Message from Executive Director of Digital MEdIC

Digital MEdIC is housed within the Stanford Center for Health Education, a University-wide program supported by Stanford Medicine and the Office of the Vice Provost for Teaching and Learning. Our new Center engages and supports faculty and students from across our campus who are involved in the creation of content that is relevant to maintaining wellness and managing disease. Based upon the belief that education empowers and health education saves lives, our hope is to extend the impact of Stanford University’s broad and deep research and education expertise around the world.

In the next decade, technology will continue to advance while the world’s most vulnerable populations struggle with access to educational opportunities. The Stanford Center for Health Education will accelerate access to education worldwide using our experiences in technology and digital learning to scale our impact. Our focus is on the production of relevant, engaging, accessible, and scalable digital content. This content is deployed as part of a disruptive solution to extend health education to learners across the globe. The ultimate benefits of the Center’s efforts will be a more informed public, better trained healthcare professionals, and improved health outcomes in some of the world’s most vulnerable populations, allowing Stanford University to extend its reach far beyond the walls of our campus. I firmly believe that Stanford University has a social responsibility to address the global deficiencies in health professionals and inequalities in access to research findings and medical education.

Visionary and generous philanthropists helped us to launch and sustain Digital MEdIC, initially in India and more recently in South Africa. Our founding partnerships with private and public medical schools, non-government organizations, and government agencies in these regions are summarized in the pages that follow. Our current learners include the general public, patients and their families, community health workers, and medical students. In the coming year, we will have data from pilot education projects conducted with these learners to help inform our critical next steps.

We believe that access to high-quality health education will improve global health outcomes over time. Through the Center for Health Education and our programs led by Digital MEdIC, we will provide innovative solutions to address the most pressing health concerns around the world.

Sincerely,

Charles Prober, MD

Senior Associate Vice Provost for Health Education at Stanford University, Founding Executive Director of the Stanford Center for Health Education, and Professor of Pediatrics, Microbiology and Immunology at Stanford School of Medicine
There is a critical deficit in the number of health professionals being trained, especially in under-resourced areas of the world. The World Health Organization estimated that 83 countries had a collective shortage of 7.2 million health care professionals in 2013. That number is projected to increase to a shortage of nearly 13 million by 2035. As a result, billions of people worldwide do not have access to adequate healthcare. In addition, new scientific knowledge and medical advances are not being efficiently shared across the global medical community so that they can be translated into improved health outcomes. This is particularly evident in developing countries, where health care professionals available to teach and educational resources necessary to facilitate high-quality training are in short supply.

The Digital Medical Education International Collaborative (Digital MEdIC) initiative began in 2016, when Stanford University formalized its vision and commitment to improving global health outcomes by making healthcare education content available to anyone, anywhere, anytime. By leveraging digital technologies to deliver health education content, Digital MEdIC is able to reach millions of learners both in formal educational programs and those that informally address vital healthcare needs in our communities, including medical students, community health promoters, graduate students, allied healthcare professionals, and practicing physicians. By leveraging faculty expertise from Stanford Medicine and collaborating academic institutions, Digital MEdIC is able to develop best practices and effective learning tools across all types of healthcare providers.

Since launching Digital MEdIC, we have established the necessary technology, teams, and content to support a global program of this scale. We consider ourselves to be a learning lab, identifying best practices that can scale to achieve maximum impact. Digital MEdIC currently has partnerships and in-country hubs in India and South Africa, with the goal of exponentially expanding our impact within these countries and in new regions around the world.

Our Vision

improve global health outcomes by increasing access to medical education and building human capacity.

Our Mission

collaboratively create a high quality, accessible, and customized healthcare learning experience that is openly available to anyone, anywhere, anytime.
Our Strategic Goals

- Build capacity for healthcare by building a more skilled health professional workforce
- Empower a digital learning movement
- Improve teaching quality by supporting faculty training
- Increase access to high-quality health education content
- Understand the effectiveness of our approaches in improving health outcomes and health-related knowledge
- Create a “learning lab” to test and study innovative approaches to health education content
- Facilitate the development of infrastructure to ensure overall programmatic success and sustainability

Delivering medical education to some of the most remote areas of the world

An Auxiliary nurse midwife (ANM), trained by the Antara Foundation, views maternal and child health content developed by Digital MEdIC. In remote areas of Rajasthan, India, ANMs who serve village subcenters may be the only locally accessible health worker providing care during emergencies.
The Digital MEdIC platform currently hosts 18 courses with almost 500 lessons, mostly in video format, available to learners worldwide.

Our Philosophy for Content Creation

Digital MEdIC develops and aggregates high-quality educational content that translates to health outcomes by identifying and focusing on the most pressing knowledge gaps in vulnerable populations around the world. Plans are underway for co-creating new content with partnering institutions in India and South Africa for the Digital MEdIC platform. We aim to co-create a flexible learning experience that is digitally enhanced, customizable, globally connected, and available freely to anyone, anywhere, anytime. Digital MEdIC content is:

- High Quality and Engaging
- Appropriate for Target Learners
- Created and Vetted by Experts
- Modular and Flexible
- Customizable
- Free and Open
- Accessible on many devices
Offline viewing is now available through our in-house developed app for tablets, enabling frontline health care workers to easily access our content in low bandwidth areas. We created a customized app because there are currently no existing products that would allow us to reach learners with limited network connectivity, while ensuring ease of updates and data retrieval. The Hindi version of our mobile app is currently being piloted in India with 40 frontline healthcare workers, with the full version being released to the Google Play store this spring and later to the Apple Store. The South Africa version of the app, with translations in English and Xhosa, will be released this spring. The app will contain three courses available in English, Hindi, and Xhosa, focusing on maternal and child health, with additional courses to follow. We are also piloting an automated emergency medicine text message response system.
Digital MEdIC teaches anatomy with the most up-to-date information from experts, high-quality images and videos, and interactive learning.

“A lot of us, including me, are audio visual learners, and videos are better for us, especially with courses like anatomy.”

- Student from Jhalawar Medical College, Rajasthan, India.

“Digital MEdIC gave me the opportunity to use my experiences both as a learner and an educator...to create new and innovative digital learning modalities.... I’m immensely proud of what we have built, and can’t wait to see it in the hands of our collaborators.”

- Student from Stanford School of Medicine, California, USA.
Digital MEdIC collaborates with global organizations to effectively deliver our content to medical schools and areas of the world most in need. Our collaborators play crucial roles in the success of our initiative.

The digitalMEdIC Learning Tree

**Learning Sites**
Organizations in a Strategic Collaborator’s network, that offer Digital MEdIC’s content to its learners in order to better address a current health educational gap.

**Strategic Collaborators**
Organizations working to improve health outcomes or education delivery worldwide, that partner with Digital MEdIC to implement and evaluate our content with the groups they reach.

**digitalMEdIC & Innovation Collaborators**
Education Organizations that partner with Digital MEdIC to customize or offer new health education content to Digital MEdIC’s growing network of learners.

**Sponsors**
Foundations, Philanthropists, Governments, and other Organizations who provide the vital resources and infrastructure to ensure a sustainable initiative.
Our Global Collaborators

In South Africa

**University of Cape Town Faculty of Health Sciences** is the largest of six faculties at UCT and focuses on medical, nursing, and the rehabilitation professions; as well as basic, translational, clinical, and public health sciences.

**Stellenbosch University Faculty of Medicine and Health Sciences** is a tertiary educational institution in health sciences, including medical, nursing, and rehabilitation professions, focused on advancing health and equality in South Africa and beyond.

**The Philani Mentor Mother Outreach Programme** is a non-profit organization that has been addressing maternal, child health, and nutrition problems in the informal settlements outside Cape Town since 1979.

**University of Limpopo Faculty of Health Sciences and Surrounding Clinics** is a university with 3 undergraduate and 2 postgraduate training programs in the health sciences located in the province of Limpopo.

**University of Witswatersrand** is a top public research university with five academic campuses. It is the third oldest South African university in continuous operation.

**Western Cape Govt.** works with national government and municipalities in the Western Cape to ensure that citizens of the province have access to services, facilities and information they need. Digital MEdIC is working closely with the Ministry of Health.

In India

**All India Institute of Medical Science (AIIMS)**, based in New Delhi, is the premier medical college in India. AIIMS has a mandate for innovation in medical education and has been a leader nationally and internationally in medical education and training.

**Jhalawar Hospital and Medical College** was established by the government of Rajasthan in 2008 and has recently increased their enrollment of medical students.

**Antara Foundation** is an NGO that focuses on maternal and child health. Their Akshada program targets village healthcare workers who provide care and guidance to women and children from pregnancy through early childhood.

**Office of the Chief Minister**, Government of Rajasthan, has supported Digital MEdIC implementation in their state with the goal of scaling up our program to the remaining districts and medical colleges of Rajasthan.

**Jagdalpur Medical College** is a state-run publicly funded medical college. It is recognized as the first true rural medical college of India and one of the largest medical colleges in the central part of India.

**Office of Dr. Amit Sengupta and Team** has extensively supported the creation of content appropriate for frontline healthcare workers, its translation into Hindi, and implementation of Digital MEdIC in the Jagdalpur district with their field staff.

In Rwanda

**Institut Superieur Pedagogique de Gitwe (ISPG)** was founded in 2013, and is only the second medical school in the entire country.
Digital MEdIC established its first global partnerships and in-country hub in India. India is poised to benefit from this collaboration due to its large (>400) number of medical schools, urgent need for more physicians, and high population density that allows us to reach large numbers of learners.

Digital MEdIC has established collaborations with medical colleges and NGOs in India. Digital MEdIC is also working closely with the Government of Rajasthan to help build the infrastructure required for effective content delivery. We are continuously pursuing additional collaborations to expand our program’s reach and impact in India.

Auxiliary nurse midwives (ANMs) trained by the Antara Foundation have begun piloting digital learning tools from Digital MEdIC to fill the gaps in their training at a community health center in Jhalawar. ANMs, Accredited Social Health Activists (ASHA), and Anganwadi workers serve important roles in counseling and treating expectant and new mothers in rural communities in villages of India. Digital MEdIC’s maternal and child health content is used as a visual educational tool both for the healthcare worker’s own professional training, as well as to show directly to the mothers. In addition, it is difficult for these workers to obtain training from colleges and having a flexible curriculum that can be completed in their own time is valuable and can reduce the risk of complications during births among women in these communities.
In December 2016, the Digital MEdIC team made our first visit to India to conduct an in-depth needs assessment and establish key collaborations. We participated in a Memorandum of Understanding Signing Ceremony with the Government of Rajasthan, receiving an enthusiastic reception from government officials, academic leaders, and deans of medical colleges.
In the past year, Digital MEdIC India’s focus has been on building relationships with key institutions, assessing the technological and educational needs of our collaborators, and establishing the infrastructure to facilitate our 2018 pilots.

• We have worked with the Government of Rajasthan and Jhalawar Medical College to bring Wi-Fi and a virtual classroom to the Jhalawar campus. We have provided 300 medical students with access to Digital MEdIC content. A virtual classroom session with Stanford faculty and 150 Jhalawar medical students will be held in Spring 2018.

• We have worked with Jagdalpur Medical College to set up Wi-Fi hotspots in residential dorms. We are poised to launch a student access pilot with 200 medical students at Jagdalpur Medical College, with plans of expanding to more students.

• We have worked with Antara Foundation on building the infrastructure for piloting content, including developing the Digital MEdIC mobile app that includes offline access to content. We are currently piloting the app and maternal and child care content with 50 frontline workers, with plans of expanding to over 700 frontline workers.

• Working with Dr. Amit Sengupta and his team, we have translated our maternal and child care content into Hindi and implemented it with 50 frontline workers in the Jagdalpur district, with plans of expanding to hundreds more.

• We have solidified a collaboration with AIIMS to co-create new content, and are nearing completion of our first module on blood pressure measurement, which will be piloted with AIIMS medical students and faculty. In early 2018, we also presented about Digital MEdIC at the 2nd National Conclave on Virtual Teaching in New Delhi, which was attended by hundreds of delegates from all over India.
Digital MEdIC established its second international hub in South Africa. According to the World Health Organization, South Africa has only 0.7 physicians per 1,000 people compared to 2.3 in the United States. In addition to a shortage of physicians, TB, infectious diseases (malaria, pneumonia, & gastroenteritis), high maternal and child mortality, HIV/AIDS, and non-communicable diseases are prominent health issues in many regions across the continent.

Digital MEdIC South Africa’s initial areas of focus will be maternal and child health, nutrition, and infectious diseases – all areas in which we have existing expertise and digital content available. Digital MEdIC South Africa (SA) has been working closely with community clinics, local academic institutions, and UNICEF SA to design education interventions that will help address the most pressing needs in the maternal and child health space. Ongoing discussions with the provincial and national departments of health have informed this work. Through these collaborations, we aim to optimize our shared progress toward designing effective and engaging health education interventions.

Digital MEdIC has also established a core group of partners, including four South African universities that collaborate with us to ensure content is locally relevant and poised to scale to other regions in South Africa. In the past year, Digital MEdIC South Africa has established a local content production team and developed collaborations and high-impact projects with local partners to improve maternal and child health outcomes in South Africa.

Our goals for the next two years include launching new content on exclusive breastfeeding and infant/child nutrition, a high-priority topic identified by community health clinics across South Africa, to be offered to frontline healthcare workers and the general public. We have also established a collaboration with the Government of the Western Cape to create two maternal and child health courses that will be offered through the Government’s first 1,000 days initiative and fulfill the highest priority health care gaps.
Our South Africa team has been working closely with community clinics, the provincial and national departments of health as well as local academic institutions and UNICEF South Africa to create content that addresses the most pressing needs in maternal and child health. One critical issue is the persistently low rate of exclusive breastfeeding in South Africa. Given the lack of access to clean water and equipment for sterilizing bottles, and the economic constraints faced by many South Africans, formula feeding becomes dangerous for infants. High rates of gastrointestinal infections and diarrheal disease lead to preventable infant deaths. We have developed many strong relationships with local stakeholders and have been working with them to create health education content with the goal of achieving measurable positive impact on breastfeeding rates and other maternal and child health indicators (Digital MEdIC 100% Breastfed Website and Trailer).

Recently, the National Department of Health embraced our content for use in a nationwide initiative called the Road to Health (Digital MEdIC Road to Health Trailer). Every baby born in South Africa will be issued a new Road to Health Booklet and content created by Digital MEdIC South Africa as part of efforts to raise awareness and underscore the health messages of the national campaign. In addition, we are collaborating with the University of Cape Town and Stellenbosch University to evaluate Digital MEdIC South Africa initiatives over time and refine our content and approaches to improving health outcomes in South Africa.
Digital MEdIC has launched our 100% Breastfed Initiative in South Africa.

Visit our website to view our breastfeeding teaching videos

http://100percentbreastfed.co.za/
Community Health Promoters in South Africa, such as Philani mentor mothers, fill an enormous gap in access to healthcare. They are the frontline providers to many communities for whom formal medical care is not accessible. The Philani mentor mothers (and many other CHWs) are currently being trained through print materials demanding fluency in English and high levels of literacy. Many CHWs struggle with English and have limited reading skills. By translating their curriculum into picture-based, narrated teaching tools in their own language (example shown on top right), Digital MEdIC supports their training and the delivery of information to the community members they serve. Compared with traditional, text-based instruction, picture-based, narrated teaching tools enhance learner engagement and retention.
Our Digital MEdIC Team

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Join our efforts toward egalitarian access to education and health care that populations around the world demand and deserve by becoming a collaborator or supporting the Digital MEdIC program.

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