

# **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 trematodiasis
- Lymphatic filariasis
- Onchocerciasis (river blindness)
- Schistosomiasis
- Soil-transmitted helminthiasis
- Trachoma
- Taeniasis and neurocysticercosis
- Scabies and ectoparasites

# **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**



# SUSTAINABLE DEVELOPMENT GOALS

1 NO POVERTY

2 ZERO HUNGER

3 GOOD HEALTH AND WELL-BEING

4 QUALITY EDUCATION

5 GENDER EQUALITY

6 CLEAN WATER AND SANITATION

3 GOOD HEALTH AND WELL-BEING



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.



GOALS

# 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 helminth**



**Schistosomiasis**



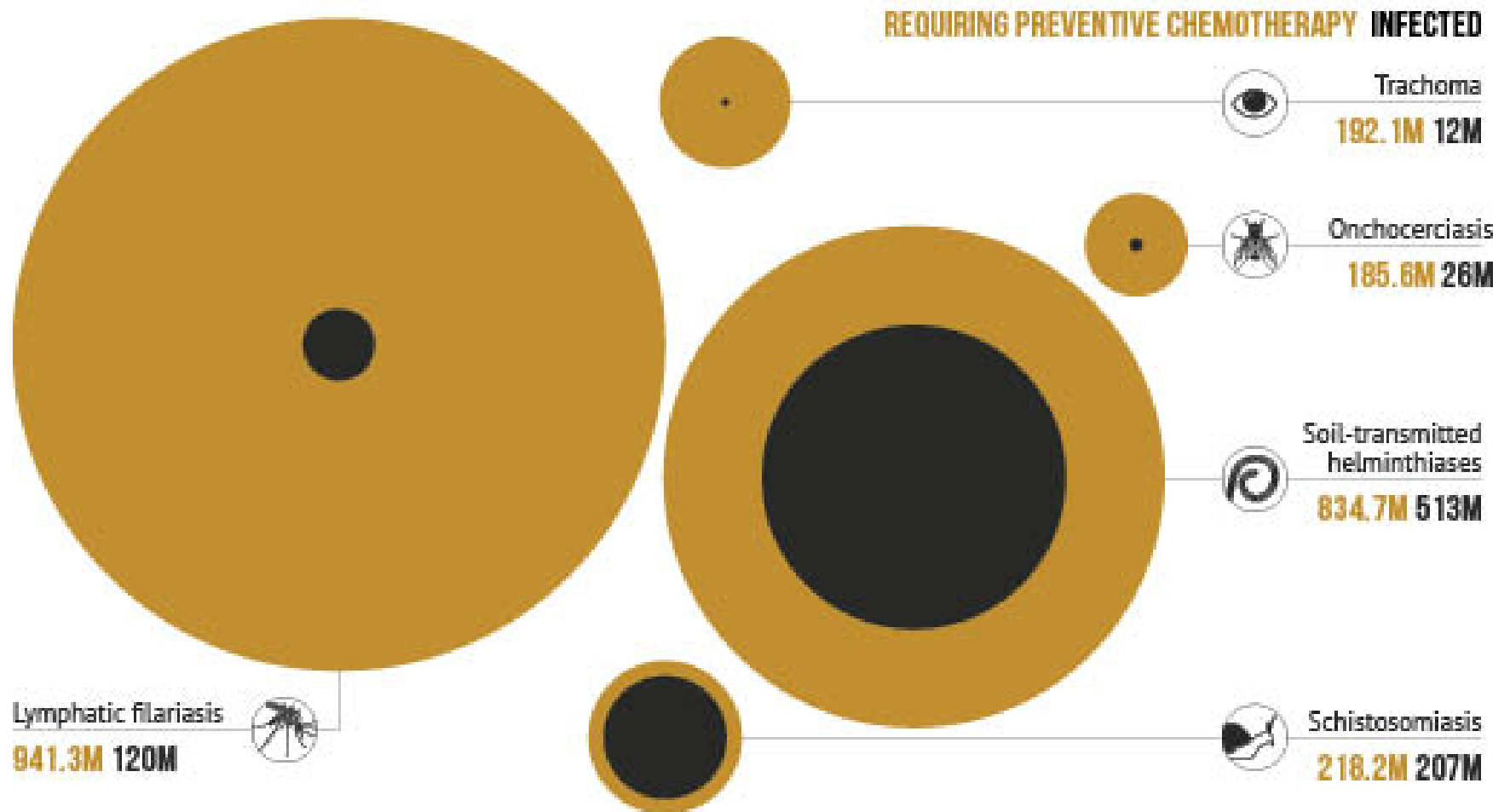
**Onchocerciasis**



**Trachoma**



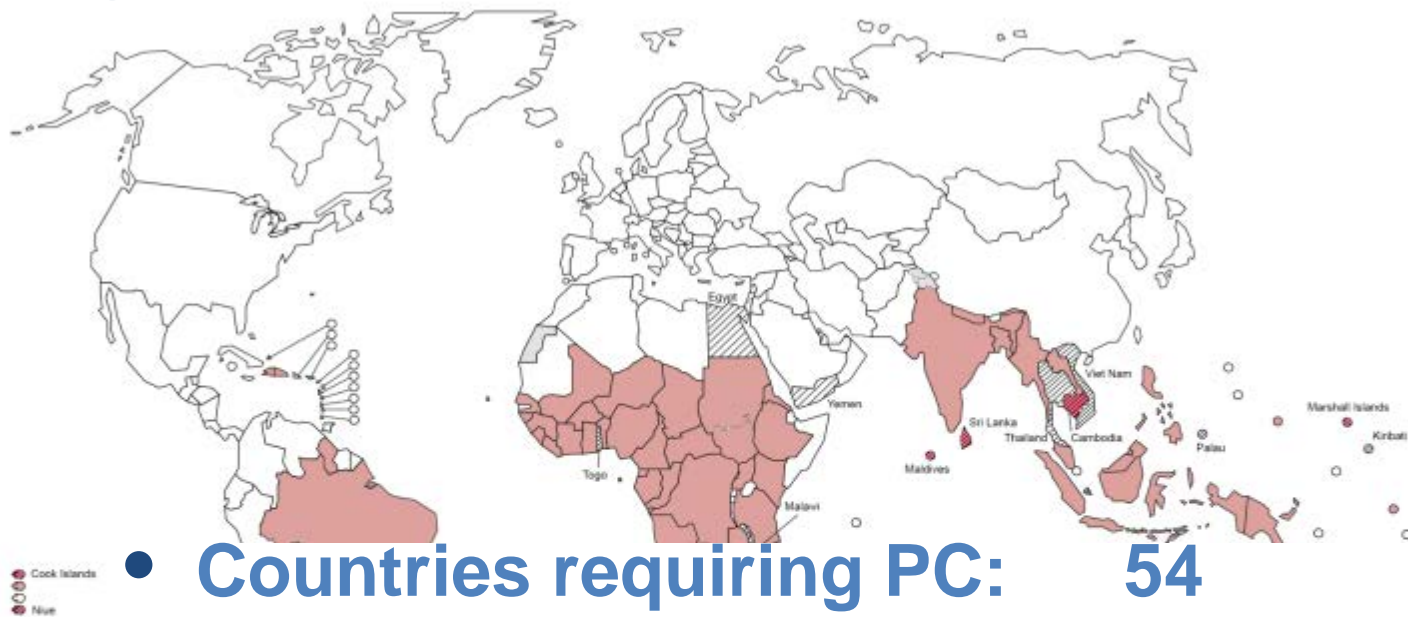
# Comparative burden of the diseases





# Lymphatic filariasis

**Target: Eliminate as Public Health Problem**

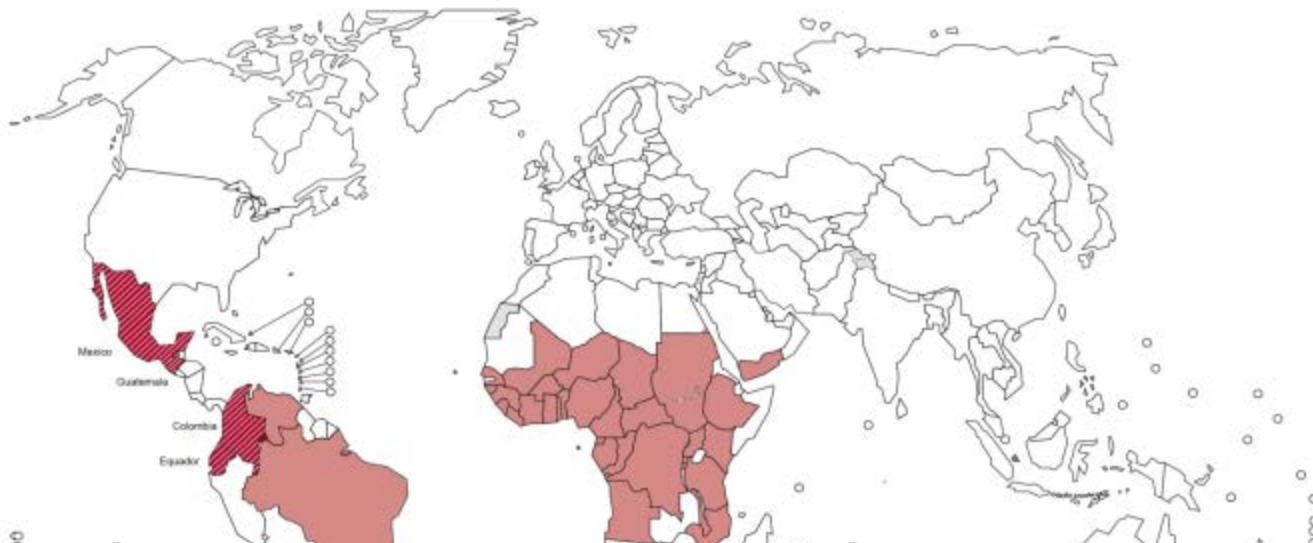


- **Countries requiring PC: 54**
- **No. requiring PC: 941 million**
- **Treated in 2015: 558 million**
- **Countries reached goal: 19**



# Onchocerciasis

## Target: Elimination

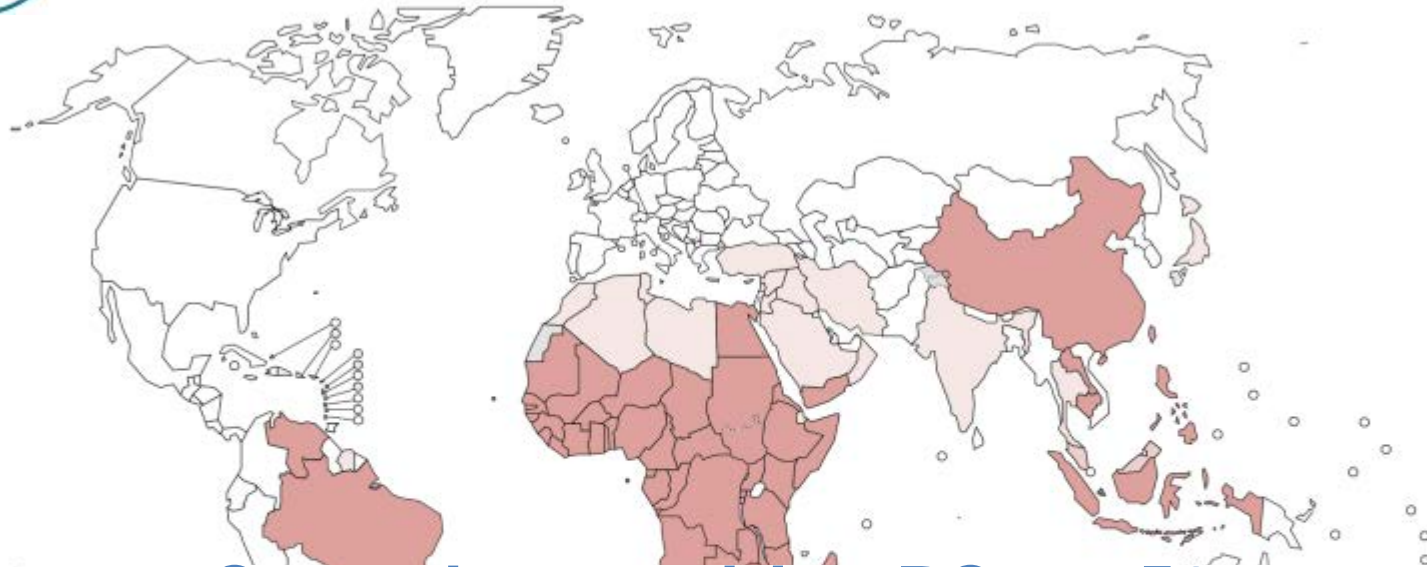


- **Countries requiring PC: 31**
- **No. requiring PC: 186 million**
- **Treated in 2015: 119 million**
- **Countries reached goal: 4**



# Schistosomiasis

**Target: Elimination**

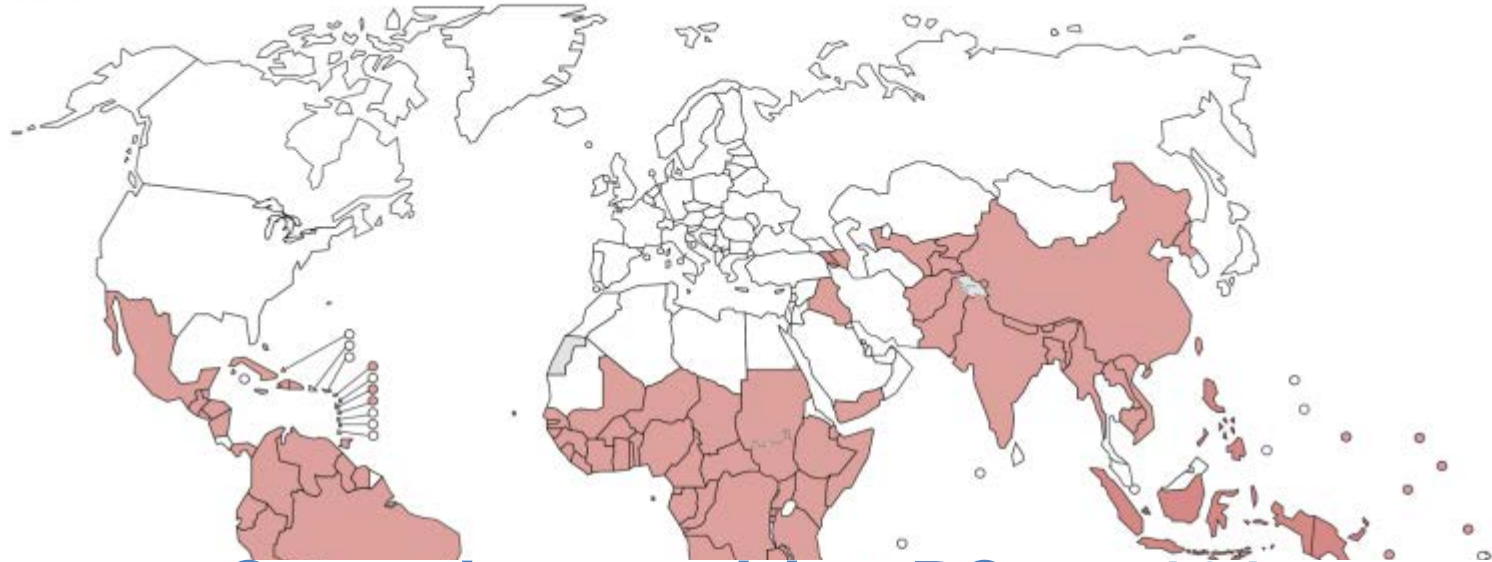


- **Countries requiring PC: 52**
- **No. requiring PC: 219 million**
- **Treated in 2015: 74 million**
- **Countries reached goal: 12**



# Soil-transmitted helminths

**Target: Control morbidity**



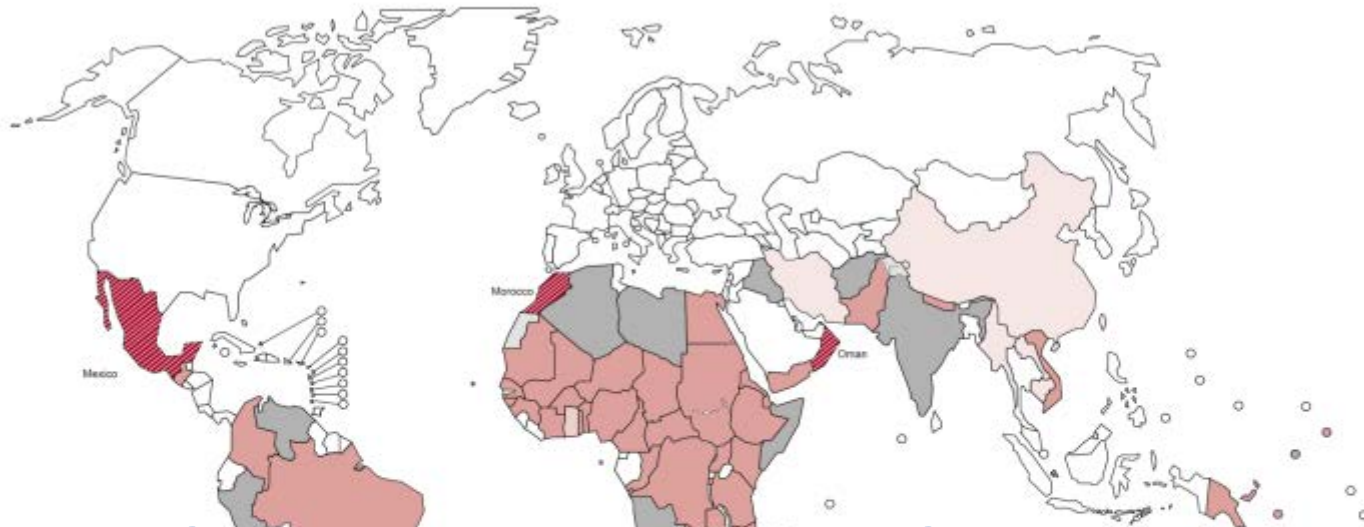
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- **Countries requiring PC: 101**
- **No. requiring PC: 835 million**
- **Treated in 2015: 573 million**
- **Countries reached goal (75%): 32**



# Trachoma

**Target: Eliminate as Public Health Problem**

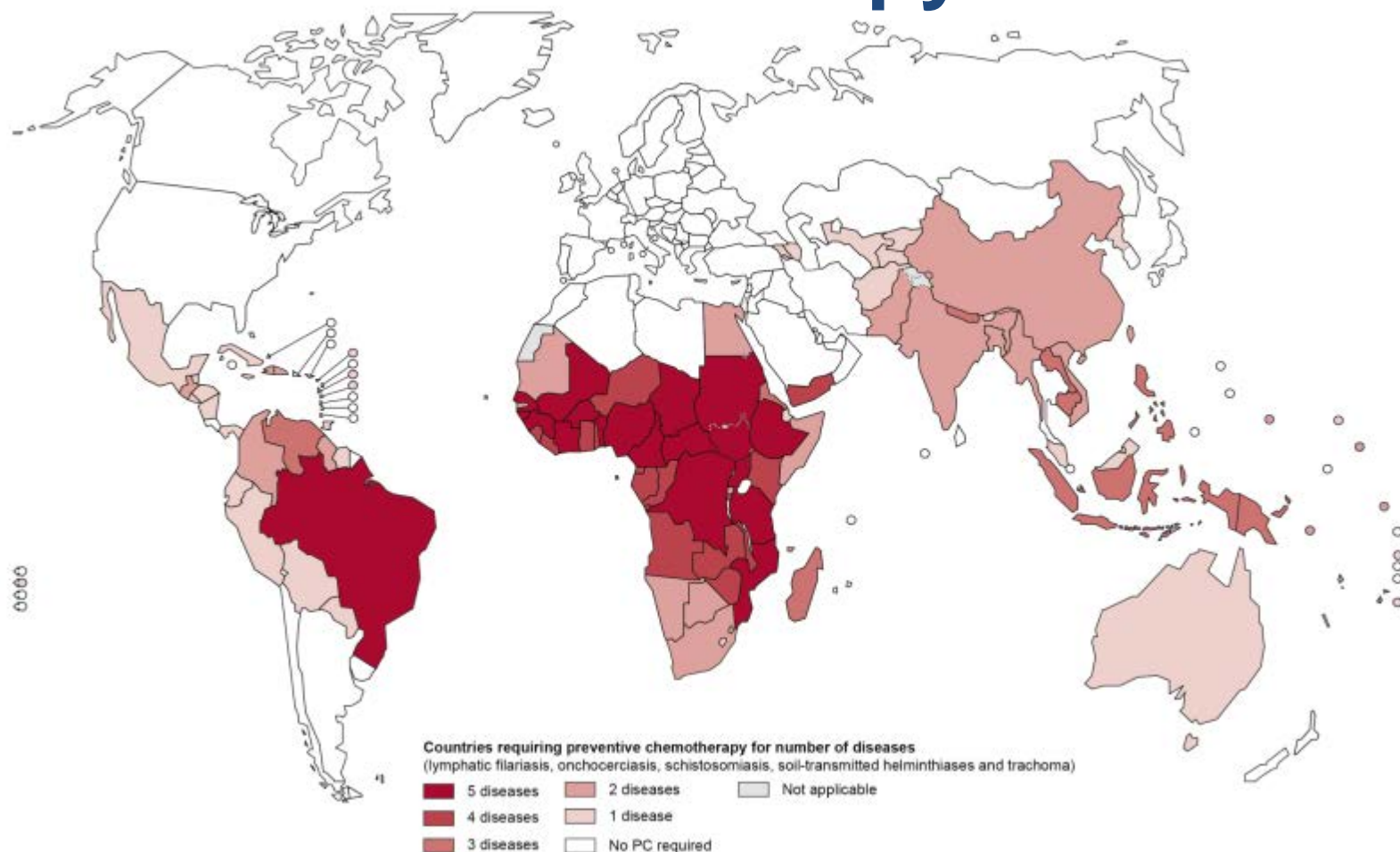


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- **Countries requiring PC: 41**
- **No. requiring PC: 190 million**
- **Treated in 2016: 85 million**
- **Countries reached goal: 10**



# Countries requiring preventive chemotherapy





# Six medicines

Diethylcarbamazine (DEC) Ivermectin

Albendazole

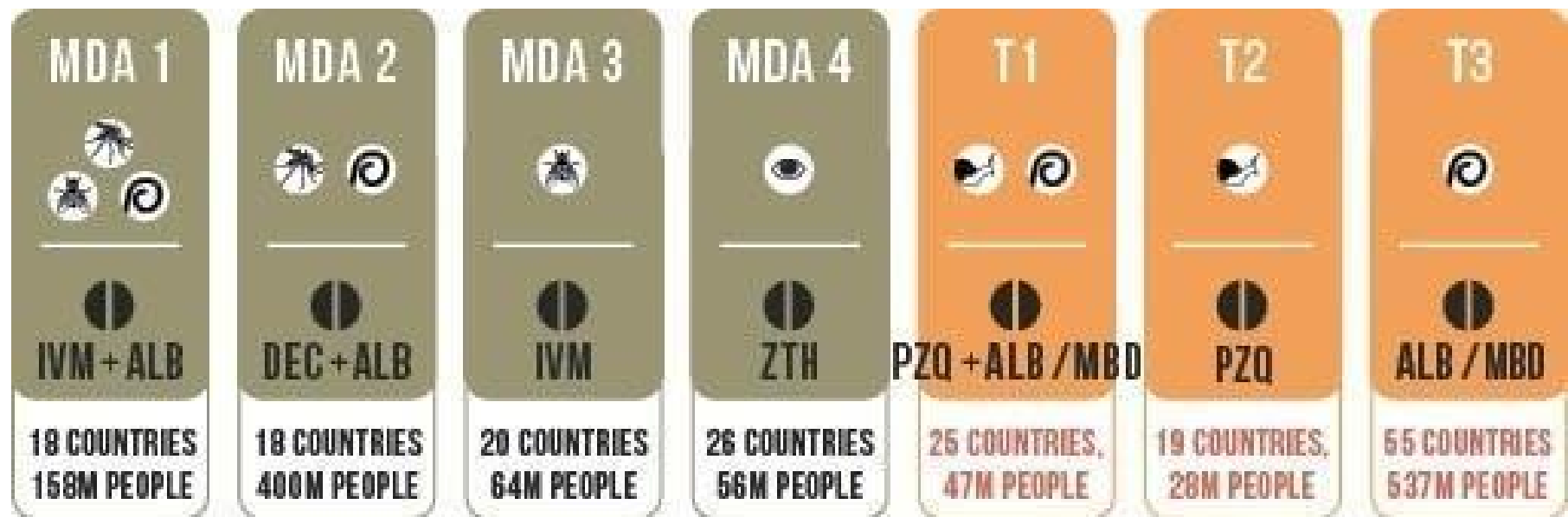
Mebendazole

Praziquantel

Azithromycin

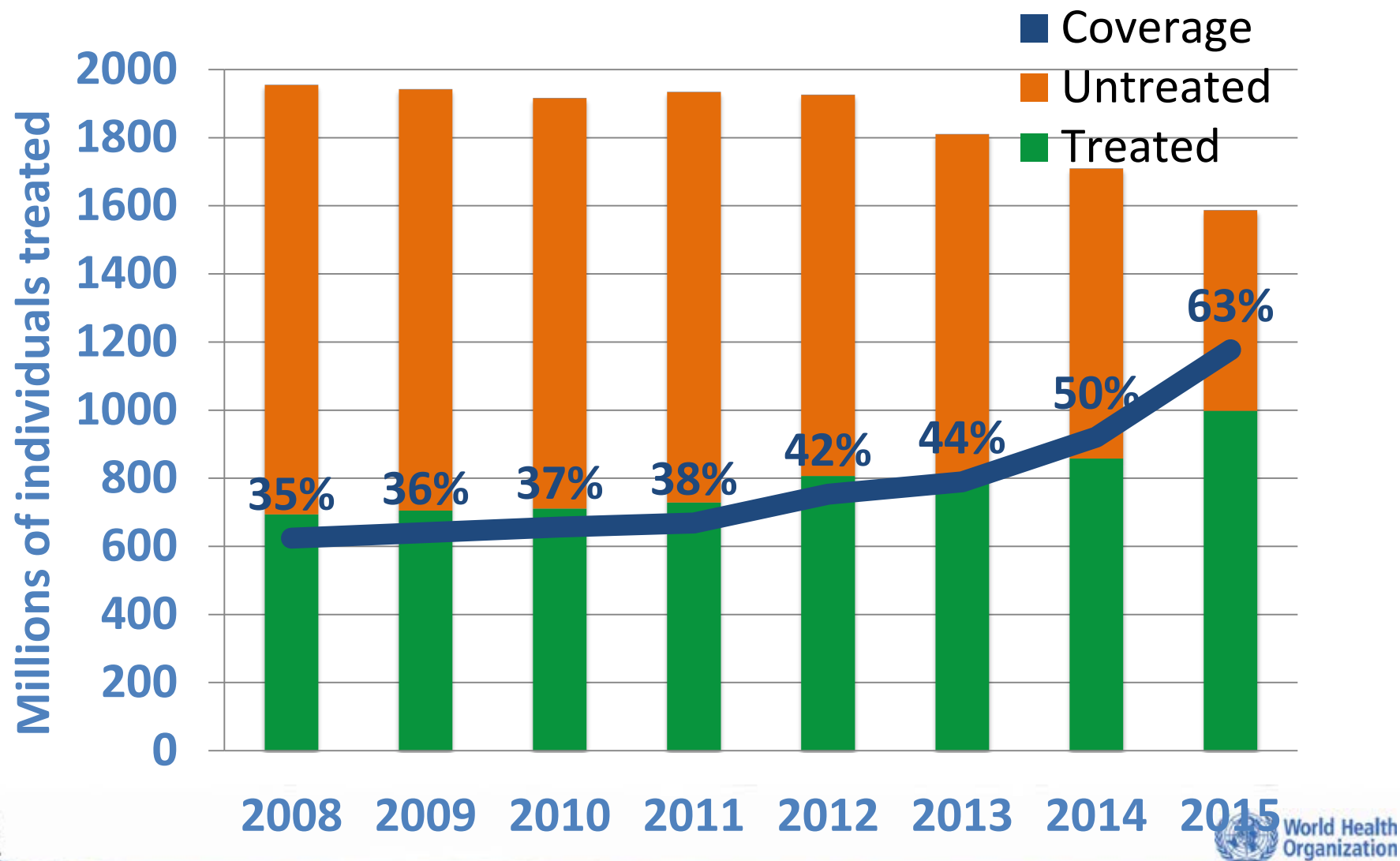


# Seven medicine combinations

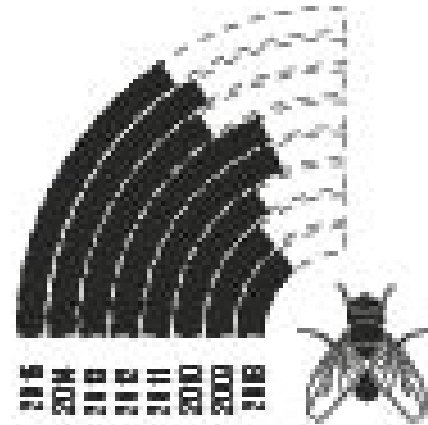
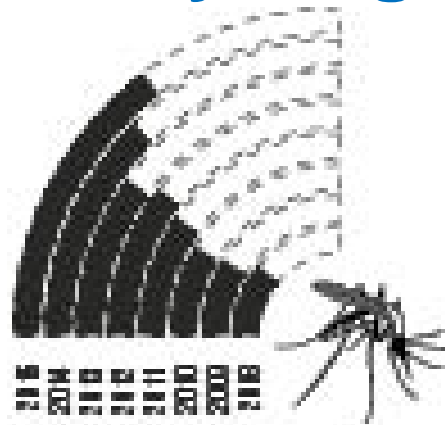


# Progress in preventive chemotherapy

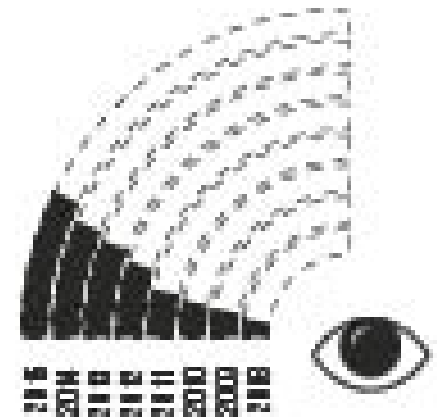
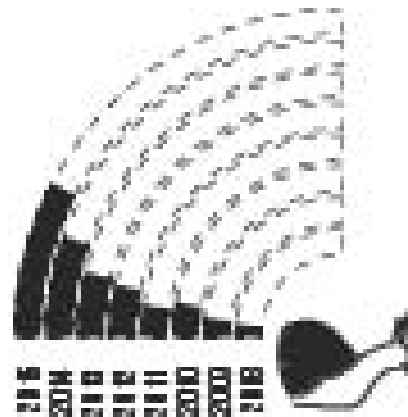
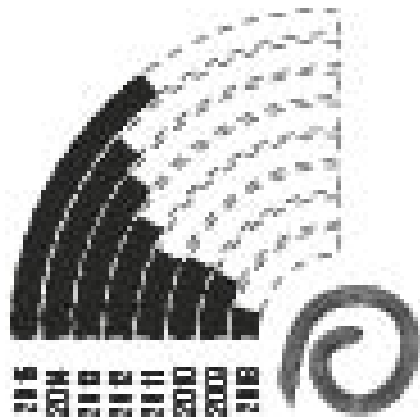
## individuals treated against at least one disease



# 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**

Medicines

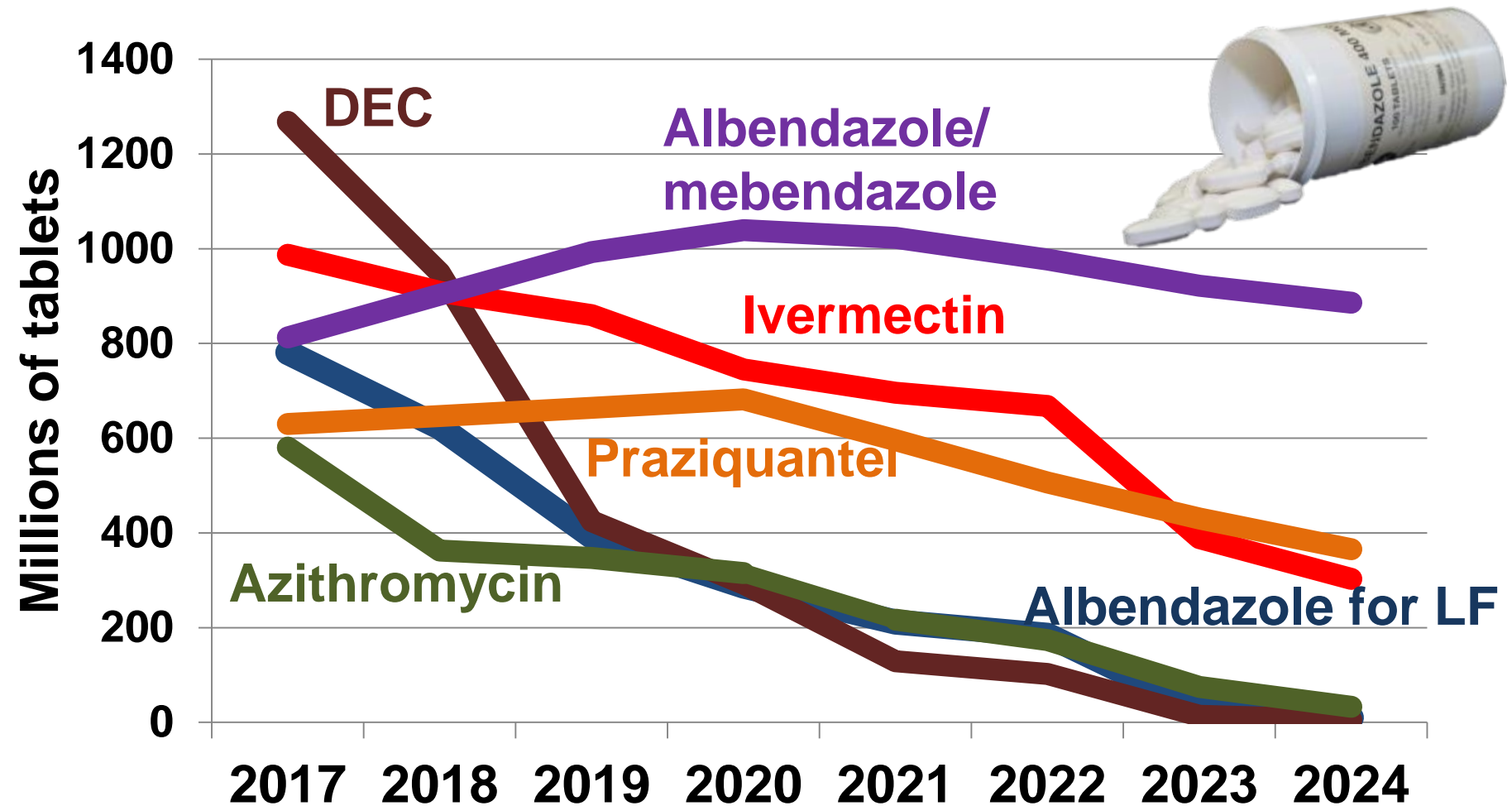
Implement

Test

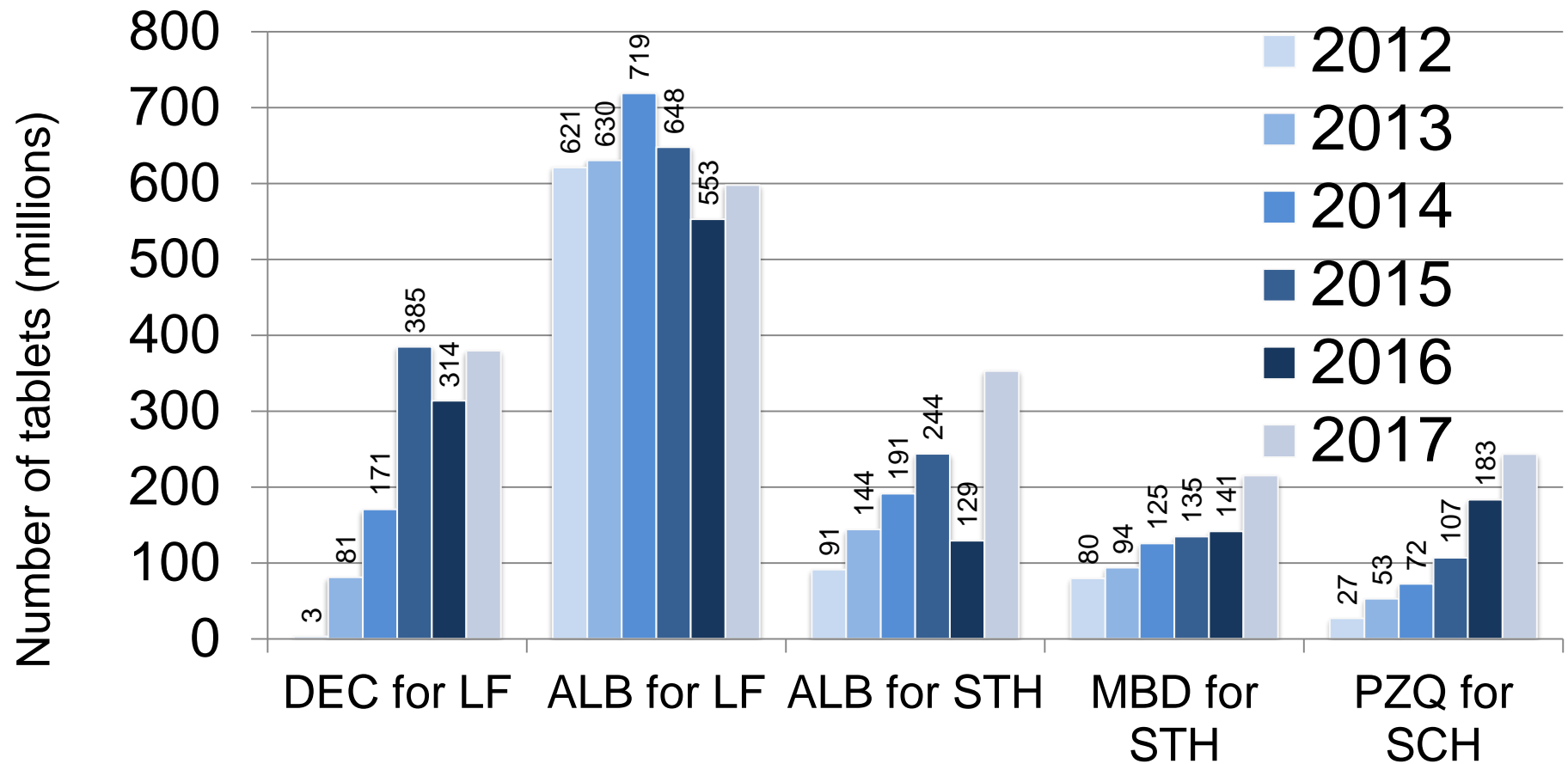
Validate



# Medicine needs for preventive chemotherapy

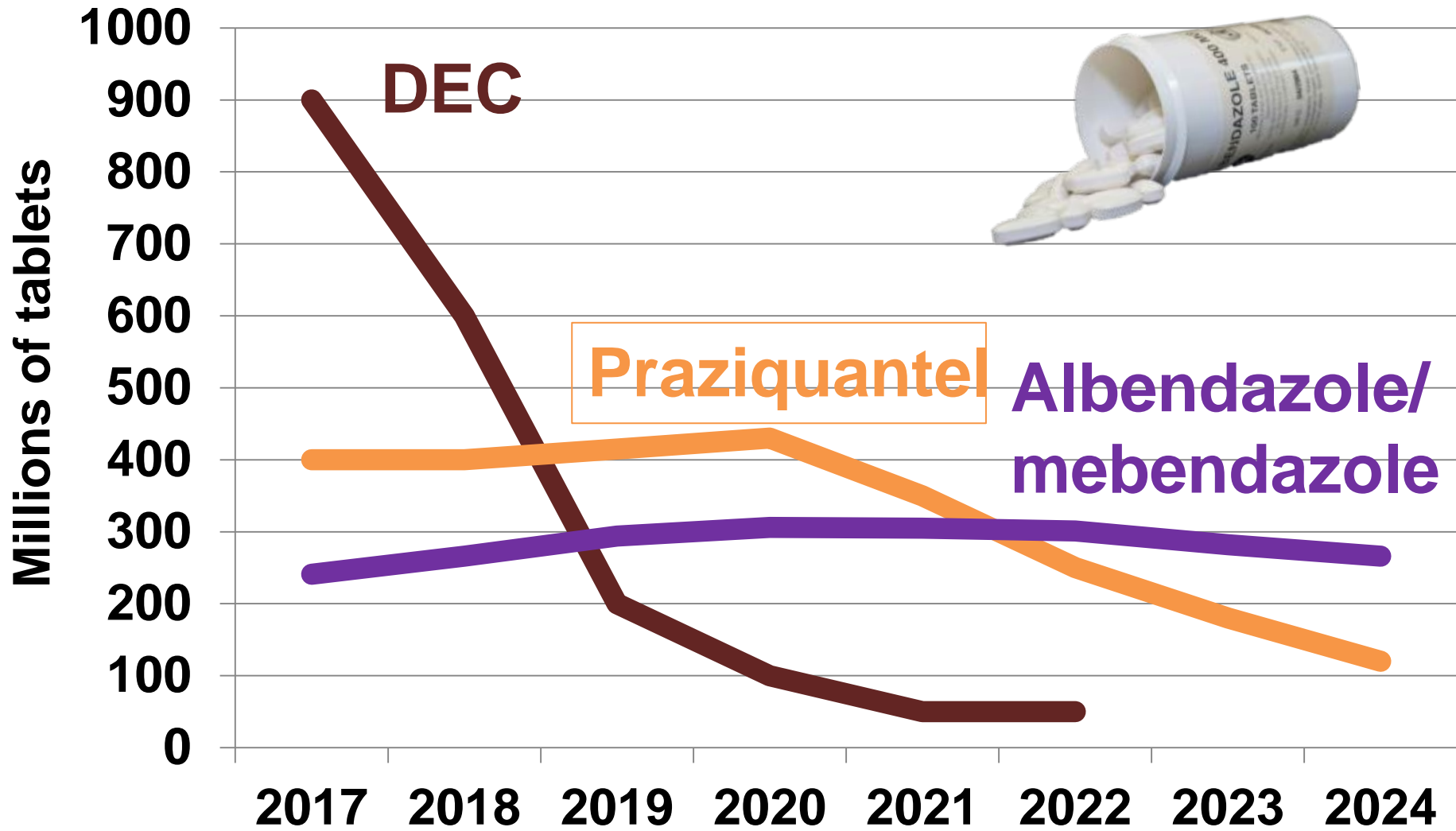


# Donated medicines supplied through WHO





# Estimated medicine gaps



# Ensuring quality of medicines

- **Stringent regulatory authority**
- **Prequalified by WHO**
- **Temporary assessment by WHO-ERP**

# CROSSING THE BILLION

Lymphatic filariasis, onchocerciasis,  
schistosomiasis, soil-transmitted  
helminthiasis and trachoma

Preventive chemotherapy for  
neglected tropical diseases



## Thank you

