Prevention of Non-Communicable Diseases (NCDs = ENTs) and the UN Sustainable Development Goals

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September, 2019

VISION

• Every child will be accorded the right to the highest attainable standard of health, and the opportunity to grow, develop, and fulfill to his or her human potential. The IPA will serve as an unceasing voice for children’s health, development, and potential through advocacy, education, and action.

MISSION

• Pediatricians, working with other partners, will be leaders in promoting physical, mental, and social health for all children, and in realizing the highest standards of health for newborns, children, and adolescents in all countries of the world. The IPA will work with professional associations and all others willing to add their strengths to advocacy, education, and programming on behalf of children.
SDGs Different from MDGs

Greater focus on…
- Leaving no one behind – all countries
- Sustainability
- Accountability
- Global partnerships
- Rights-based approach

SDG 3 -- 13 Targets for Health Goal 3

To ensure healthy lives and promote wellbeing for all at all ages

1. By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and ensure access to treatment for all those患病
2. Achieve universal health coverage, including financial risk protection and access to quality essential health-care services and safe, effective, quality and affordable essential medicines and health-care services
3. Strengthen the capacity of all levels of health systems
4. Reduce by one third the mortality of all killer diseases
5. Reduce the global maternal mortality ratio by three quarters
6. End child deaths from preventable causes
7. End the premature deaths from non-communicable diseases and injuries
8. Reduce by one third the number of preventable stillbirths
9. Reduce by one third the number of women of reproductive age who are anemic
10. Reduce by one third the number of underweight children under five years of age
11. Reduce the global prevalence of overweight and obesity
12. Reduce by one third the prevalence of diabetes
13. Reduce by one third the prevalence of hypertension

SDG 3: NCD-related Targets

- Reduce mortality from NCDs by 1/3 through prevention and treatment
- Promote mental health
- FCTC (tobacco control) and Prevention/treatment of substance abuse
- Halve road traffic accident death/injury by 2020
- Achieve universal health coverage with access to essential medicines and technology
Non-Communicable Diseases
Enfermedades Non-Transmissibles
(NCDs = ENTs)

- Affect all human and economic development and threaten progress towards global goals
- Now the leading cause of death in low- and middle-income countries – and rates are rising especially in sub-Saharan Africa and South Asia
- NCDs have been viewed as a problem of adults, but children and youth are affected

WHO Global Action Plan for Prevention & Control of NCDs 2013-2020

<table>
<thead>
<tr>
<th>Behavioural risk factors</th>
<th>Tobacco use</th>
<th>Unhealthy diets</th>
<th>Physical inactivity</th>
<th>Harmful use of alcohol</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heart disease and stroke</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Diabetes</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Cancer</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Chronic lung disease</td>
<td>✓</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

WHO Global Action Plan – Added at the 2018 High Level Meeting on NCDs at the UN

<table>
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<th>Physical inactivity</th>
<th>Harmful use of alcohol</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mental Health disease</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Environmental risk factor

- Heart disease and stroke
- Diabetes
- Cancer
- Chronic lung disease
WHO Global NCD Action Plan 2013-2020

• MULTISECTORAL policy options for UN Member States

• Agreed commitment by international partners and private sectors

• “Best buys” – cost effective interventions

A global multi-stakeholder coalition addressing the rights and needs of all children, adolescents and youth living with or at risk of developing NCDs.

Children require a different approach to the prevention and treatment of NCDs than do adults

A life-course, rights-based approach

Advocacy at the 2018 UN High Level Meeting on NCDs

• Asked governments to recognize needs of children and youth
  – For broader definition of NCDs that include prevention and treatment for children and youth
  – For a rights based, life course approach
  – For integration into SDG and UHC (Universal Health Care) agendas
  – Remove age brackets from SDG target 3.4

• Include young people

Children and Youth and Non-communicable Diseases (NCDs)

• Prevention
  – Nutrition – Malnutrition and Obesity
  – Tobacco and Secondhand smoke, Alcohol/drugs
  – Injury
  – Mental health, Early brain development, toxic stress

• Access to care
  – Diabetes, congenital heart dx, cancer, asthma, other special health care needs – treatment affects survival
Leading causes of early death, 1990–2017

Azzopardi et al, Lancet 2019

NCD predominant
Injury excess
Multiburden

1990
2016

Disease burden by country groups 1990–2015

Patton et al, Lancet 2016

https://vizhub.healthdata.org/sdg/
Interventions for Maternal and Child Survival

**Periconception**
- Folic acid supplementation or fortification
- Tetanus vaccination
- Syphilis detection and treatment
- Calcium and micronutrient supplementation

**Pregnancy**
- Clean postnatal practices
- Education and supplementation

**Childbirth**
- Clean birth practices
- Labor and delivery management by SBA
- Neonatal resuscitation

**Preventive** Interventions for MCNH
- Thermal care
- Clean postnatal practices
- Breastfeeding
  - Promotion
  - Behavior
- Complementary feeding
  - Education only
  - Education and supplementation
- Vitamin A
- Zinc
- Insecticide treated materials
- Improved water source
- Improved sanitation
- Hand washing with soap
- Hygienic disposal of stools
- Vaccines
  - BCG
  - Polio
  - Pentavalent
  - DPT, Hib, HepB
  - Pneumococcal
  - Rotavirus
  - Measles

Parenting and nurturing care

- Nurturing care includes early child development
- All essential elements for a child to grow physically, mentally and socially
  - Nutrition
  - Health care
  - Love and security
  - Protection from danger
  - Opportunities to learn and discover the world

Multi-sectoral intervention to improve child development

- **Family Support & Strengthening Package**
  - Access to quality services, skills building, support

- **Multigenerational Nurturing Care Package**
  - Care and protection of mothers’ and fathers’ physical and mental health and wellbeing, and their capacity to provide nurturing care

- **Early Learning & Protection Package**
  - Support for young children with parental and preconception support to create a nurturing learning environment
Under-5 deaths preventable through universal coverage with individual interventions (2000)

### India

<table>
<thead>
<tr>
<th>Treatment intervention</th>
<th>Deaths averted (in '000s)</th>
<th>Percent (of total deaths)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral rehydration therapy</td>
<td>394</td>
<td>16%</td>
</tr>
<tr>
<td>Antibiotics for sepsis</td>
<td>158</td>
<td>7%</td>
</tr>
<tr>
<td>Antibiotics for pneumonia</td>
<td>153</td>
<td>6%</td>
</tr>
<tr>
<td>Zinc</td>
<td>113</td>
<td>5%</td>
</tr>
<tr>
<td>Newborn resuscitation</td>
<td>97</td>
<td>4%</td>
</tr>
<tr>
<td>Antibiotics for dysentery</td>
<td>81</td>
<td>3%</td>
</tr>
<tr>
<td>Vitamin A</td>
<td>3</td>
<td>0%</td>
</tr>
<tr>
<td>Antimalarials</td>
<td>2</td>
<td>0%</td>
</tr>
</tbody>
</table>

Currently, ~3 in 4 childhood pneumonia cases around the world do not receive treatment. ~80% of this occurs in just 10 countries in these 10 countries (in order of untreated cases)

1. India
2. Nigeria
3. Bangladesh
4. DRC
5. Ethiopia
6. Tanzania
7. Uganda
8. Afghanistan
9. Pakistan
10. Kenya

Potential global demand expected to continue to grow, with up to ~4.1B amox DT needed over the next 5 years
Country-level product registration is important as regulatory conditions in key markets enable amox DT scale-up:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>India</td>
<td>In progress</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Nigeria</td>
<td>In progress</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Pakistan</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Eritrea</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>In progress</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Uganda</td>
<td>In progress</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Kenya</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Niger</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

As policies are updated, countries will likely start transitioning toward awareness of amox DT registration in their markets.


PATH and UNICEF piloting dispensing aids for community health workers (CHW) and primary health settings.

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**Bright Futures Guidelines**

- Theory-based, evidence-driven, systems-oriented principles, strategies, and tools
- To improve the health and well-being of all children through culturally appropriate interventions
- Address current and emerging health promotion needs at the family, clinical practice, community, health system and policy levels

Bright Futures: Guidelines for Health Supervision of Infants, Children, and Adolescents

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**Components of a Bright Futures Visit**

- History
- Surveillance
- Physical examination
- Screening
- Immunizations
- Anticipatory guidance
Bright Futures Periodicity Schedule

Priorities 12 Month Visit – BF 4th Edition

Social determinants of health
(the economic and social conditions that shape the health of individuals and communities)

Establishing routines

Feeding and appetite changes

Establishing a dental home

Safety

Healthy People 2020

Priorities 12 Month Visit

Bright Future Priorities for the visit

Previsit Questionnaires

– Allows healthcare provider to gather pertinent information without using valuable time asking questions

Documentation Forms

– Enables Provider to document all pertinent information and fulfill quality measures

Parent/Patient Handouts

– Provides Parental Education all the

Core Tools: Integrated Format

– Prevents unnecessary repetition of questions asked at each visit

– Provides a comprehensive approach to collecting patient information and addressing health needs

– Helps healthcare providers make evidence-based decisions and provide targeted interventions

– Prevents delays in treatment and improves patient outcomes

– Supports effective communication and collaboration among healthcare providers

– Enhances patient satisfaction and trust in healthcare providers

– Facilitates the delivery of high-quality, patient-centered care
Implementation of BF improves screening and interventions

<table>
<thead>
<tr>
<th>Ages 0-6 years</th>
<th>Two year olds</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-6 months old</td>
<td>Two year old</td>
</tr>
</tbody>
</table>

Implementation of BF improves screening – does not make visits longer

<table>
<thead>
<tr>
<th>Time Spent at Visit (Minutes)</th>
<th>Brink Futures Preventive Service Performed</th>
<th>Initial</th>
<th>Final</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infant</td>
<td>N=20</td>
<td>10.75</td>
<td>12.15</td>
<td>0.07</td>
</tr>
<tr>
<td>Time Spent at Visit (Minutes)</td>
<td>(10.55)</td>
<td>(12.33)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brink Futures PSS*</td>
<td>3.86</td>
<td>6.01</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(3.80)</td>
<td>(6.01)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

IPA Vaccine Hesitancy Project  #IPAtrustsVaccines

Middle and high income countries are most affected by vaccination confidence

Percent Disagreeing with the Statement, “Overall I think vaccines are safe”

IPA Vaccine Hesitancy Project  #IPAtrustsVaccines

The State of Vaccine Confidence Report, 2016, LSHTM

US Childhood and Adolescent Immunization Schedule

Ages 0-6 years

Ages 7-18 years
Despite substantial supply-side investment: vaccination coverage is flat.....time to focus on demand?

IPA Vaccine

Adolescent Clinical Preventive Services

Immunizations: HPV, Hepatitis B, meningococcal disease, influenza, tetanus, diphtheria, pertussis

Screening and treatment for sexually transmitted infections (STIs) and the provision of reproductive and sexual health care services

Screening and counseling to reduce risky behaviors such as tobacco, alcohol and drug use and to address injury prevention, mental health, obesity, and physical activity

Parent and Adolescent Attitudes

- Adolescents and parents often agree about the importance of preventive services; private time and confidentiality
- Parents value clinical preventive services somewhat more than youth
- Youth value confidentiality more than parents
- Both parents and adolescents think private conversations should start later (mode: age 18) than recommended in clinical care guidelines (age 13)

Age at which parents and adolescents think private time should begin

Ever had Private Time and Ever Discussed Confidentiality

Adolescents

Young Adults

Song et al. 2019

Key finding: ~half of AYA report ever having private time or confidentiality discussion
Bright Futures Tool and Resource Kit also contains:

- Additional Parent/Patient Handouts
- Developmental, behavioral, and psychosocial screening and assessment tools
- Practice management tools for preventive care
- Information on community resources

All of Bright Futures developed materials are in the public domain

brightfutures.aap.org/materials-and-tools/tool-and-resource-kit/Pages/default.aspx

Why does this matter?

Care and Protect
Engagement and empowerment

Sawyer et al. Lancet Child and Adolescent Health 2018
1372 responses
115 countries

Change in upper age with time

Why has the upper age increased?

Demographics: respondents
(n=1372)

<table>
<thead>
<tr>
<th>Sex</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>748</td>
<td>55%</td>
</tr>
<tr>
<td>Male</td>
<td>624</td>
<td>45%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Years of practice</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-10</td>
<td>367</td>
<td>27%</td>
</tr>
<tr>
<td>11-29</td>
<td>354</td>
<td>26%</td>
</tr>
<tr>
<td>30-39</td>
<td>300</td>
<td>22%</td>
</tr>
<tr>
<td>&gt;40</td>
<td>35</td>
<td>2%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type of practice</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary care</td>
<td>119</td>
<td>8%</td>
</tr>
<tr>
<td>Specialist Private Practice</td>
<td>739</td>
<td>54%</td>
</tr>
<tr>
<td>Academic/Paediatrics</td>
<td>554</td>
<td>40%</td>
</tr>
<tr>
<td>Other</td>
<td>53</td>
<td>4%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Leadership role in national adolescent association</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>385</td>
<td>52%</td>
</tr>
<tr>
<td>No or more than 50% No</td>
<td>97</td>
<td>13%</td>
</tr>
</tbody>
</table>
The SDGs call for:
- Equitable opportunities
- All countries to prioritize the most vulnerable

An opportunity to scale-up preventive services for children and youth:
- Go to scale with effective evidence-based interventions
- Expand content to address changing epidemiology
- Expand the quality front line health worker delivery of care

Integration Example – tobacco and secondhand smoke
- Low birthweight
- Resp. distress
- Sudden infant death
- Influenza
- Tuberculosis
- Acute gastroenteritis
- Pneumonia
- Asthma
- Obesity
- Food insecurity/hunger
- Diabetes
- 10% of cancers due to second hand smoke
Integration Example – tobacco and secondhand smoke

- Maternal and Child Health systems
  - Already population based
  - Most people in the world will only see one front line health worker
  - Prevention without technology or pharma ‘parent’ less easy to spread

Integration Example – High Resource Systems

- Child and Adolescent Health Guidelines
  - Bright Futures
  - Medical Home for Children with Special Health Care Needs (CSHCNs)
    - NB Screening?
    - Birth asphyxia?
    - Injury?
- Community and clinical support needed regardless of underlying condition(s)
Opportunities for Action

- Need for broader definition of NCDs to achieve appropriate integration
- Include prevention and treatment of NCDs for children and youth in SDGs and NCD Roadmap
- Integrate NCD prevention and treatment into frontline population-based health care systems
- Include young people in advocacy and planning
- Address both social and commercial determinants of health

Action on access to care

- National health systems to include NCD prevention and treatment in Universal Health Care
- Essential Medicines and technology lists for children are incomplete – age cutoff is at 12 – and drugs are not always available in countries (e.g., hydrocortisone, insulin)
- Rights-based approach - all children including those with special health care needs
  - Community and clinical support regardless of underlying condition(s)

IPA and NCD Child activities

- UN and WHO advocacy
- Champions training to engage clinicians, civil society, and other stakeholders in country NCD advocacy/plans
- UNICEF, WHO, NCD Alliance collaboration
- Child Rights series
  - Essential Medicine Task Force
  - Youth Voice network and advocacy
176 participants
52 countries
21 mini-grants

NCD Champions Workshops

Next regional advocacy and youth workshop

Opportunities to become involved in strategic/technical expert groups in several different areas of child and adolescent health

Thank you!
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