STH Coalition Webinar

A WORLD BANK’S STRATEGY FOR IMPROVING HUMAN CAPITAL
DEWORMING AFRICA INITIATIVE (DAI)

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TWIN GOALS
End Extreme Poverty by 2030 &
Promote Shared Prosperity
Among the Poorest 40%
OUTLINE

1. WBG Human Capital Project
2. WBG Strategy to Control NTDs: *Deworming Africa Initiative*
3. Country Operations
4. Recent Implementation Stories - *Angola*
The Human Capital Project (HCP) is a key World Bank Group strategy to end extreme poverty.

The Human Capital Project (HCP) is a global effort to accelerate more and better investments in people for greater equity and economic growth.
THE WORLD BANK HAS LAUNCHED THE HUMAN CAPITAL PROJECT TO ACCELERATE MORE AND BETTER INVESTMENTS IN PEOPLE


2. Measurement and Research: Improve measurement and research and provide analysis to support investments in human capital development.


How much human capital can a child born today expect to acquire by age 18, given the risks to poor health and education that prevail in the country where he/she lives?

Survival
- Children who don’t survive don’t grow up to become future workers.

Education
- Contribution of quality-adjusted years of school to productivity of future workers

Health
- Contribution of health (adult survival rate and stunting) to productivity of future workers

Productivity of a future worker (relative to benchmark of complete education and full health)
## World Bank Group – Human Capital Index

<table>
<thead>
<tr>
<th>Indicator</th>
<th>East Asia &amp; Pacific</th>
<th>Europe &amp; Central Asia</th>
<th>Latin America &amp; Caribbean</th>
<th>Middle East &amp; North Africa</th>
<th>North America</th>
<th>South Asia</th>
<th>Sub-Saharan Africa</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male + Female</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>Probability of Survival at Age 5</td>
<td>0.978</td>
<td>0.993</td>
<td>0.980</td>
<td>0.984</td>
<td>0.994</td>
<td>0.957</td>
<td>0.934</td>
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<tr>
<td>HCI COMPONENT 2: SCHOOL</td>
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<td></td>
<td></td>
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<td></td>
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<tr>
<td>Expected Years of School</td>
<td>11.9</td>
<td>13.0</td>
<td>11.9</td>
<td>11.5</td>
<td>13.5</td>
<td>10.5</td>
<td>8.1</td>
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<td>Harmonized Test Scores</td>
<td>451</td>
<td>495</td>
<td>404</td>
<td>408</td>
<td>530</td>
<td>364</td>
<td>374</td>
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<tr>
<td>HCI COMPONENT 3: HEALTH</td>
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</tr>
<tr>
<td>Survival Rate from Age 15-60</td>
<td>0.873</td>
<td>0.900</td>
<td>0.861</td>
<td>0.906</td>
<td>0.921</td>
<td>0.841</td>
<td>0.732</td>
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<tr>
<td>Fraction of Children Under 5 Not Stunted</td>
<td>0.776</td>
<td>0.881</td>
<td>0.859</td>
<td>0.847</td>
<td>0.979</td>
<td>0.645</td>
<td>0.684</td>
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<tr>
<td>HUMAN CAPITAL INDEX (HCI)</td>
<td>0.61</td>
<td>0.70</td>
<td>0.55</td>
<td>0.57</td>
<td>0.78</td>
<td>0.46</td>
<td>0.40</td>
</tr>
</tbody>
</table>
HUMAN CAPITAL INVESTMENTS, ESPECIALLY EARLY INVESTMENTS, POSITIVELY IMPACT GROWTH AND DEVELOPMENT

INVESTING EARLY MATTERS!

- **Malnutrition**: irreversibly impairs development, learning, and earnings.

- **Cognitive/linguistics**: delays accumulate early and last a lifetime.

- **Socio-emotional skills**: predict success and productivity

- **Human Capital** is a critical precondition for economic growth

Child mortality rates down

Maternal mortality rates down

More children in school

More people covered by safety nets

Rising life expectancy

Massive gains from human capital investments
WHY ARE NTDS A SERIOUS CONCERN FOR HUMAN CAPITAL?

Early years:
• Increased risk of anemia by 25% and severe anemia by 73%
• Reduction of nutrient absorption increasing malnutrition
• Increased chronic infections and fatigue
• Delays children’s growth and cognitive development

Deworming as a key intervention for school-age children (SAC):
• Higher math test scores following treatment (Uganda)
• Improved cognitive test scores
• Increased school attendance by 7.5% (Kenya)
• Increased rate of progression to secondary school in females by 25% (Kenya)
• Most cost-effective intervention at schools

Long-term economic productivity:
• Increased working hours per week for males by 17% (Kenya)
Short-run effects of deworming:
Miguel and Kremer (2004); Hamory Hicks et al. (2015)
- After one year, rates of serious worm infections fall by half, from 52% to 25%.
- Absenteeism falls by one quarter.
- Ozier (2017) finds cognitive gains among young children in the area.

Educational and Economic Effects 10 years later:
Baird et al., 2016
- 9.6 percentage points more likely to pass secondary school entrance exam (base rate=41%, p<0.05)
- Similar increase in attending secondary school (p<0.05)
- Shift from agriculture to non-agricultural self-employment (p<0.05)
ECONOMIC EFFECTS OF DEWORMING: 15 YEARS LATER (BAIRD ET AL., 2018)

• Total earnings increased by 15% (p<0.05)
• Total consumption expenditures increase by 30% (p<0.01)
• Likelihood of migrating to an urban locality increased by 7pp, mainly among women (p<0.05)

• Cost-benefit analysis
  ➢ Future earnings (net of increased schooling costs) > 150 times cost
  ➢ Implies tax revenue > cost of program

• USA: Hookworm rates of 40% among school-aged children
  ➢ Travelling dispensaries administered treatment and educated people about prevention in 1910’s
  ➢ Bleakley (2007) difference-in-differences analysis finds:
    ➢ increase in school enrollment of 3-5% and increase in attendance of 6-8% (for a county with a 1910 infection rate of 50%)
    ➢ 43% increase in adult wages among those infected and treated as children
HOWEVER, FOLLOWING BUSINESS AS USUAL, THE REGION WILL NOT ACHIEVE ITS TARGET BY 2020

- 17 out of 48 countries in the Africa region have reached 75% coverage for STH among SAC
- Only Sierra Leone has achieved the 75% coverage target for schistosomiasis among SAC
- Limited data available on deworming in pre-sac, and no data available on deworming in pregnancy
- A regional financial effort is needed to build momentum to achieve the targets in the region by 2020 for all groups.

Using the current average annual reduction rate of 2.8%, STH will be eradicated by 2140.
FOLLOWING BUSINESS AS USUAL, FINANCIAL GAPS CONTINUE BEING A SERIOUS PROBLEM

Total gap cost for three population groups: US$ 77.0 M
A PROPOSAL TO ADDRESS THE BIGGEST CHALLENGES

- PRIORITY SETTING
- GOVERNANCE
- FINANCIAL GAPS
- SUSTAINABILITY
- PARTNERSHIP
DAI: OUTLINE

Priority Setting

DAI
75
50
20
15
STH AND SCHISTOSOMIASIS AS TRACERS
Number of NTDs infections worldwide

- Soil-transmitted helminths (1.4 billion)
- Malaria * (300 million)
- Schistosomiasis (240 million)
- Lymphatic Filariasis (120 million)
- Amoebiasis * (40 million)
- Foodborne trematodiases (40 million)
- Chagas (16 million)
- Leishmaniasis (12 million)
- African Trypanosomiasis (0.3 million)
- Dracunculiasis (0.1 million)

* = not included in the WHO’s NTD portfolio

WHICH DISEASES?
WORLD HEALTH ORGANIZATION IDENTIFIES SIX POPULATION GROUPS AT-RISK FOR STH INFECTIONS

WHICH POPULATION GROUPS?

- Young children 12–23 months of age
- Pre-SAC (4–59 months of age)
- SAC (5 to 14* years of age) *UNDP
- Non-pregnant menstruating adolescents (10–19 years of age)
- Women of reproductive age (15–49 years) (pregnant women excluded)
- Pregnant women

[Bar chart showing estimated population and percentage of the total country population for different countries and population groups.]

Total Estimated population for PC/Percentage of total country population

Nigeria: Young children 61.6%, Pre-SAC 55.4%, SAC 43.9%, Non-pregnant menstruating adolescents 41.0%, Women of reproductive age 45.4%, Pregnant women 63.1%

Ethiopia: Young children 60.3%, Pre-SAC 43.9%, SAC 60.9%, Non-pregnant menstruating adolescents 62.7%, Women of reproductive age 41.0%, Pregnant women 45.4%

Democratic Republic of the Congo: Young children 60.1%, Pre-SAC 43.1%, SAC 61.6%, Non-pregnant menstruating adolescents 60.8%, Women of reproductive age 63.0%, Pregnant women 41.4%

South Africa: Young children 61.4%, Pre-SAC 59.7%, SAC 63.0%, Non-pregnant menstruating adolescents 60.8%, Women of reproductive age 61.4%, Pregnant women 61.7%

Tanzania: Young children 59.7%, Pre-SAC 43.9%, SAC 60.9%, Non-pregnant menstruating adolescents 62.7%, Women of reproductive age 41.0%, Pregnant women 45.4%

Kenya: Young children 60.9%, Pre-SAC 43.1%, SAC 61.6%, Non-pregnant menstruating adolescents 60.8%, Women of reproductive age 43.1%, Pregnant women 61.2%

Uganda: Young children 60.3%, Pre-SAC 41.0%, SAC 62.7%, Non-pregnant menstruating adolescents 61.1%, Women of reproductive age 41.0%, Pregnant women 62.4%

Algeria: Young children 45.4%, Pre-SAC 43.1%, SAC 61.6%, Non-pregnant menstruating adolescents 60.8%, Women of reproductive age 61.4%, Pregnant women 61.7%

Sudan: Young children 60.3%, Pre-SAC 41.0%, SAC 61.6%, Non-pregnant menstruating adolescents 61.1%, Women of reproductive age 45.4%, Pregnant women 62.4%

Morocco: Young children 43.1%, Pre-SAC 59.7%, SAC 61.6%, Non-pregnant menstruating adolescents 60.8%, Women of reproductive age 63.0%, Pregnant women 43.1%

Mozambique: Young children 60.8%, Pre-SAC 59.7%, SAC 61.6%, Non-pregnant menstruating adolescents 60.8%, Women of reproductive age 61.4%, Pregnant women 63.0%

Angola: Young children 61.1%, Pre-SAC 43.1%, SAC 61.6%, Non-pregnant menstruating adolescents 60.8%, Women of reproductive age 61.2%, Pregnant women 61.7%

Ghana: Young children 61.1%, Pre-SAC 55.4%, SAC 59.7%, Non-pregnant menstruating adolescents 61.4%, Women of reproductive age 59.7%, Pregnant women 59.7%

Yemen: Young children 61.2%, Pre-SAC 43.1%, SAC 61.6%, Non-pregnant menstruating adolescents 60.8%, Women of reproductive age 61.4%, Pregnant women 61.1%

Madagascar: Young children 60.3%, Pre-SAC 41.0%, SAC 62.7%, Non-pregnant menstruating adolescents 62.4%, Women of reproductive age 41.0%, Pregnant women 60.9%

Cote d'Ivoire: Young children 60.8%, Pre-SAC 43.1%, SAC 61.6%, Non-pregnant menstruating adolescents 60.8%, Women of reproductive age 61.4%, Pregnant women 63.0%

Cameroon: Young children 60.3%, Pre-SAC 43.1%, SAC 61.6%, Non-pregnant menstruating adolescents 60.8%, Women of reproductive age 61.4%, Pregnant women 61.2%

Niger: Young children 61.1%, Pre-SAC 43.1%, SAC 61.6%, Non-pregnant menstruating adolescents 60.8%, Women of reproductive age 61.4%, Pregnant women 61.7%

Burkina Faso: Young children 61.2%, Pre-SAC 43.1%, SAC 61.6%, Non-pregnant menstruating adolescents 60.8%, Women of reproductive age 61.4%, Pregnant women 61.1%

Malawi: Young children 60.8%, Pre-SAC 41.0%, SAC 62.7%, Non-pregnant menstruating adolescents 62.4%, Women of reproductive age 41.0%, Pregnant women 60.9%

Mali: Young children 61.1%, Pre-SAC 43.1%, SAC 61.6%, Non-pregnant menstruating adolescents 60.8%, Women of reproductive age 61.4%, Pregnant women 60.3%

Zambia: Young children 62.4%, Pre-SAC 43.1%, SAC 61.6%, Non-pregnant menstruating adolescents 60.8%, Women of reproductive age 61.4%, Pregnant women 60.9%

Zimbabwe: Young children 62.4%, Pre-SAC 43.1%, SAC 61.6%, Non-pregnant menstruating adolescents 60.8%, Women of reproductive age 61.4%, Pregnant women 60.9%

Senegal: Young children 60.9%, Pre-SAC 43.1%, SAC 61.6%, Non-pregnant menstruating adolescents 60.8%, Women of reproductive age 61.4%, Pregnant women 60.9%

Total Estimated population for PC/Percentage of total country population
THE WBG PRIORITIZES THREE AT-RISK POPULATIONS TO ACHIEVE THE GREATEST IMPACT ON HUMAN CAPITAL INVESTMENTS

- Pregnant women; 2.2%
- Young children 12–23 months of age; 1.4%
- Pre-SAC (4–59 months of age); 2.4%
- SAC (5 to 14 years); 1.6%
- Non-pregnant menstruating adolescents (10–19 years of age); 30.2%
- Women of reproductive age (15–49 years) (pregnant women excluded); 62.2%
The NTDs index, comprised of 13 indicators, prioritizes countries most affected by the five PC-NTDs in SSA those countries are simultaneously in the worst condition to adequately respond to NTDs and/or do not have the mechanisms to mobilize resources in a way that could allow the country to control key NTDs in a sustainable manner.

**Risk Index**

\[
Risk \ Index = \sum [(indicator_1 \times \text{weight}) + (indicator_2 \times \text{weight}) + \cdots]
\]

**Magnitude**

3 dimensions of magnitude:
- Absolute number of DALYs of NTDs
- DALYs rate for NTDs
- Number of NTDs in the country

**Performance**

5 dimensions performance:
- National coverage of PC for STH of SAC
- Existence of an NTD master plan
- Undergoing research on NTD interventions
- Donor support for STH
- Donor support for SCH

**Sustainability**

5 dimensions of sustainability:
- Education coverage
- Coverage of safe drinking water
- Health system quality
- Country’s health system performance
- Rural population
• The regional average for the SSA was 47%, (Moderate Priority level).
• The country with the highest score (lowest performance) was South Sudan (76%), and the country with the lowest score (highest performance) was Congo (33%).
• High Priority Countries (≥ 60%): 6 countries (South Sudan, Chad, Angola, Central African Republic, Democratic Republic of Congo, Nigeria)
• Moderate Priority Countries (41% - 59%): 26 countries (Ethiopia, Somalia, Uganda, Equatorial Guinea, Niger, Liberia, The Gambia, Burkina Faso, Guinea, Sudan, Guinea-Bissau, Malawi, Sao Tomé and Principe, Madagascar, Burundi, Kenya, Mali, Namibia, Mozambique, Senegal, Cameroon, Ghana, Rwanda, Sierra Leone, Zambia, eSwatini [Swaziland])
• Low Priority Countries (≤ 40%): 12 countries (Togo, Mauritania, Cape Verde, Zimbabwe, Comoros, South Africa, Gabon, Lesotho, Benin, Botswana, Cote D’Ivoire, Congo).
DAI: outline

Priority Setting

Governance Assessment

DAI
75
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20
15
GOVERNANCE FOR SCHOOL-BASED DEWORMING

- Requires strong collaboration between education and health sectors to ensure all materials and knowledge reach from the national level to frontline workers.

- Governments contribute significant in-kind resources to programs:
  - Teacher time, and health and education personnel responsible for program delivery.
  - These costs are estimated to be 40% of total program cost, when opportunity costs are included.
<table>
<thead>
<tr>
<th>NTDS COSTING TOOL</th>
<th>GOVERNANCE ASSESSMENT TOOL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Support SSA countries estimate the cost required to fill the coverage gap of deworming with PC (through MDA) and attain the 75% coverage target of deworming for STH among school-age children, emphasizing on STH and SCH, and on the three prioritized populations. Key for UHC benefit packages in projects.</td>
<td>This tool is currently being developed and aims to evaluate the institutional capacity of governments in terms of program implementation, management of the 5 PC-NTDs, coordination between stakeholders and services, and the allocative efficiency and partnership for long-term financing of deworming. This is the baseline to strategize in a more sustainable and comprehensive manner and mainstream NTD interventions into national action plans.</td>
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</table>
THE RIGHT SETTING

1. UNIVERSAL HEALTH COVERAGE
2. Universal School health and nutrition coverage
   No more vertical programs!
NEW SETTING FOR NTDS: MAJOR THEMES

Expanding access to equitable, quality service coverage and financial protection

Building and protecting Human Capital: investing in the early years and harnessing the demographic dividend

Strengthening institutional capacity at a local, national, regional level for stewardship

Focus on public goods: preparedness, control / elimination of diseases (NTDs, Malaria, TB, Polio)
ALMOST ALL SSA COUNTRIES ARE OFFICIALLY COMMITTED TO ACHIEVING UHC

Countries with a commitment to UHC / the right to health
- Yes: 96%
- No: 4%

Where is the commitment to UHC expressed?(*)
- Constitution: 61%
- Specific law/bill: 39%
- Sector strategy/plan: 82%
- Other: 43%

(*) Note: may add up to more than 100%
DAI: OUTLINE

Priority Setting

Governance Assessment

Long Term Financing Strategy

DAI 75 50 20 15
AFRICA´S 10 HIGH RISK COUNTRIES
Investments to achieve the regional target of universal deworming coverage among SAC

10 High Risk countries

Africa
DAI: OUTLINE

- Priority Setting
- Governance Assessment
- Long Term Financing Strategy
- Sustainability
**INVEST IN SUSTAINABILITY**

i. Support countries to increase current NTD financial investment with declining investment over time

ii. Engage in cross-sectoral investments with WASH (Angola’s case)

iii. Country implementation road map for NTDs

**Strategy**

- Support countries to increase national investment on NTDs
- Comprehensive investment approach, including: Health, Education and WASH
The WB has defined the process of country graduation based on the following 10 areas of focus:

1. Improvement in the implementation and governance of NTDs, based on a governance assessment tool
2. Elaboration of an strategic investment case model
3. Implementation of a 5/10-year national multi-sectoral NTDs strategic plan
4. Development and implementation of a long-term financial strategy
5. Management and performance agreements in place for DAI implementation
6. Partnerships for long-term financing sustainability
7. Implementation of deworming under UHC
8. Development and implementation of a school-health package
9. Promote social advocacy & community empowerment
10. Monitoring & Evaluation
DAI: OUTLINE

Priority Setting

Governance Assessment

Long Term Financing Strategy

Sustainability Assessment

Partnership

DAI 75 50 20 15
## LONG TERM PARTNERSHIP STRATEGY

<table>
<thead>
<tr>
<th>Objectives</th>
<th>Overview</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategic Objective 1</td>
<td>Develop a bold regional deworming initiative to control STH and schistosomiasis in Africa - SAC +++</td>
</tr>
<tr>
<td>Strategic Objective 2</td>
<td>Increase external and domestic funding for NTDs and deworming in endemic countries in key countries in SSA (long-term financial investment / graduation)</td>
</tr>
<tr>
<td>Strategic Objective 3</td>
<td>Increase number of World Bank projects across Global Practices that include a NTD, deworming, and WASH activities into a new or restructured project</td>
</tr>
<tr>
<td>Strategic Objective 4</td>
<td>Key partnerships for DAI in selected countries (Cameroon, Equatorial Guinea, Nigeria, Angola etc.)</td>
</tr>
<tr>
<td>Strategic Objective 5</td>
<td>Improve governance through health systems strengthening to guarantee a sustainable integration of the programs in national health plans.</td>
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</tbody>
</table>
THE RIGHT SETTING

1. Universal Health Coverage

2. UNIVERSAL SCHOOL HEALTH AND NUTRITION COVERAGE

No more vertical programs!
• Based on evidence from the *DCP3 vol. 8* report and WB School health team, 26 key health interventions were identified as cost-effective.

• The time is right to work together, across both sectors, in a collaborative effort to ensure healthy girls and boys, and to complete equitable, and quality primary and secondary education.
DEWORMING AFRICA INITIATIVE (DAI) – COUNTRY OPERATIONS

• Closed Guinea-Bissau (FY16-17)
• Closed Madagascar (FY16-17)
• Closed Republic of Congo (FY16-17)
• Active Burkina Faso, Mali, Niger (FY17-20)
• Active Angola (FY19-20)
• Active Cameroon (FY19-20)
• Active Nigeria (FY19-20)
• Pipeline Niger (FY19-20)
• Pipeline Equatorial Guinea (FY19-20)
THE WBG HAS INCREASED ITS ROLE IN FINANCING NTDS CONTROL SINCE 2014

World Bank Contribution to Control of PC-NTDs, 2013-2018

- 2013: $3.3 M
- 2014: $3.7 M
- 2015: $4.8 M
- 2016: $13.1 M
- 2017: $12.2 M
- 2018: $13.9 M
RECENT IMPLEMENTATION STORIES - ANGOLA
THANK YOU!

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