in in cancer – Cancer Institute
• 5% Increase in NCDs among patients attending care and treatment at Mildmay (2010)
Design of the study - 4 questions

• What is the prevalence of NCDs and associated risk factors in Uganda
• What is the Knowledge, Attitudes, and Practices of the Ugandan population on the four risk factors
• What are the current policy and regulatory frameworks that support the prevention and control of NCDs? And how effective are they?
• What can we do to prevent and control NCDs in Uganda?
Study objectives

• **Objective 1**: To determine the prevalence of NCDs and associated risk factors in Uganda

• **Objective 2**: To identify Knowledge, attitudes and Practices of Ugandans around NCDs and the associated risk factors

• **Objective 3**: Identify policy and regulatory frameworks and assess their level of implementation

• **Objective 4**: Generate recommendations and develop an action plan
Methods

• Literature review
• Policy analysis
• KAP study among University Students in Wakiso, Mukono and Kampala districts - Makerere, Uganda Christian University, Nkumba, and Kampala International University
• Key Informant Interviews
Data analysis

• Limited published data on NCD prevalence in Uganda – metaanalysis not possible

• Policy content analysis – McMaster University Model & benchmarking against global frameworks

• KAP Study – used Epi-info 7 for data entry and analysis
WHO frameworks & guidance on NCDs

• WHO has provided guidance to support NCD programming
  – *NCD Global Monitoring Framework for the prevention and control of NCDs.*
  – *The World Health Organization Framework Convention on Tobacco Control (WHO FCTC)*
  – *The WHO Global Strategy on Diet, Physical Activity & Health*
  – *WHO Set of recommendations on the marketing of foods and non-alcoholic beverages to children.*
# WHO “Best Buys” Interventions

<table>
<thead>
<tr>
<th>Risk factor / disease</th>
<th>Interventions</th>
</tr>
</thead>
</table>
| Tobacco use                                 | • Tax increases  
• Smoke-free indoor workplaces and public places  
• Health information and warnings  
• Bans on tobacco advertising, promotion and sponsorship |
| Harmful alcohol use                         | • Tax increases  
• Restricted access to retailed alcohol  
• Bans on alcohol advertising |
| Unhealthy diet and physical inactivity      | • Reduced salt intake in food  
• Replacement of trans fat with polyunsaturated fat  
• Public awareness through mass media on diet and physical activity |
| Cardiovascular disease (CVD) and diabetes   | • Counselling and multi-drug therapy for people with a high risk of developing heart attacks and strokes (including those with established CVD)  
• Treatment of heart attacks with aspirin |
| Cancer                                      | • Hepatitis B immunization to prevent liver cancer (already scaled up)  
• Screening and treatment of pre-cancerous lesions to prevent cervical cancer |
Results

• Reported Prevalence of NCDs and associated risk factors
• Policy and regulatory framework
• KAP Study
  – Tobacco use
  – Alcohol and drug use
  – Physical activity
  – Healthy diet
## Reported NCD and risk factor prevalence

<table>
<thead>
<tr>
<th>Study</th>
<th>Prevalence of NCDs</th>
<th>Prevalence of risk factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Murphy et al (2013) – Kasese district</td>
<td>21% - Hypertension&lt;br&gt;7.2% - diabetes</td>
<td>9.6% - smoked&lt;br&gt;7.2% - ate fruit&lt;br&gt;1.2% - ate vegetables</td>
</tr>
<tr>
<td>UNHS 2009/10</td>
<td>9% NCDs&lt;br&gt;5% - hypertension</td>
<td>13% smoked</td>
</tr>
<tr>
<td>Kawuma (2012)</td>
<td>5% increase in NCDs</td>
<td></td>
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</table>
Policy and regulatory Framework

• NEMA 2004 – Control of Smoking in Public Places
• Darft tobacco control bill – with MOFPED
• NCD prevention and control policy – at technical working group.
KAP study

- 2000 University students – 500 randomly sampled from each University
- 48% - female and 52% Male
- Mean age – 22 years
- 75% of all sampled were between the ages of 20 -23.
- 67% could not accurately describe NCDs
Alcohol Use

• 40% of all females sampled had ever taken alcohol
• 49% of all males sampled had ever taken alcohol
• Most of those that had ever taken alcohol had their first drink between 10 and 18 years of age
# Tobacco Use

<table>
<thead>
<tr>
<th>Variable</th>
<th>Prevalence</th>
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</thead>
<tbody>
<tr>
<td>Ever smoked</td>
<td>15%</td>
</tr>
<tr>
<td>Currently use tobacco</td>
<td>12%</td>
</tr>
<tr>
<td>Use other tobacco products (shisha etc)</td>
<td>9%</td>
</tr>
<tr>
<td>Average number of cigarrettes per day</td>
<td>5</td>
</tr>
<tr>
<td>Duration of smoking</td>
<td>Less than a year</td>
</tr>
<tr>
<td>Exposed to environmental smoke</td>
<td>40%</td>
</tr>
<tr>
<td>Exposed to pro-cigarette adverts</td>
<td>57%</td>
</tr>
<tr>
<td>Would like to stop smoking</td>
<td>74%</td>
</tr>
<tr>
<td>Ever received help to stop smoking</td>
<td>27%</td>
</tr>
<tr>
<td>Taught about smoking in a lecture</td>
<td>42%</td>
</tr>
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## Healthy diet

<table>
<thead>
<tr>
<th>Variable</th>
<th>Prevalence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ate fruits</td>
<td>94%</td>
</tr>
<tr>
<td>One portion per day</td>
<td>59%</td>
</tr>
<tr>
<td>Ate vegetables</td>
<td>93%</td>
</tr>
<tr>
<td>1-3 portions per day</td>
<td>86%</td>
</tr>
</tbody>
</table>
## Physical Activity

<table>
<thead>
<tr>
<th>Variable</th>
<th>Frequency (95%CI)</th>
<th>Average</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>F</td>
<td>M</td>
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<tr>
<td><strong>Prevalence</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>During the past 7 days - engaged in physical activity for at least 60 days</td>
<td>80% (73-85)</td>
<td>85% (79-90)</td>
</tr>
<tr>
<td><strong>Type of physical activity engaged in</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>jogging</td>
<td>26% (20-35)</td>
<td>15% (7-20)</td>
</tr>
<tr>
<td>walking</td>
<td>18% (16-24)</td>
<td>10% (4-12)</td>
</tr>
<tr>
<td>games</td>
<td>14% (9-18)</td>
<td>24% (2-10)</td>
</tr>
<tr>
<td>None</td>
<td>14% (8-20)</td>
<td>12% (8-18)</td>
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Study Limitations

• No comparable data on NCD risk factors in this age group
• Could underestimate the magnitude of the problem – only 5% of Ugandan children have access to tertiary education
• KAP study used a self-administered questionnaire
• Time constraints
<table>
<thead>
<tr>
<th>Issue</th>
<th>Recommended solution</th>
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<tbody>
<tr>
<td>Dearth of information on NCDs and risk factors</td>
<td>Invest in community/population-based studies on NCDs and risk factors</td>
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<td></td>
<td>Partnership between MOH, Academia and civil society to conduct these studies</td>
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<td>Apparent fragmentation in handling NCDs and risk factors at MOH level</td>
<td>Foster an integrated approach</td>
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<tr>
<td>Weak Policy and regulatory framework</td>
<td>Need to develop a national action plan on NCDs</td>
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<tr>
<td>Low community awareness</td>
<td>Social mobilization and awareness programs</td>
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<tr>
<td>High tobacco &amp; alcohol use</td>
<td>Tobacco and alcohol regulation</td>
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National action Plan

Goal

“to reduce the impact of NCD morbidity and premature mortality in Uganda, with a target of at least 25 percent reduction in premature mortality from the four main NCDs by 2025”.
What do we need to do?

• Build multisectoral policies and partnerships for NCD prevention and control
• Reduce the prevalence of the main NCD risk factors and strengthen the protective factors
• Improve coverage and quality of care for NCDs and risk factors
• Strengthen our capacity for surveillance and research on NCDs, risk factors and social determinants.