



Integrated e-Diagnostic Approach (leDA)



A digital solution to save children's lives

leDA aims to improve quality of care in rural areas of resource-constrained countries, by improving diagnosis and treatment of sick children, and to strengthen healthcare performance.

leDA has been instrumental to support the national COVID-19 response in Burkina Faso to enable patient triage and surveillance, to build awareness and train health workers.

Description

Over the past 10 years, the Ministry of Health of Burkina Faso and Terre des hommes (Tdh) have partnered to design and deploy a digital job aid leDA to improve the clinical management of sick children and create a digital health record. leDA is built on the WHO-UNICEF clinical protocol for children under 5 years old and is installed on tablets used by healthcare workers. Upon introducing all the signs, symptoms and test results as prompted by the digital system, a diagnosis and recommended treatment are suggested to the healthcare worker. The consultation record containing the clinical examination data is sent to a central server using the mobile network. leDA is connected to and nurture the national health information system (DHIS2).

leDA supports a whole performance improvement package that includes coaching, data exploitation and e-learning.

Tdh has recently enriched the digital initiative with new features, including integration of point of care tests, creation of interactive web maps and dashboards, artificial intelligence-based analyses, epidemiological predictive models and perinatal health digitalization, among others.

leDA is one of the few examples in Sub-Saharan Africa of a digital health tool for frontline healthcare workers deployed at national scale in Burkina Faso.

Development costs: 1.0 M CHF

Implementation costs: 10.5 M CHF

Population coverage:
12,5 million across 3 countries

Beneficiaries:

→ **Primary:** > 3 million children

→ **Secondary:** > 6,500 health care workers



Achieved results

leDA is today available in about 1,200 clinics in Burkina Faso (over 60% of the country), in Mali and Niger. Further deployment is ongoing. Over 6 million consultations have been performed by leDA to date and 3 million children have benefitted from this project. Over 6,500 health workers have been trained.

An external evaluation by the London School of Hygiene and Tropical Medicine shows a significant improvement in the quality of care thanks to leDA, an increased diagnostic accuracy (especially for the severe cases), a reduction in antibiotics unnecessary prescription and a reduction of over 1 million \$ in yearly savings for maintenance costs compared to paper version.

→ **Operational partners:** Dimagi, FIND, World Vision, Action against hunger, Inserm, Alima, Solthis

→ **Research partners:** HUG, EPFL, Swiss TPH, Haute Ecole de Santé Genève, Université de Genève, John Hopkins University, London School of Hygiene and Tropical Medicine.

→ **Current sponsors:** Swiss Agency for Development and Cooperation, the Global Fund, Bill and Melinda Gates Foundation, ECHO, DEVCO, GIZ, Cloudera Foundation, Tableau Foundation, UNITAID



Expected results

- With almost 1 billion data points, its database represents an invaluable source of evidence for research and policy making, and to provide identity to children.
- As to COVID-19, predictive models and tailored dashboards will be developed to help decision makers fight the pandemic.
- By end of 2020, Burkina Faso MoH will take control of leDA ensuring its maintenance and full national deployment for the future.

Collaboration and Networks:

- Ministry of Health of Burkina Faso, Mali and Niger
- WHO and ITU
- DATA4Health Network
- Alliance for e-Diagnostic (ALeDIA)

Contact

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Terre des hommes (Tdh) is the leading Swiss organisation for children's aid. In 2019, we provided assistance to over four million children and members of their communities in 38 countries through our health, protection and emergency relief programmes.

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