Transform Health

Developing a Digital Health Curriculum in Ecuador

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The views expressed in this report reflect the independent assessment of the author and do not necessarily represent the views of Transform Health or its affiliates.

The study drew from a series of semi-structured interviews and focus group discussions with 10 members of Transform Health Ecuador. Interviews were conducted between October and December of 2024.

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Transform Health is a coalition of organisations that advocate for equitable digital transformation of health to achieve health for all in the digital age.

Find out more: https://transformhealthcoalition.org/

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Executive Summary

Transform Health Ecuador is a coalition of 29 members and over 40 partners committed to achieving Universal Health Coverage (UHC) by 2030 using digital technologies and data. Key challenges to implementing digital health in Ecuador include the lack of a clear government strategy, low levels of public investment, limited digital health services and applications, the absence of standards, interoperability gaps, and a shortage of trained personnel. Since 2022, the national coalition has been working to integrate digital health into the foundational curriculum for health workers in order to promote digital literacy and address the shortage of trained personnel.

Digital literacy enables health workers to better engage with healthcare resources, stay up to date with emerging treatments, and use technology to promote health access. Digital health tools, including mobile health applications, telemedicine platforms, and wearable devices, have a positive impact on health outcomes. These technologies support real-time monitoring, personalised health interventions, and improved chronic disease management. They also enhance healthcare workers' performance, reducing burnout and enabling better decision-making, ultimately benefiting patient care. As part of efforts to address growing health inequities, the private and public health sectors in Ecuador are increasingly investing in digital health technologies and their integration.

The uptake of these technologies depends on the promotion of digital health literacy amongst health workers.

Transform Health Ecuador successfully developed a flexible digital health curriculum for universities to adapt, built a consensus amongst stakeholders in support of this curriculum, and established a framework for piloting.

This case study examines how the national coalition, with the support of public and private academic and health institutions, contributed to the development of the curriculum.

We conclude that this would not have been achieved without the establishment of the coalition, bringing together a diverse set of stakeholders and building relationships, consensus, and momentum for digital health curriculum reform in a way that was responsive to Ecuador's context.

Successful strategies

"Before the coalition, each university would simply look to institutions like Harvard and try to replicate what they were doing. What we did through Transform Health Ecuador was to map the real needs of Ecuador and establish a tailored agenda that directly addressed the challenges within the Ecuadorian health system. Without the coalition, the gaps in information and coordination would have been much larger. The coalition has enabled us to work collectively as a unified national system."

Gabriela Astudillo, CEDIA - coordinator of Transform Health Ecuador 2024

The coalition employed several successful strategies which supported it to develop the digital health curriculum. These included:

Working with a coalition coordinator with deep experience and relationships with relevant stakeholders in policy and academia.

Developing a digital health curriculum relied on a well-positioned coordinator to ensure effective communication, relationship building, and alignment between diverse stakeholders. The Ecuadorian Consortium for Higher Education's (CEDIA's) leadership and credibility within the higher education sector enabled effective facilitation and mobilised an engaged group of relevant actors. CEDIA was well respected by all stakeholders interviewed, and these informants continually emphasised CEDIA's key role in building relationships.

CEDIA's ability to bridge gaps between academia, public and private health sectors, and policymakers mitigated potential barriers to the development of a new curriculum. By including stakeholders previously not consulted on university teaching content, such as private healthcare providers, the coalition successfully developed a curriculum that had broad-based support and mitigated against later criticism from these stakeholders.

Working closely with university, regulatory, and government leaders to ensure the reform fits Ecuador's higher education structure.

Ecuador's success in developing a digital health curriculum stemmed from engaging key decision-makers in higher education and health, including Deans, Heads of Health

Sciences faculties, senior Ministry of Health officials, and Council for Quality Assurance in Higher Education (CACES) representatives. This collaboration fostered a pragmatic approach to problem-solving and secured essential buy-in for the curriculum's development and pilot phase.

Working with stakeholders, including CACES, Transform Health Ecuador shifted its strategy from creating an entirely new curriculum to identifying digital health competencies that universities could integrate into existing teaching modules. This approach is expected to expedite the pilot phase. CACES played a pivotal role in developing the competencies, and they agreed to mandate the incorporation of digital health competencies into existing curricula as a requirement for accreditation.

Using research and consultant networks to establish a foundation for the curriculum proposal.

The creation of a strong evidence base was essential for identifying the needs and gaps in digital health content within current curricula and for designing a comprehensive proposal that addressed these needs. Consultants with expertise in health workforce skills strengthening and designing academic offerings conducted baseline studies[1] to ensure that the curricula proposal was grounded in reality. These baseline studies identified significant skills and competency gaps across Ecuador, and they provided the coalition with a deeper understanding of the institutional landscape, recognizing that universities can make small adjustments to their curricula.

By leveraging the consultants' academic networks, the baseline studies utilized informal and formal information-sharing channels to gather insights from academics and practitioners across public and private sectors. The consultants also used their connections to current technical and strategic leaders at the Ministry of Health to enhance the impact of the baseline studies and to position the work of the coalition more broadly. This evidence-based approach ensured that the curriculum was aligned

[1] As part of the activities planned, CEDIA commissioned three baseline studies: (1) on current situation of digital health curricula in Ecuadorean universities, (2) on current needs of health professionals; (3) international trends in digital health curricula and content. To accomplish this, CEDIA worked with consultants from Fundación Aldea (Maria Belen Mena and Giannina Zamora for studies 1 and 2, and from WINN Francisco Alvarez and Javier Valdivieso) for the third study. These studies were shared with the national coalition to support their discussion and decision making, building consensus based relevant information.

with ongoing efforts to introduce digital health skills at universities and within the Ministry of Health, thereby enhancing its credibility and effectiveness.

Key Impacts

By adopting a collaborative model that engaged public and private health providers, academic institutions, regulatory and policymaking bodies, Transform Health Ecuador:

Created a proposal for a digital health curriculum and micro-curricular adjustments.

The coalition developed a curriculum for universities to use and adapt to current syllabi, comprising 10 subjects and 5 key competencies that can be integrated into existing programmes.

This proposal has been endorsed by public and private universities, the Ministry of Health (MSP) and the Council of Higher Education (CES) following a collaborative process involving key stakeholders. The endorsement was part of a broader initiative to integrate digital health competencies into existing curricula, supported by workshops and consultations with academic and health sector leaders. The final draft was presented to universities in December 2024 for review and feedback.

The approach sought to update digital health curriculum content in two ways:

1. Incorporate the most relevant skills throughout the syllabi of all degrees;
2. Incorporate technology for teaching health to ensure that digital skills are utilised in everyday practices, for example, allowing students to work on digital patient information platforms during their education that the Ministry of Health currently uses.

This joint curriculum proposal had partly not been developed earlier due to the lack of a forum for collective discussion, such as the national coalition, which has provided a novel space and mechanism for coordination among key stakeholders.

Established an effective networking and coordination platform for stakeholders interested in future work on digital health curricula.

Transform Health Ecuador established a multi-sector stakeholder working group, composed of all coalition partners from the health and higher education sectors, to work on the digital health curricula. This diverse group, which did not exist before the coalition's formation, will support the implementation of the pilot phase.

The coalition made use of participatory methods to build consensus and strengthen collaboration between academic institutions and healthcare providers. Over time, it evolved into an effective platform for aligning stakeholders on digital health more broadly. This collaborative approach ensured the digital health curriculum content was well-supported and tailored to the unique needs of Ecuador's higher education and health sectors, remaining responsive to its context throughout its development.
The approach to collaboration also identified opportunities for resource-sharing across universities, including laboratories, technologies, and faculty expertise, fostering collaboration and equity within the higher education system.

Strengthened inter-departmental relationships to further digital health within the Ministry of Health.

The Ministry of Health (MSP) is a large and complex institution, where coordination between different departments has often been limited, as highlighted in interviews. The coalition addressed this communication challenge by bringing together representatives from various departments within the Ministry, including IT and health professional training. The involvement of the Ministry of Health in the coalition proved invaluable, as it has enabled input from officials across different areas of the Ministry. Their collective expertise greatly enhanced the focus and depth of their contributions to shaping the curricular changes, which will likely lead to further engagement on digital health issues.

Conclusion & Lessons Learned

This case study demonstrated the effectiveness of establishing a multi-stakeholder coalition led by a coordinator with existing credibility with relevant academic and policy stakeholders, the importance of contextualising the curriculum reform approach to Ecuador's higher education landscape, the importance of involving regulatory, academic, and policy leaders, and the role research played as a tool to establish the foundation for curricular changes.

Based on this review, and to inform the next stage of digital health curriculum implementation, we identified two additional lessons from this initiative:

Consistently engaging with diverse stakeholders and building relationships between previously silo-ed groups built momentum for curriculum reform. This may further influence health workforce strengthening initiatives going forward.

The endorsed curriculum demonstrates the success of Transform Health Ecuador as a forum for collaboration on strengthening health workforce readiness to integrate digital health modalities. Due to the engagement of this particular set of diverse stakeholders, the coalition has begun to establish a movement for strengthened digital health training within the health sector more broadly. This may influence the training of healthcare workers more widely, including in-service training in the future.

Early signs of this are promising with Fundación ALDEA having requested permission from CEDIA to use the baseline study results on digital health skills among healthcare professionals in Ecuador to develop further research. This effort aims to generate evidence that will be shared with stakeholders beyond the coalition, promoting greater coordination and cohesion within civil society on future changes to pre-service training.

Creating a flexible, contextualised, and standardised digital health curriculum was well suited to the autonomous structure of universities in Ecuador. The coordinated approach to this reform will likely aid inter-institution learning.

Creating a standardised and contextualised digital health curriculum for universities helps to move away from universities' isolated efforts that are based on replicating what is done in other universities internationally. This standard curriculum allows flexibility of implementation according to universities current curricula, needs and capacity. Basing the proposal on evidence specific to Ecuador has allowed universities, as part of the national coalition, to discuss and provide feedback on specific competencies that Ecuadorian health professionals need to face the labour market in the public or private sectors. This has been instrumental in generating a pertinent digital health curriculum that targets Ecuador's cultural and infrastructure characteristics.

Some stakeholders suggested that universities should start creating forums and spaces to discuss best practices and examples of incorporating digital health into curricula, building on the lessons learned from implementing the proposed curriculum.

Opportunities for Improvement

Formalising partnerships, integrating user voices, and establishing a robust monitoring framework are critical for ensuring the long-term relevance and impact of the digital health curriculum.

One area that could have been improved is the inclusion of health service users in the development process. While the coalition successfully brought together academic and policy stakeholders, the absence of user perspectives represents a missed opportunity to ground the curriculum in real-world needs and preferences. Future efforts should engage healthcare users to ensure the curriculum reflects societal demands and cultural contexts.

Additionally, formalising agreements between universities and the Ministry of Health (MSP) is essential for securing long-term sustainability. Relying on informal commitments poses risks for implementation and continuity. Establishing structured processes and clear documentation will help mitigate these risks and support sustained collaboration.

Developing a robust monitoring and evaluation (M&E) framework to track the curriculum's impact would enhance its potential. A clear M&E system would enable continuous improvements, ensuring the curriculum remains relevant and aligned with emerging digital health trends.

Background

Ecuador’s healthcare system faces significant challenges, including rising poverty, insecurity, and climate change impacts, which place pressure on both the public and private sectors. To address growing health inequities, Ecuador is increasingly seeking to integrate digital health technologies. However, the country faces several barriers, including insufficient infrastructure, a lack of a digital health strategy and investment, and a shortage of a trained workforce to implement digital health solutions effectively.

Ecuador ranks below the regional average on the World Health Organisation's Universal Health Coverage Index, scoring 77/100 in 2021. Similarly, Ecuador is currently positioned in phase 3 out of 5, as assessed by the Global Digital Health Monitor Index (2023), which evaluates digital health readiness across key areas such as workforce, leadership and governance, and infrastructure. A significant gap remains in workforce training, with Ecuador scoring 0 out of 5, well below the global average score of 2 out of 5, underscoring a critical challenge in digital health workforce development that is not unique to Ecuador.

According to a 2022 study by the Economic Commission for Latin America and the Caribbean (ECLAC), policies are needed to address inequities in digital health access and improve digital literacy among healthcare professionals to maximise the potential of these tools (ECLAC, 2022). The development of a digital health curriculum is seen as a critical step in addressing these issues, enhancing digital competencies within the healthcare workforce, and ensuring that healthcare professionals are equipped to meet the growing demands of digital health.

Transform Health Ecuador began in July 2022 and brings together 29 organisations and 40+ partners working to drive the digital transformation of Ecuador's health sector.

Institutional Context

In Ecuador, health professionals are trained in universities, and curricula are designed by each institution. The National Constitution of Ecuador (art. 355) establishes universities as autonomous in all academic and administrative matters. Universities work independently to shape their degrees, while regulatory bodies maintain clear rules for ensuring harmonisation and quality standards, particularly ensuring that professionals, such as health workers, meet the standards required by relevant national systems.

Key players and ecosystem

To understand the process and how a curricular proposal was achieved, it is crucial to outline the key players and ecosystem:

Transform Health Ecuador coordinating partner: CEDIA

- Coordinates Transform Health Ecuador, composed of health and higher education stakeholders, including community leaders, health professionals, private sector representatives, civil society members, research institutions, international organisations, and government entities. Subgrantees and coalition partners, including WINN and ALDEA conducted the baseline studies for the development of the curriculum.

Universities

- Whether public, private, or mixed-funded, all universities have autonomy over their curricula but are overseen by the Higher Education Council (CES) and the Council for Quality Assurance in Higher Education (CACES).
- Universities played a key role in curriculum development, with senior academic leaders, such as deans or heads of faculty, representing their institutions at coalition meetings. These academic leaders, who hold decision-making power, provided valuable insights into digital health training needs, existing curricula that can be leveraged and implementation strategies.

Government

- Civil servants from Ecuador's Ministry of Public Health (MSP) sat on the national coalition representing two fundamental areas: (1) the National Department for Professionals Training and (2) the National IT department. The combination of academic and technological expertise from the MSP allowed the coalition to integrate specific insights into the needs and state of the art of digital health in Ecuador.
- At the national level, the Council for Quality Assurance in Higher Education (CACES) oversees university accreditation and qualification examinations for health sector graduates.
- The Higher Education Council (CES) regulates the Academic Regime, limiting updates to approved degrees to prevent substantial changes.
- The National Secretariat for Higher Education, Science, and Technology (SENESCYT) is the equivalent of a Ministry and establishes the government's higher education policies and allocates resources to public institutions.

- All three stakeholders above are active participants in the national coalition and ensure the development of the digital health curricula is aligned with national standards and government priorities.

Private Sector:

- Private healthcare providers and health insurance companies contributing perspectives on the competencies needed for future health professionals. These stakeholders shared valuable insights into the demands of the health labour market. Drawing from their experiences with ongoing digital health initiatives, the sector offered a complementary perspective on the competencies that future health professionals will need.

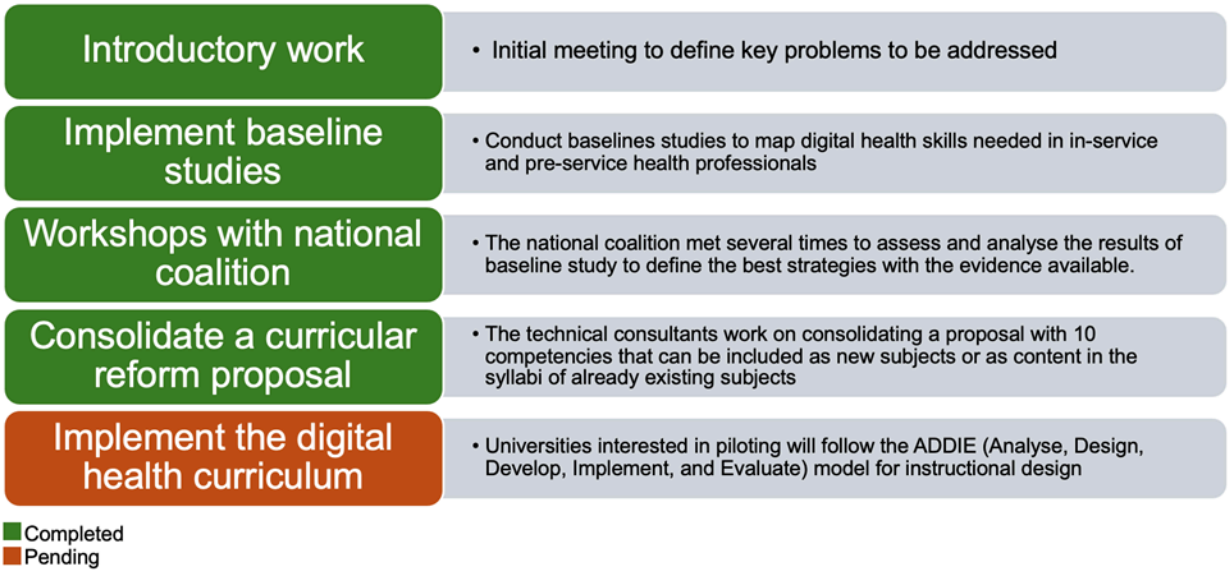
Users

- Health users (public and/or private) were not included in the coalition or the baseline studies. This absence meant that the demand for, use of, and preferences for specific digital health tools were not addressed. According to ALDEA, healthcare users may also reflect actual societal needs and culture, especially when considering a transition to digital health.

Different partners have engaged differently in creating the curricular proposal based on their roles and motivations. All stakeholders from the national coalition interviewed agree on the importance of introducing digital health content into health-related degrees. However, there is variation in how deeply and for what purpose digital health should be implemented. The table in Annex 3 summarizes the different motivations for each stakeholder group elicited through interviews.

The Coalition’s Collaborative and Contextualized Approach

The coalition took an inclusive approach by integrating diverse stakeholders from the private sector, civil society, and academia. In order to design the curriculum, the coalition implemented the following process:



Summary of the curriculum development and implementation process

Based on the assessment of institutional competencies, the Council for Quality Assurance in Higher Education (CACES) does not have the authority to approve a "standard curriculum" for higher education institutions. The National Constitution of Ecuador (art. 355) defines Universities as autonomous, whereas CACES implements accreditation and quality assurance measures. For health professionals, CACES also administers the Qualification Examination for Professional Practices to all graduates of health degrees.

Initially, Transform Health Ecuador aimed to develop a proposal for the Council for Quality Assurance in Higher Education (CACES) to approve a new basic curriculum that would integrate at least one digital health subject by 2025. However, this approach was adjusted to better align with the institutional context.

Instead of creating a completely new curriculum that would require CACES approval, which takes many years, Transform Health Ecuador decided to work with key stakeholders, including CACES, to identify a set of key competencies in digital health for universities to integrate into existing teaching modules. This was a change in strategy from the original approach.

This adjustment was more practical because universities in Ecuador are autonomous and can adapt existing curricula without needing approval from CACES.

However, working with universities to change their curricula represents another institutional challenge: if the curricula change substantially, they must be “re-approved” by the Higher Education Council (CES.

The final approach adapted to the autonomy of universities, allowing universities to make changes at the “micro-curricular level”, for example, adjusting the syllabi with digital health contents.

Based on the workshops with stakeholders, it was unanimously agreed that this was the best way to include digital health content rather than creating a separate subject.

The approach sought to update digital health curriculum content in two ways:

> **(1) Incorporate the most relevant skills throughout the syllabi of all degrees;**
>
> **(2) Incorporate technology for teaching health to ensure that digital skills are utilised in everyday practices (for example, allowing students to work on digital patient information platforms that the MSP currently uses).**

By providing universities with a digital health curriculum based on a framework of competencies, they have the flexibility to incorporate digital health topics into existing subjects or choose from ways to integrate digital health content, making the proposal more adaptable and achievable within the current institutional structure.

CACES played a pivotal role in developing the competencies and, as part of the coalition, agreed that they would make incorporating digital health competencies in the curricula mandatory in order for institutions to get accredited.

"By mapping and proposing the key competencies needed for health professionals' degrees at universities, Transform Health Ecuador will provide universities with a clear agenda for the work they need to do. This process takes time, and it must start as soon as possible."

Juan Carlos Chavez, Ministry of Health

Key Approaches

Selecting a coalition coordinator with experience serving as a bridge between policy and academia.

Overall, according to Hugo Navarrete, Director of the Centre for Applied Chemistry at Pontificia Universidad Católica de Quito, *"CEDIA was the ideal partner to lead the coalition as it already works with universities in many other aspects and is highly respected and valued by the academic community in Ecuador. CEDIA kept stakeholders updated and informed as well as interested in the debate and discussion. In fact, I dare say that we (universities) should be responsible for engaging further to contribute more to this coalition"*.

Similarly, Maria Belen Mena, former dean of the Faculty of Medicine at Universidad Central and former high government official at the Ministry of Health, mentioned that CEDIA " engages effectively within academia and between academia and the public and private health sectors."

This versatility of coordination and legitimacy has been key to attracting the attention of the coalition members, linking them with potential bi-lateral collaborations to implement digital health.

Including decision-makers from higher education and health sectors supported in the national coalition to leverage its position enabling the piloting phase.

Including decision makers from universities, the private and public sectors was strategic to ensure that the process influences universities at the core of their daily work.

According to Maria Mena, “one of the key mechanisms that ensured the successful engagement of members as well as high-quality information was including decision-makers, especially from universities, were the invitations made to Rectors and thus, they delegate head of schools or faculties”.

Including decision-makers within academic institutions made a difference in the ways in which problems and solutions were discussed, as they were approached pragmatically. The solutions defined were more binding as decision-makers agreed on solutions that they could commit to in the short term. This helped to engage participants for the future implementation phase.

Utilising experts’ professional networks to ensure legitimacy and communication.

The consultant team conducting the baseline studies included academics like Maria Belen Mena, who worked as a senior government official at MSP, as well as an academic leadership position in the Faculty of Health at Universidad Central. Her experience and networks with current technical and strategic leaders at the MSP allowed her to access datasets, send invitations for surveys and reach different stakeholders to retrieve information as well as communicate results. Her academic and professional network enhanced the impact of the work at the coalition. Including well-networked professionals helped manage communication more effectively and navigate public and academic sector networks easier to retrieve information and bring in key stakeholders. Overall, this strengthens legitimacy and provides timely responses from external stakeholders.

Establishing an effective communication platform and venues for sub-policy streams.

CEDIA created a constant communication flow with stakeholders with methodologies that fostered participation and helped stakeholders feel heard. Stakeholders reached a consensus on strategies and approaches for including digital health subjects across curricula.

University participants, such as Hugo Narvaez from Universidad Católica, mentioned that "group meetings were interesting. Results from baseline studies paved the way for good systemic discussions, where universities should play a more active role, continue collaborating and start leading this transformation." He suggested that universities start initiating the debate and creating forums and spaces to discuss good practices and examples of incorporating digital health into curricula.

Baseline studies examined the labour conditions of health professionals, gaps in digital health skills, and the current curricular context in universities. They also assessed trends in how digital health is being included in academic programmes. These insights enabled the national coalition to develop a strategy that responded effectively to the identified needs and circumstances.

Fundación ALDEA has requested permission from CEDIA to develop an academic paper using the baseline study results on digital health skills among in-service professionals in Ecuador. This effort aims to contribute to academic knowledge and generate evidence that will be shared with stakeholders beyond the coalition, promoting greater coordination and cohesion within civil society.

"We believe that it is important to place these results in the academic sphere as a publication because it will be useful to enhance the debate and create visibility on the concrete needs of digital health skills in the health sector of Ecuador. This way more interested organisations will know where to focus their efforts".

Giannina Zamora, Fundación Aldea, 2024

Additionally, the MSP will utilise this baseline evidence to define the essential digital health skills required for all health professionals. Juan Carlos Chavez, Head of Health Sector Training, stated, 'The MSP will use these baseline studies as a reference for the skills we will require from health professionals.

Acknowledging differences between universities which helped ensure the curriculum proposal was practical and responsive to conditions on the

ground.

The university sector of Ecuador is highly heterogeneous in terms of infrastructure, resources, teaching capacities and even focus. The differences in universities could become a barrier to designing or implementing digital health content on the curriculum. However, if understood, it may represent an opportunity to establish collaboration. According to Javier Valdiviezo, CEDIA's Academic Director, Universities in the context of the national coalition can design strategies to share technology, laboratories, professors' experience and training to create a strong capacity for all universities nationally. This equitable measure allows the system to make the best use of all its resources but also reduces the coordination with the MSP which would support academia instead of attending to individual demands from universities.

Impacts of the Coalition

By adopting a collaborative model that engaged public and private health providers, academic institutions, regulatory and policymaking bodies, Transform Health Ecuador:

Created a proposal for a digital health curriculum and micro-curricular adjustments.

According to Hugo Navarrete, from PUCE, the University is very interested in piloting the proposal that was developed by Transform Health Ecuador to integrate digital health in the curriculum: *"Although we have not yet seen the final proposal in detail, we have worked closely as part of Transform Health Ecuador, and we know that the proposal is not only feasible to implement but urgent"*.

Similarly, Javier Valdiviezo, academic leader of WINN, emphasised that successful implementation requires universities to collaborate by sharing infrastructure and resources. This cooperation allows institutions to complement each other's capacities and ease the implementation process. The developed proposal includes subjects and competencies to be integrated into existing curricula.

These subjects are:

1. Introduction to digital health
2. Telemedicine and teleconsultation
3. Health information systems
4. Artificial intelligence and big data in health
5. Cybersecurity and ethics in digital health
6. Wearable devices and mobile technology in health
7. Health data analytics
8. Augmented and virtual reality in medical education
9. Project management in digital health
10. Innovation and entrepreneurship in digital health

Similarly, the proposal identified five essential competencies::

1. Advanced technical skills
2. Cybersecurity and ethics
3. Innovation and adaptability
4. Project management
5. Continuous training

The proposal is still in draft form and will be presented to the national coalition for feedback by December 2024 for corrections and final approval. It has followed the "ADDIE" model of instructional design (Analyse, Design, Develop, Implement, and Evaluate). This model helps to provide a holistic proposal that defines in detail how to implement each of the proposed subjects as modules, practical exercises (for example, with telemedicine) or e-learning platforms that complement the current curricula at universities.

Established an effective networking and coordination platform for stakeholders interested in digital health curricula.

The multisectoral space established by Transform Health Ecuador is innovative and has set the stage for future collaborative projects. For instance, the Ministry of Health has committed to creating a learning environment on PRAS (Plataforma de Registro de Atenciones en Salud en primero y segundo nivel – Platform for Registering Health Services at Primary and Secondary Levels), its most widely used platform. This space will

enable undergraduate students to gain practical experience in a simulated, real-life setting for patient registration applications. According to Adriana Abad, IT specialist from the MSP, "Currently, we mostly collaborate with Universidad Central, helping them with a user of the PRAS. She argues that the national coalition meetings have brought about commitments such as a learning space and access to all universities interested in training their students in real-life digital health tools that the Ministry is currently using". She explains that these agreements happened verbally and require formalisation through an official request from universities for the Ministry of Health to proceed with the development.

Strengthened relationships with the Ministry of Health's technical authorities.

The coalition was perceived positively by the government, especially by the Ministry of Health (MSP). Adriana Abad, an IT specialist at MSP, mentions that "the space provided by Transform Health Ecuador was unique, it was the first time IT specialists from the MSP were included in the discussion of digital health skills in service and in training health professionals"., Giannina, from Fundacion ALDEA, mentioned that "there are differences in the way the public sector receives digital health as it may represent more surveillance on what frontline providers do or how they use public resources. On the other hand, private sector providers have the incentive to have professionals with the highest training possible in digital health. This would avoid training professionals to adapt to the new technologies used by private sector providers and health insurance companies". Considering the different motivations that public and private providers may have, CEDIA has focused its leading role on developing the health curriculum to fit existing digital health tools that the Ministry of Health has already developed. This, according to Maria Belen Mena, "is a vital step to give future health professionals a snapshot of the data analysis and data management tools that they will surely use in real-life situations. Making use of MSP's already existing tools has enriched the relationship with the Ministry as the coalition is not perceived as an imposing agenda institution but as facilitating the usage of what has already been developed (which may be improved).

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Annexes

Annex 1: Study Methodology

Study approach:

We have implemented semi-structured interviews to key stakeholders to understand the process, strengths and weaknesses of designing a curricular proposal for digital health in Ecuador.

Sampling and participants:

Name	Position, Organization	Comments	Interview date
Giannina Zamora	Researcher Fundación ALDEA	ALDEA developed the baseline study for Ecuador's curricular reform on digital health	23/09/2024
Maria Belen Mena	University Professor ar Research at UCE and ALDEA	Researcher at UCE (second largest and oldest university in Ecuador with the most prestigiou faculty of medicine)	19/09/2024
Adriana Aba	Director of Health Education at Ministry Health of Ecuador	MSP works closely on defining the ideal profile of health professionals influencing universities definitions on degrees' content	20/09/2024

Name	Position, Organization	Comments	Interview date
Juan Carlos Chavez	Director of Health Sector training, Ministry of Health	MSP must coordinate and regulate the skills and profile needed for its health professionals. In service and pre-service	08/10/2024
Javier Valdiviezo	Researcher at WINN/CEDIA	Researcher on baseline study at WINN (CEDIA consulting group)	23/09/2024
Hugo Navarrete	Professor at PUCE	PUCE is a private university that has decided t be the first to pilot the curricular adaptations proposed by the national coalition	04/10/2024
Francisco Alvarez	Researcher at WINN / CEDIA	Researcher on baseline study at WINN (CEDIA consulting group)	23/09/2024
Gabriela Astudillo	Research & Development Project Manager, CEDIA / National Coalition Coordinator	Introductory interview pending to receive 2 baseline documents and the chronology of activities. Interview already implemented	17/09/2024; 08/10/2024

Annex 2: Acronyms and Abbreviations

Acronym/abbreviation	Full name
CACES	Council for Higher Education Quality Assurance
CEDIA	Corporación Ecuatoriana para el Desarrollo de la Investigación y la Academia
CES	Higher Education Council of Ecuador
ECLAC	Economic Commission for Latin America and the Caribbean

MSP	Ministry of Health of Ecuador
SENESCYT	National Secretariat for Higher Education, Science and Technology
UHC	Universal Health Coverage
UHCI	Universal Health Coverage Index
WHO	World Health Organisation's