

The African experience of digital health

Prof. (Hon) Jacques Elion

Inserm UMR 1134

National Institute for Blood Transfusion, 75015 Paris, France

Guadeloupe University Hospital, 97139 Les Abymes (French West Indies)

National Reference Centers for Sickle Cell Disease

Laboratory of Excellence on the Red Cell

The components of digital health

eHealth

healthcare practices supported by electronic processes

- electronic health records
- decision support systems
- eConsulting
- Telemedicine
- eLearning

mHealth

healthcare practices that utilize mobile devices

- remote patient monitoring
- Point-of-Care diagnostics
- medication management
- medical imaging

overlapping applications and both utilized for disseminating **health learning** and **dissemination of health information** → **eLearning**

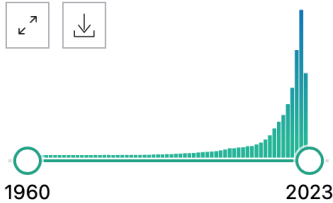
What is the status of digital health implementation?

PubMed.gov [Advanced](#) [Create alert](#) [Create RSS](#) [User Guide](#)

Sorted by: Best match

MY NCBI FILTERS 47,107 results << < Page 1 of 4,711 > >>

RESULTS BY YEAR


1960 2023

TEXT AVAILABILITY

☐ **WHO guidance for digital health: What it means for researchers.**
1 Jandoo T.
Cite **Digit Health.** 2020 Jan 8;6:2055207619898984. doi: 10.1177/2055207619898984. eCollection 2020 Jan-Dec.
Share PMID: 31949918 **Free PMC article.**
In healthcare, **digital** solutions have been adopted with zeal, but there is paucity of evidence for benefits and harms of these solutions. ...Digitalization can certainly empower and enable patients and physicians to achieve **health** objectives. The World **Health** ...

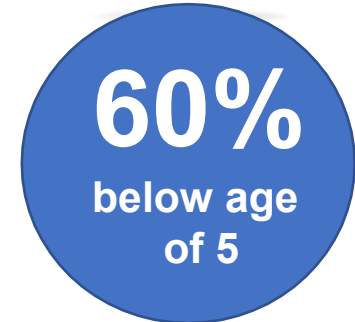
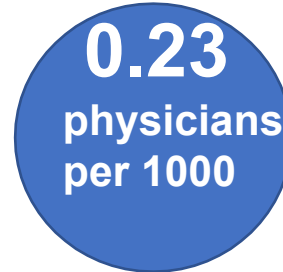
Africa: A unique context

huge and urgent need of health forces

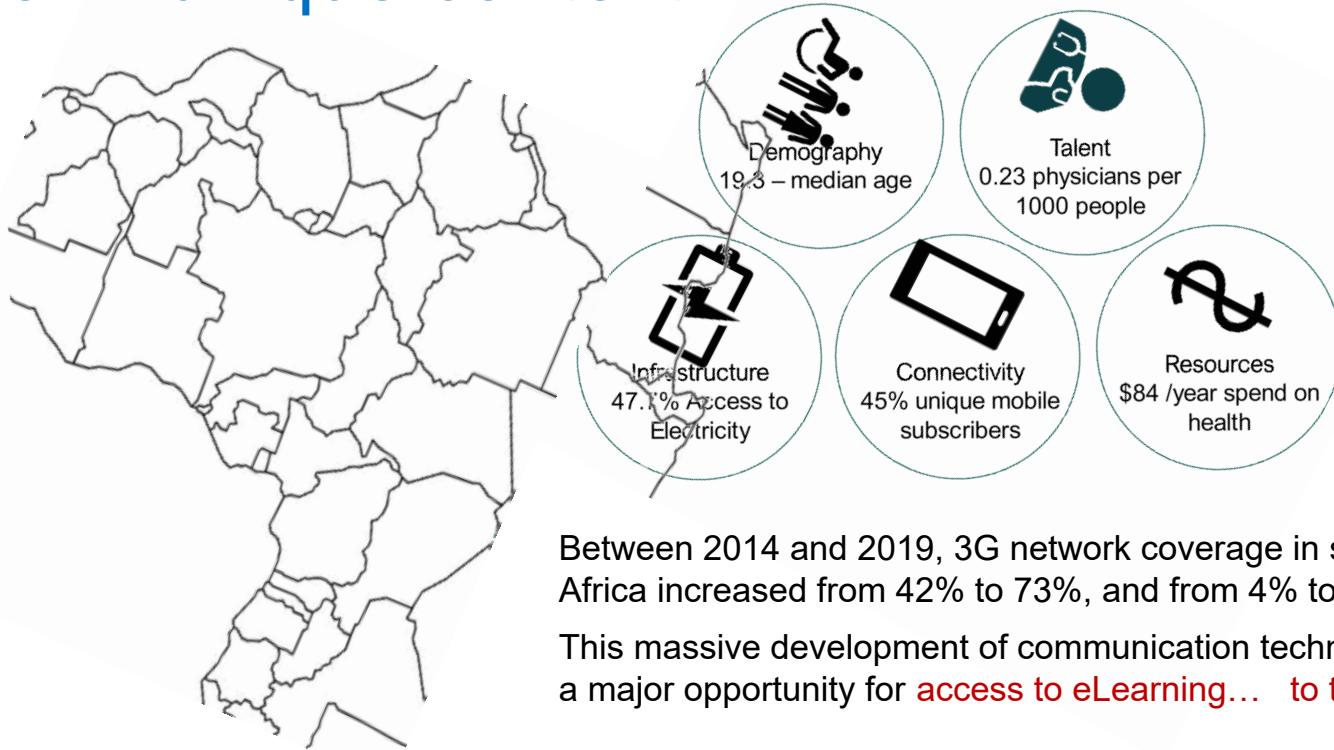
6 Million is the estimated deficit of Health Workers by 2030

health education and information should be a priority

....down to the last mile



Africa: A unique context



Between 2014 and 2019, 3G network coverage in sub-Saharan Africa increased from 42% to 73%, and from 4% to 44% for 4G.

This massive development of communication technologies provides a major opportunity for **access to eLearning... to the last mile**

Several very active networks in Africa



SPARCo Clinical

Coordinating Centre

SPARCo Ghana

SPARCo Mali

SPARCo Nigeria

SPARCo Tanzania

SPARCo Uganda

SPARCo Zimbabwe



still eLearning resources specifically
targeted to African countries are scarce
most resources are in English



Africa: 55 countries, population 1,300 M

6 countries 51 M (4%)

RAFT: A pioneer telemedicine network

Initiated in 2000 by Antoine Geissbühler

réseau rede
RAFT
red network



UNIVERSITÉ
DE GENÈVE

HUG

Hôpitaux
Universitaires
de Genève

Objective: *“to break the isolation and precariousness of healthcare centers scattered in the countryside...”* i.e. to the last mile

Initially targeted to francophone Africa

Now 250 sites on 4 continents



major input in building appropriate tools
and in training local scholars

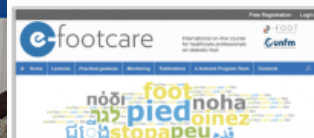
covers all the fields of telemedicine

strong emphasis on eLearning



L'Université Numérique Francophone Mondiale

World Francophone Digital University



and now: eDrepanocytose
"eSickleCellDisease"



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www.unfm.org

4th Global Congress
Sickle Cell Disease



JUNE 16-18 2022
Paris, Novotel Tour Eiffel



- e-drepanocytose is an on-line eLearning platform
- with a training programme on all aspects of Sickle Cell Disease
- delivered by **French-speaking** experts from the North and the South
- using low-tech tools to... **reach the last mile**

Dudal software developed by RAFT)



- composed of short on-line lectures (10-15 min)
- designed to be visible on a computer, tablet or smartphone
- also downloadable for offline use
- **freely accessible at:** <https://e-drepanocytose.org>



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e-drépanocytose

- composed of 2 levels

- **level 1:** recognize the disease and orient the patient
nurses, doctors in remote areas

NIVEAU 2 : CONNAÎTRE LA MALADIE ET SES COMPLICATIONS, PRISE EN CHARGE ET PRÉVENTION

Public visé : médecins et infirmiers exerçant dans des structures de soin de premier ou second niveau de référence.

Objectifs : acquérir les connaissances et compétences permettant à la fois le suivi à l'état basal du patient, mais également la reconnaissance des complications pour orienter au mieux ces patients tout en assurant les premiers soins.

organized in 6 modules

MODULE 1 – GÉNÉRALITÉS, PHYSIOPATHOLOGIE ET DIAGNOSTIC BIOLOGIQUE



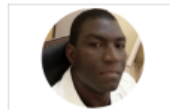
Pr Jacques ELION
01 – HISTOIRE ET
ÉPIDÉMIOLOGIE DE LA
DRÉPANOCYTOSE



Dr Assa NIAKATÉ-TALL
02 – GÉNÉTIQUE ET
TRANSMISSION DE LA
DRÉPANOCYTOSE



Pr Jacques ELION
03 – PHYSIOPATHOLOGIE DE
LA DRÉPANOCYTOSE



Dr Abdoul Karim DEMBELE
04 – DIAGNOSTIC
BIOLOGIQUE DE LA
DREPANOCYTOSE



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iecd
Semeurs d'avenir



e-drépanocytose

- composed of 2 levels

- **level 2:** recognize and manage the complications

doctors at all levels of the health system, nurses, midwives...

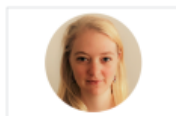
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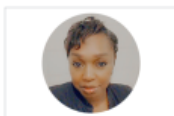
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organized in 8 modules

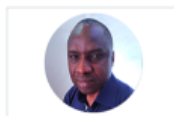
MODULE 7 : ACCOMPAGNEMENT DES PATIENTS



Dr Bérengère KOEHL
01 - ANNONCE
DIAGNOSTIQUE ET CONSEIL
GÉNÉTIQUE



Mme Kagny TRAORÉ
02 - ÉDUCATION
THÉRAPEUTIQUE DES
PATIENTS ET DES FAM...



Pr Ibrahim DIAGNE
03 - NUTRITION CHEZ LE
DRÉPANOCYTAIRE



Pr Dapa DIALLO
04 - DRÉPANOCYTOSE ET
PALUDISME



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Semeurs d'avenir



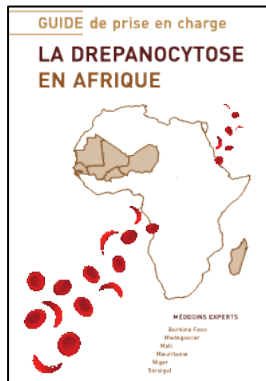
e-drépanocytose

- Educational materials

developed or provided by stakeholders and partners

including a reference guidebook

the “Guide to the management of sickle cell disease in Africa”



elaborated by a group of experts from 6 countries in sub-Saharan Africa (coordination Prof. Ibrahima Diagne - Senegal)

under the auspices of the Principality of Monaco

(also available as hard book)



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e-drépanocytose

- Still in construction (beta version)
50% of the learning content on line
limited diffusion yet



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present users location: by country



outside of capital cities



drépanocytose



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- **Profile of trainees:**

African countries: 90% / France: 10%

doctors (67%) / nurses (9%)

working in all types of structure: University Hospital (26%), Reference Hospital (21%), health centers (22%, public + private)

M/F ratio \approx 60/40

- **Agenda:**

complete the lectures catalogue

develop trainees' evaluation / autoevaluation procedures – certification process

increase diffusion to front-line health professionals

consider developing a “level 3”: advanced training / master classes



Thank you

Merci

Obrigado

