Neglected Tropical Diseases
Burden and Treatment of select NTDs

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Preventive Chemotherapy
Neglected Tropical Diseases
Group of 20 diverse diseases

- Dengue
- Rabies
- Buruli ulcer
- Yaws
- Leprosy
- Chagas disease
- Human African trypanosomiasis
- Leishmaniases
- Snake-bite envenoming
- Mycetoma and other deep mycoses
- Dracunculiasis
- Echinococcosis
- Foodborne trematodiases
- Lymphatic filariasis
- Onchocerciasis (river blindness)
- Schistosomiasis
- Soil-transmitted helminthiases
- Trachoma
- Taeniasis and neurocysticercosis
- Scabies and ectoparasites
- Dengue
- Rabies
- Buruli ulcer
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Neglected Tropical Diseases
Group of 20 diverse diseases

• Bacterial, parasitic, fungal and viral
• Kill, blind, maim, disfigure and disable
• Affects hundreds of millions of people
• In the poorest parts of the world
• Living in remote, or conflict zones
3.3 By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases.
Intervention approach to NTDs

- Preventive chemotherapy
- Intensive disease management
- Vector control and pesticide management
- Zoonotic disease management
- Water, sanitation & hygiene
Preventive Chemotherapy

- Reduce/prevent morbidity
- Reduce infection load and transmission
- Treat communities instead of individuals
- Use of safe and easy to administer medicines
- Annual or Biannual treatments
- Complimented with other public health strategies
5 target diseases
6 medicines
7 combinations
Five target diseases:

- Lymphatic filariasis
- Soil-transmitted helminthiasis
- Onchocerciasis
- Schistosomiasis
- Trachoma
Comparative burden of the diseases

- **Lymphatic filariasis**: 941.3M infected, 120M requiring preventive chemotherapy
- **Onchocerciasis**: 185.6M infected, 26M requiring preventive chemotherapy
- **Soil-transmitted helminthiases**: 834.7M infected, 513M requiring preventive chemotherapy
- **Schistosomiasis**: 218.2M infected, 207M requiring preventive chemotherapy
- **Trachoma**: 192.1M infected, 12M requiring preventive chemotherapy
Lymphatic filariasis
Target: Eliminate as Public Health Problem

- Countries requiring PC: 54
- No. requiring PC: 941 million
- Treated in 2015: 558 million
- Countries reached goal: 19
Onchocerciasis
Target: Elimination

- Countries requiring PC: 31
- No. requiring PC: 186 million
- Treated in 2015: 119 million
- Countries reached goal: 4
Schistosomiasis
Target: Elimination

- Countries requiring PC: 52
- No. requiring PC: 219 million
- Treated in 2015: 74 million
- Countries reached goal: 12
Soil-transmitted helminths
Target: Control morbidity

- Countries requiring PC: 101
- No. requiring PC: 835 million
- Treated in 2015: 573 million
- Countries reached goal (75%): 32
Trachoma
Target: Eliminate as Public Health Problem

- Countries requiring PC: 41
- No. requiring PC: 190 million
- Treated in 2016: 85 million
- Countries reached goal: 10
Countries requiring preventive chemotherapy
Six medicines

- Diethylcarbamazine (DEC)
- Ivermectin
- Albendazole
- Mebendazole
- Praziquantel
- Azithromycin
Seven medicine combinations

- **MDA 1**: IVM + ALB, 18 countries, 158M people
- **MDA 2**: DEC + ALB, 18 countries, 400M people
- **MDA 3**: IVM, 20 countries, 64M people
- **MDA 4**: ZTH, 26 countries, 56M people
- **T1**: PZQ + ALB/MBD, 25 countries, 47M people
- **T2**: PZQ, 19 countries, 28M people
- **T3**: ALB/MBD, 55 countries, 537M people
Progress in preventive chemotherapy
individuals treated against at least one disease

Millions of individuals treated

- Coverage
- Untreated
- Treated

2008: 35%
2009: 36%
2010: 37%
2011: 38%
2012: 42%
2013: 44%
2014: 50%
2015: 63%

World Health Organization
Progress in preventive chemotherapy by target diseases

Lymphatic filariasis Onchocerciasis

Soil-transmitted helminths schistosomiasis Trachoma
Components of preventive chemotherapy

- Quality medicines
- Implement
- Test criteria
- Validate or Verify
Medicine needs for preventive chemotherapy

- DEC
- Albendazole/mebendazole
- Ivermectin
- Praziquantel
- Azithromycin
- Albendazole for LF
Donated medicines supplied through WHO

Number of tablets (millions)

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Estimated medicine gaps

Millions of tablets

- DEC
- Praziquantel
- Albendazole/mebendazole

Year:
- 2017
- 2018
- 2019
- 2020
- 2021
- 2022
- 2023
- 2024

World Health Organization
Ensuring quality of medicines

• Stringent regulatory authority

• Prequalified by WHO

• Temporary assessment by WHO-ERP
Thank you