ACT Accelerator
Dx Partnership

Brief to Member States

16 July 2020

#UnitedAgainstCoronavirus
#StrongerTogether | #GlobalResponse | #GlobalGoalUnite
We have a simple message to all countries: test, test, test.”
Why do we need diagnostics?

• Testing is essential at every stage of the pandemic response

• Effective diagnostics are essential to limit the spread of infection

• Many countries have shown that “test, trace and isolate” works
How can testing help save lives now?
By averting 1 death for every ~1000 tests

Early, targeted testing helps to isolate cases, manage patients and prevent spread
Barriers mean we cannot reach everyone who needs a test today

**CURRENT TESTING STRATEGIES RELY ON SYSTEMS & INFRASTRUCTURE**
- Complex, expensive, slow, laboratory-based, resource-intensive

**SUPPLY SHORTAGES JEOPARDIZE ACCESS**
- Manufacturing capacity is not in place to rapidly scale up production of tests to meet global demand

**RAPID DIAGNOSTIC TESTS NEED INNOVATION**
- Need faster, more accurate, affordable, easier to use tests

TESTING IN LMICs IS 10% OF WHAT IT IS IN HICS, <1% IN LICs
OUR GOAL
To drive universal and equitable access to diagnostics as per WHA resolution

HOW WE ARE HELPING

R&D - Supporting R&D

Market Readiness - Engaging in market-shaping interventions to stimulate rapid, massive scale-up

Supply - Powering supply and distribution, with additional support for LMICs

Country Readiness - Building the capacity of countries' health infrastructures to enable uptake of the tests
What do we want to deliver in next 12 months?

- **R&D**
  - Well-performing Ag RDTs & point-of-care molecular tests developed
  - Non-proprietary test result reader app and interoperability solution developed

- **Market Readiness**
  - Regionalized production incl. in LMICs & mechanism set up to make RDTs affordable and available

- **Supply**
  - 500m tests procured

- **Country Preparedness**
  - Country policies and uptake in integrated testing strategies driven in 50+ countries
  - 10,000 health care workers trained

- **Target**
  - All countries able to deploy affordable, quality POC tests
  - Significant number of LMICs have been supported to put in place effective test, trace, isolate strategies
  - Disruption of core health services minimized
Meeting these milestones will require a total of $6B and closing existing funding gaps.

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<th>Focus area</th>
<th>$needs in M</th>
<th>$ funded</th>
<th>$ Gap</th>
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<tbody>
<tr>
<td>R&amp;D</td>
<td>300</td>
<td>14%</td>
<td>86%</td>
</tr>
<tr>
<td>Market Readiness</td>
<td>100</td>
<td>12%</td>
<td>88%</td>
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<tr>
<td>Supply</td>
<td>5,000</td>
<td>3%</td>
<td>97%</td>
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<tr>
<td>Country Preparedness</td>
<td>600</td>
<td>3%</td>
<td>97%</td>
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Total immediate need is $6,000.
By closing the urgent funding gaps, Member States can benefit from...

- Global investments in R&D and market interventions to create competitive markets that will make tests more accessible and affordable for all countries
- Stronger country testing capacity and development of testing strategies
- Support for selecting the best tests for local needs
- Preventing the procurement of low quality or fake tests
- Well-performing innovative tests brought to market
- Ability to scale procurement of existing PCR and new RDT tests
- Making informed decisions about pandemic control measures and when lockdowns can be eased, and economies re-opened
What have we achieved in the past 8 weeks?

1. Launched call to scale R&D and manufacturing Antigen RDTs
2. Set up multi-country evaluation platform to test diagnostics & completed 20+ evaluations
3. Developed Target Product Profiles to guide test development
4. Added 15 tests to WHO Emergency Use List
5. Modeled impact of diagnostics
6. Shared critical data with countries to inform decision-making
7. Procured 6m tests
8. Established ACT-A Dx Partnership working groups
Dx Consortium has already procured more than 6m tests

- Manual PCR tests (BGI, ThermoFisher) - 4m
- Automatic PCR tests (Abbott, Cepheid, Roche, ThermoFisher) - 2m
- Sample collection kits (swabs) - 5m

Allocation framework for LMICs
Key innovations underway to address point of care testing and scalability

Manufacturing innovations
- Advanced semi-conductor based microfluidics
- Scalable manufacturing for Low cost products

Business model innovations
- Local-manufacturing and improved distribution
- Enhanced connectivity for data transmission
- Link to payment /insurance services

Technology breakthroughs
- Improved reagents, e.g. new antibodies
- More sensitive readouts, e.g. new particles
- Next generation technologies- e.g. Crispr-based
- Enhanced digital integration

Multi-modality capabilities
- Multiplex different targets; e.g. Covid and Flu
- Platform approach: Integration of multiple platforms, Combined immuno- and molecular assays

Innovations in usability
- Instrument-free, handheld, portable systems
- Decentralized testing for pharmacy or at-home use
Testing is vital to both mitigating direct impact of COVID-19 and minimizing knock-on impact. If insufficient testing capacity, we risk facing future bottlenecks when it is time to roll out approved therapeutics and vaccines. And we will lose ground on global health gains over past 20 years. The chart shows the increase in deaths in high-burden settings over 5 years vs if there was no COVID-19 pandemic. The source is Imperial College London. 

<table>
<thead>
<tr>
<th></th>
<th>HIV</th>
<th>TB</th>
<th>Malaria</th>
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<tr>
<td>Increase in deaths</td>
<td>10%</td>
<td>20%</td>
<td>36%</td>
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+ Need for differential testing
In summary

Over the next 12 months, we need $6 billion to procure and deploy 500 million tests in countries that might otherwise miss out.

The world must seize a window of opportunity and put in place the right conditions for large-scale testing strategies now.

Every dollar invested in testing today is a dollar invested in our future global health security and an opportunity to protect the health advances of recent decades.