Burden of non-communicable disease
Non-communicable diseases (NCDs) are non-infectious health conditions. They are typically caused by genetic and/or environmental and lifestyle factors. Currently, NCDs are accountable for almost two-thirds of deaths globally.

Four main diseases account for the majority of deaths from NCDs:
- cardiovascular disease
- chronic respiratory disease
- cancer
- diabetes

Importantly, these four NCDs share common behavioural risk factors including:
- tobacco use,
- unhealthy diet
- physical inactivity
- and harmful use of alcohol

A major challenge in the prevention and control of NCDs has been that despite a wide range of global, regional and national plans, initiatives, policies and interventions, the impact on health outcomes still needs to be increased significantly. There is still a very remarkable evidence in implementation or action gap.

The translation gap between research evidence and the practice is now very well recognized. A review of healthcare delivered to adults from the USA shows that up to 45% of patients fail to receive treatments that have been shown to be effective, while 11% receive treatments that are not needed or potentially harmful.

Reducing the gap between evidence and practice is associated with reductions in morbidity and mortality and reduced healthcare costs. Therefore, in the recent past there has been increased attention on barriers to the translation of research and on how to develop evidence-based implementation in order to improve patient outcomes.

Implementation research investigates the factors that affect on how a new policy or an intervention may be implemented in real-life settings. Such research remains relatively new to population-based health programmes.

Common language and terminology used in describing implementation research:
Implementation
A specified set of activities designed to put into practice a policy or intervention of known dimensions

Implementation Research
The scientific study of the processes used to implement policies and interventions and the contextual factors that affect these processes.

Implemener(s)
An individual (or group of individuals) responsible for management of the implementation process

Consumers
The group(s) of individuals that are targeted by
an intervention, programme or a policy

Context
The setting within which a policy or intervention is to be implemented

Knowledge synthesis
The identification, assessment and collation of evidence

Knowledge exchange
The process of collaborative problem-solving

Knowledge translation
The process by which relevant research information is made accessible and available

Importance of implementation research
One of the purposes of implementation research is to support the successful selection of policies and interventions that have been shown to be efficacious. It also helps identify how to implement these policies and interventions in contexts where populations and/or resources may differ from that where they were initially formulated and evaluated, and helps identify which components of a policy or intervention are needed to obtain intended outcomes.

Moreover, when prevention and control efforts fail, implementation research can help identify whether failure was due to a policy/intervention being ineffective in the setting (intervention failure) or whether a so-called good policy/intervention was deployed incorrectly (implementation failure).

In effect, implementation research is about learning how to optimize implementation, scale up promising strategies, evaluate impact and, importantly, how to sustain these strategies over the long term. Notably, implementation research has the potential to bridge the evidence-into-action gap.

Implementation and the implementation research cycle
There is a growing number of theories and models describing implementation and the implementation research process. Implementation typically involves a stepwise, cyclical process.

- The first step is to work with key stakeholders in order to define the specific health need and then identify an appropriate policy or intervention to address that need.
- The second step is adaptation of the selected policy or intervention to the local context and undertaking some piloting.
- The third step involves implementation of the adapted policy or intervention.
- The fourth and final step is assessing if the adapted policy or intervention can be more widely implemented or scaled up, and, if so, defining the resources and further steps that will be required to achieve this.

In practice, the path from selection through to scale up is rarely direct, as it is usually determined by multiple stakeholders, the availability of resources and other contextual factors. Instead, it normally has numerous iterations involving going back and forth between two or more process steps.

Practical steps on how to undertake implementation research
Identifying evidence-based policies and interventions that are appropriate to your local context before a policy or intervention is selected and implemented it is important to ascertain that there is a need for it and that there is enough high quality evidence to suggest that it would be effective in the local context.

Situation analysis: ascertaining the need for a policy or intervention
The selection of policies and interventions for NCD prevention and control typically starts with a situational analysis. This is an information-gathering process that helps understand the specifics of the NCD burden in a particular area (e.g. health needs, risks and local context). The situational analysis also provides an opportunity to garner inter-sectoral collaboration.

The first stage of a situational analysis is usually to establish a group of relevant stakeholders and this includes implementers, potential consumers and other appropriate parties. The exact point at which this group is established and its composition depends on the local context; in some instances, the individuals who set up the situational analysis would have already done work on the topic and a group may already exist.

The stakeholder group should then engage in knowledge exchange activities; this means that they should discuss the health problem and also collate and discuss evidence about environmental, behavioural and personal determinants related to the health problem. This stage helps identify which factors are modifiable and could be prioritized as targets of policies and interventions. The group should also discuss and clearly identify expected outcomes, such as changes in mortality, morbidity or prevalence of risk factors in a target population.


Compiled by: Dr. Shilanthi Seneviratne, Epidemiology unit / Ministry of Health / Colombo, Sri Lanka

WER Sri Lanka - Vol. 45 No. 27
30th to 06th July 2018

Page 2

to be continued...
Table 1: Selected notifiable diseases reported by Medical Officers of Health in Sri Lanka

<table>
<thead>
<tr>
<th>Week</th>
<th>Typhus Fever</th>
<th>Leishmaniasis</th>
<th>Meningitis</th>
<th>Chickenpox</th>
<th>Human Rabies</th>
<th>Viral Hepatitis</th>
<th>Typhus</th>
<th>Leprosy</th>
<th>Encephalitis</th>
<th>Enteric Fever</th>
<th>Dysentery</th>
<th>Dengue Fever</th>
<th>Poliomyelitis</th>
</tr>
</thead>
<tbody>
<tr>
<td>23rd-29th June 2018 (26th Week)</td>
<td>4584</td>
<td>0</td>
<td>19</td>
<td>0</td>
<td>192</td>
<td>0</td>
<td>0</td>
<td>28</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>30th-06th July 2018</td>
<td>1394</td>
<td>0</td>
<td>74</td>
<td>0</td>
<td>1188</td>
<td>0</td>
<td>0</td>
<td>59</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
Table 2: Vaccine-Preventable Diseases & AFP

<table>
<thead>
<tr>
<th>Disease</th>
<th>No. of Cases by Province</th>
<th>Number of cases during current week in 2018</th>
<th>Number of cases during same week in 2017</th>
<th>Total number of cases to date in 2018</th>
<th>Total number of cases to date in 2017</th>
<th>Difference between the number of cases to date in 2018 &amp; 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>W</td>
<td>C</td>
<td>S</td>
<td>N</td>
<td>E</td>
<td>NW</td>
</tr>
<tr>
<td>AFP*</td>
<td>01</td>
<td>00</td>
<td>00</td>
<td>00</td>
<td>00</td>
<td>01</td>
</tr>
<tr>
<td>Diphtheria</td>
<td>00</td>
<td>00</td>
<td>00</td>
<td>00</td>
<td>00</td>
<td>00</td>
</tr>
<tr>
<td>Mumps</td>
<td>00</td>
<td>01</td>
<td>00</td>
<td>01</td>
<td>02</td>
<td>00</td>
</tr>
<tr>
<td>Measles</td>
<td>01</td>
<td>02</td>
<td>00</td>
<td>00</td>
<td>00</td>
<td>01</td>
</tr>
<tr>
<td>Rubella</td>
<td>00</td>
<td>00</td>
<td>00</td>
<td>00</td>
<td>00</td>
<td>00</td>
</tr>
<tr>
<td>CRS**</td>
<td>00</td>
<td>00</td>
<td>00</td>
<td>00</td>
<td>00</td>
<td>00</td>
</tr>
<tr>
<td>Tetanus</td>
<td>00</td>
<td>00</td>
<td>00</td>
<td>00</td>
<td>00</td>
<td>00</td>
</tr>
<tr>
<td>Neonatal Tetanus</td>
<td>00</td>
<td>00</td>
<td>00</td>
<td>00</td>
<td>00</td>
<td>00</td>
</tr>
<tr>
<td>Japanese Encephalitis</td>
<td>00</td>
<td>00</td>
<td>00</td>
<td>00</td>
<td>00</td>
<td>00</td>
</tr>
<tr>
<td>Whooping Cough</td>
<td>00</td>
<td>00</td>
<td>00</td>
<td>00</td>
<td>00</td>
<td>00</td>
</tr>
<tr>
<td>Tuberculosis</td>
<td>83</td>
<td>00</td>
<td>00</td>
<td>00</td>
<td>00</td>
<td>09</td>
</tr>
</tbody>
</table>

Key to Table 1 & 2


Dengue Prevention and Control Health Messages

Look for plants such as bamboo, bohemia, rampe and banana in your surroundings and maintain them free of water collection.

PRINTING OF THIS PUBLICATION IS FUNDED BY THE WORLD HEALTH ORGANIZATION (WHO).

Comments and contributions for publication in the WER Sri Lanka are welcome. However, the editor reserves the right to accept or reject items for publication. All correspondence should be mailed to The Editor, WER Sri Lanka, Epidemiological Unit, P.O. Box 1567, Colombo or sent by E-mail to chepid@sltnet.lk. Prior approval should be obtained from the Epidemiology Unit before publishing data in this publication.

ON STATE SERVICE

Dr. S.A.R. Dissanayake
CHIEF EPIDEMIOLOGIST
EPIDEMIOLOGY UNIT
231, DE SARAM PLACE
COLOMBO 10