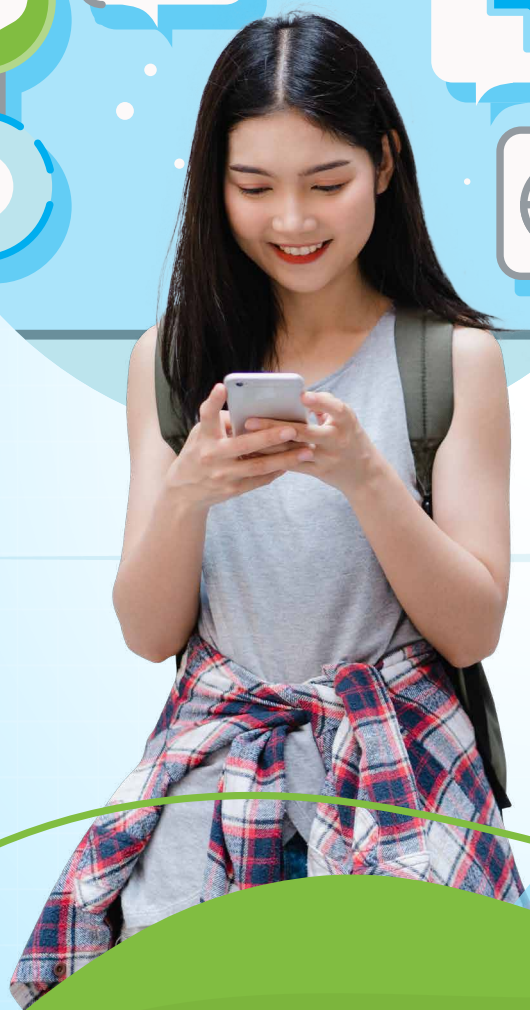


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DIGITAL HEALTH SERVICES FOR YOUNG PEOPLE IN THAILAND

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UNICEF Thailand
Phra Athit Road, Bangkok, Thailand 10200
Email: unicefthailand@unicef.org

Design and layout by: Tanat Supichayangkun

Edited by: Laura Evans

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Name	Organization
Dr. Bunyarit Sukrat	Bureau of Reproductive Health, Department of Health
Dr. Suchada Jiamsiri	Division of AIDS and STIs, Department of Disease Control
Dr. Wimolrat Wanpen	Child and Adolescent Mental Health Rajanagarindra Institute
Dr. Nattinee Isarankura	Division of AIDS, TB and STIs Control, Bangkok Metropolitan Administration
Mr. Sutee Chudcha	Children and Youth Council of Thailand
Ms. Nattakan Kudwila	Children and Youth Council of Thailand
Ms. Pawana Wienrawee	Path2Health Foundation
Ms. Krittaporn Termvanich	Institute of HIV Research and Innovation
Ms Thanichar Limpanich	Social Parent Academy
Dr. Olivia Corazon Nieveras	WHO
Ms. Jenelle Babb	UNESCO
Ms. Duangkamol Ponchamni	UNFPA
Dr. Patchara Benjarattanaporn	UNAIDS
Ms. Ilaria Favero	UNICEF
Ms. Sirirath Chunnasart	UNICEF
Mr. Jagkrapan Janchatree	UNICEF

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ACRONYMS



AI	Artificial Intelligence	MSDHS	Ministry of Social Development and Human Security
AIDS	Acquired Immunodeficiency Syndrome	NDHP	National Digital Health Platform
CDC	Centers for Disease Control and Prevention	NGO	Non-Governmental Organization
COVID-19	Coronavirus Disease 2019	NHSO	National Health Security Office
EHRs	Electronic Health Records	RCT	Randomized Controlled Trial
FAQs	Frequently Asked Questions	STIs	Sexually Transmitted Infections
FGDs	Focus Group Discussions	T-HAT	Transgender Health Access Thailand
HIV	Human Immunodeficiency Virus	UNAIDS	Joint United Nations Programme on HIV/AIDS
ICT	Information and Communications Technology	UNESCO	United Nations Educational, Scientific and Cultural Organization
IHRI	Institute of HIV Research and Innovation	UNFPA	United Nations Population Fund
KIIs	Key Informant Interviews	UNICEF	United Nations Children’s Fund
LGBTQI+	Lesbian, Gay, Bisexual, Transgender, Queer and Intersex	WHO	World Health Organization
mHealth	Mobile Health	USAID	United States Agency for International Development
MoPH	Ministry of Public Health of Thailand	YFHS	Youth Friendly Health Services
MoPH-TUC	Ministry of Public Health and United States Centers for Disease Control and Prevention Collaboration Coordinating Unit	YPAB	Young People Advisory Board



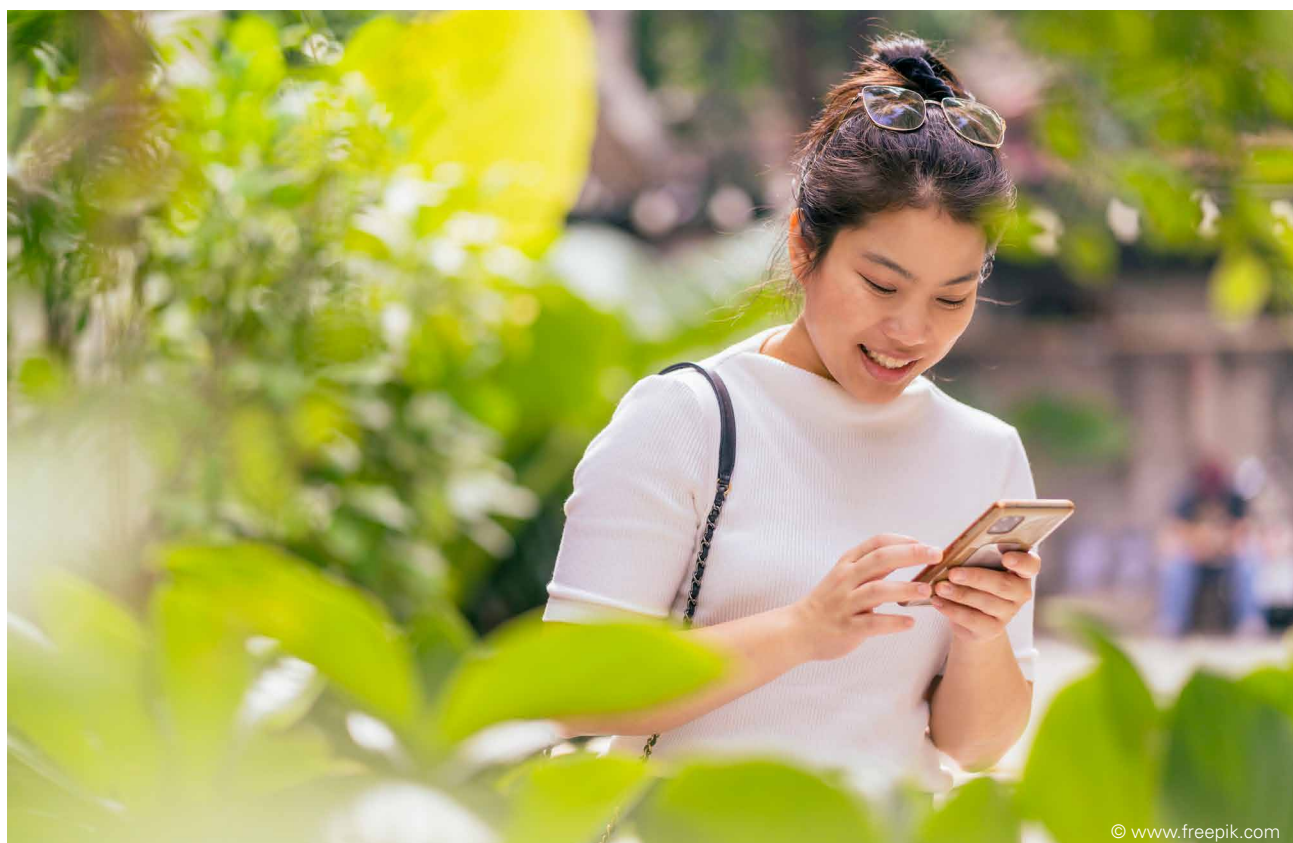
EXECUTIVE SUMMARY

Digital health involves utilizing routine and innovative forms of information and communications technology (ICT) to address health needs (World Health Organization (WHO), 2019). The use of digital platforms is an increasingly popular approach for achieving health objectives, particularly among young people, and to address health system shortcomings such as lack of access.

In recent years, Thailand has been progressively transitioning from purely facility-based health services to digital health services (Ministry of Public Health (MoPH), 2021). Digital health has been recognized by the MoPH as a key priority, as indicated by the publication of a comprehensive Digital Health Strategy (2021-2025), which acknowledges that digital technologies have a key role to play in health system strengthening and increasing public health capacity to achieve the objectives of national health policies.

There are currently several government-led and NGO-led health platforms aiming to provide either specific or comprehensive adolescent health information. Some platforms also provide interactive features such as counselling chatrooms, referral mechanisms or chatbots (United Nations Educational, Scientific and Cultural Organization (UNESCO), 2021). The COVID-19 pandemic accelerated the use of digital channels to provide health information and services. During this time, several new services were developed through different online channels such as Facebook, Line and websites. Yet despite these developments, the scope and scale of the existing services targeting young people is currently unknown, and although the Digital Health Strategy (2021-2025) aims to address key public health challenges, it does not focus on the specific needs of young people in relation to digital health services.

Following WHO recommendations on the effectiveness, feasibility, resource use and equity considerations of emerging health interventions (WHO, 2019), along with guidance on how to support digital health intervention designers, implementers, researchers and funders to meet the needs of young people (WHO, 2020), UNICEF is supporting the Royal Thai Government in the development of national guidelines for the provision of online health services to young people. Just as UNICEF previously supported the development of national standards for the provision of facility-based youth-friendly health services (YFHS), the new guidelines for digital services will provide a framework for quality assurance and will guide procurement and provision of services.



In this context, UNICEF Thailand, in consultation with the Department of Health, commissioned this study to explore and assess the situation and landscape of available digital health services targeting young people in Thailand.

The study aims to:

- Provide an analysis of the **existing landscape of digital health services** used by young people in Thailand: looking at the nature of the digital health services that exist in the country, their reach, accessibility and inclusiveness, and funding mechanisms.
- Assess the **extent to which these existing digital health services are in line with young people's needs**.
- Present a **set of actionable recommendations** to improve the current digital health services for young people (particularly in relation to their inclusiveness and accessibility), considering sustainability as a key element.

To achieve these aims, the study utilised a mixed-methods approach, with a range of data collection approaches.

The study draws from global best practice for digital health services for young people, and lessons from youth-facing digital health services in other countries that can be applied in Thailand. An initial desk review collected and synthesized available data on 25 existing digital health services in Thailand, while key informant interviews (KIIs) were conducted with a range of stakeholders, including government agencies and non-government health service providers in the country to gather perspectives and insight on how these services have been conceptualized, designed and implemented, with a particular focus on the factors which shape funding sustainability.

Crucially, the study also engaged with a wide range of young people in Thailand to understand their perspectives, needs and motivations in relation to digital health services, the barriers they may face to accessing digital health services, and their lived experience of using them. To achieve the depth of exploration required to gain young people's perspectives and lived experience, two digital health services – Lovecare Station and Teen Club – were chosen by UNICEF Thailand, in collaboration with the Steering Committee, as the primary focus for a deep dive by young people.¹ Participants who had not previously used these services were remotely onboarded to carry out a deep dive of the services and subsequently share their insights via focus group discussions (FGDs), while those who were already users of these services took part in KIIIs to share their longer-term experiences.

This comprehensive report synthesizes this multifaceted evidence, highlights gaps in the quality of the digital health services for young people, and contains a set of actionable recommendations to help guide strategic roadmaps to further improve the accessibility, inclusivity, quality and sustainability of these services.

Key Findings

Regarding the policy landscape in Thailand, the study found that digital health has been recognized by the MoPH as a key priority through its ambitious and wide-reaching **Digital Health Strategy (2021-2025)**, which lays out various initiatives to enable public and private national health agencies to accelerate the adoption of digital technologies. However, at present, **there is no specific focus on the needs of young people, and no costed plan** to resource the delivery of the initiatives laid out in the strategy. Nevertheless, several initiatives within the strategy have the potential to provide tangible benefits for young people. These include the development of **digital health infrastructure** which will make it easier for young people to access their health records and receive appropriate and timely care; the use of **telemedicine and e-health services**,² which could benefit young people in rural or remote areas who may face barriers to accessing traditional healthcare services, as well as encourage young people to take an active role in managing their health and well-being; **capacity building for digital health**, to ensure that healthcare providers and other stakeholders, including the general public, have the necessary skills to implement and use digital health technologies effectively; **healthcare data management**, which could help to ensure that young people's health data is properly collected and used to inform healthcare policies and practices; and **collaboration and partnerships** to promote the development and adoption of digital health solutions, including the establishment of public-private partnerships to accelerate the development of digital health technologies and international cooperation to share experiences and examples of best practice in digital health.

Additionally, the use of digital health to engage young people has also been identified within the **National Strategic Action Plan for the Prevention and Solution of Adolescent Pregnancy Problems (2017-2026)**.

The plan, published by the Bureau of Reproductive Health, aims to promote, support and coordinate the participation of all sectors in prevention and solution of adolescent pregnancy problems. One of its key components is **the promotion of digital health services to improve access to reproductive health information and services for young people**, alongside the utilization of a national e-Learning platform offering a range of online resources and courses for students in primary and secondary schools.

The mapping process identified 25 digital health services currently used by young people in Thailand. The majority of these digital health services were found to offer a **clearly defined service focus** with one or two key features. Amongst the range of features on offer, the most common is counselling, whereby young people can connect directly to a trained expert professional for one-to-one support. The second most common feature is the provision of **written information and resources** for users to engage with individually.

¹ Lovecare Station was amongst the very first digital health service developed for young people in Thailand, with more than 1 million users per year, while Teen Club is a newly launched government-led service which aims to be the national digital health service for adolescents and currently has approximately 50,000 registered users.

² The recognition of telemedicine as a key initiative within the Digital Health Strategy builds upon the foundation already established by the Medical Council of Thailand, which issued its *Notification of Guidelines in Respect of Telemedicine and Online Clinics No. 54/2563* in July 2020.

Findings showed that when they need to access health information or services, **young people do not typically have a digital health service to which they regularly turn.** The **primary channel young people use for accessing health information or services is Google**, followed by YouTube. In terms of delivery channel, young people tend to prefer digital health services which are accessible via **website**, although **Line** was also mentioned by young people as an **easy-to-use and desirable delivery channel.**

Young people recognize that digital health services and in-person health services may be appropriate at different times and for different needs. However, when young people were asked to reflect on the factors that would influence which digital health service they use, several priority areas were important to them, namely **credibility and reliability, privacy and confidentiality, relevance, and accessibility.**

The importance of seeking reliable, credible health information online was commonly expressed by young people. Youth participants demonstrated a sophisticated awareness of how to discern what is credible, and will often seek out digital health information that has a clear link to a medical facility. In terms of meeting these needs, there is scope for improving the ways in which some digital health services reassure young users about the credibility and recency of their information and services.

Maintaining privacy or anonymity while seeking digital health support was another key consideration, with young people stating that they are reluctant to share personal information unless it is fundamentally necessary for the service. Generally, the priority of young people's right to **privacy and confidentiality has been recognised and carefully reflected in the design across digital health services.**

As users of digital health services, **young people appreciate interactive and practical tools** that add value, such as self-assessments and personal trackers for periods and nutrition, and are familiar with sophisticated chatbots and AI that respond to their personal prompts. While many of the digital health services incorporate these elements, **there may be scope to evolve these further to keep young people engaged and excited**, as well as to **make it easier to navigate content** to find the most directly relevant, up-to-date advice. Youth participants were creative with the types of features they envisage for their ideal digital health services, suggesting a desire for digital health **information and resources to be presented in an interactive, engaging and tailored way.**

At the same time, the study found that **young people have a range of health concerns which they would like to see reflected in the content of digital health services**, including topics such as mental health and nutrition. As the **majority of digital health services reviewed tend to focus on one content theme**, most commonly sexual health, this is an area which could be developed further to meet young people's needs. **More thematic breadth** would allow digital health services to align more with young people's holistic approach to health and well-being.

Young people are keen to complete their digital user journey by accessing direct, personal expert support, either remotely or in-person. Participants expressed a significant desire for quality, responsive remote expert advice which is delivered in a timely manner and available at the point of need. When considering digital services that involve connecting directly with an expert professional for telemedicine or remote counselling for mental health support, there was consensus from young people that the service must be able to respond at the point when it is needed. However, **young people's lived experience demonstrates that remote counselling services does not always meet these expectations.** While those who were able to access a counsellor report a very positive, engaging and empathetic experience, some young people reported **challenges relating to complex usability, slow response times and limited service hours.** Furthermore, although many digital services provide contact details of physical sites for those who require or prefer an in-person health service, **there is often no direct integration for booking appointments that could make the user experience more seamless.**

When asked to envision their ideal digital health service, **young people identified inclusivity as a key concern**, with all participants mentioning that they would **prefer a service that is non-gender specific**. Most digital health services identified through the mapping process are not deliberately targeted at one gender, which aligns with young people's preferences, and most are suitable for any age group (with only five of the services specifically targeted at adolescents or youth). However, young people reported that services which do not intend to be gender exclusive may still appear to be female-targeted, suggesting that more could be done to **ensure that the presentation of services is gender inclusive** and appeals to the interests of all groups.

For services which specifically target young people, stakeholders revealed that **consulting young people is generally recognised as a fundamental part of the design process**, and shared how young people's suggestions have been used to inform creative decisions such as service model design, language used and visual design. Despite this, findings showed that **accessibility and inclusion of young people with disabilities remains a challenge that needs addressing, particularly for young people who use screen readers**. The lived experience of young people with disabilities revealed difficulties accessing certain features of digital health services, such as chat rooms or PDF documents, clearly highlight that more could be done to ensure that all features are accessible. As digital health services become more sophisticated and new features are added, accessibility must remain a constant priority.

Lastly, this study found that **financial sustainability is a challenge** for many of the digital health services used by young people in Thailand. Stakeholders across the board identified sustainability as a key issue facing digital health services. Most services identified for this study rely on one funding source type. Those who receive public funding may receive it from various public departments, but are still subject to annual planning cycles, while many services have been designed and developed through grant-based funding sources. Both options **limit long-term financial investment and planning**, and place a continuous burden on service providers to ensure grant or budget renewal. This suggests that there is scope to **explore new partnerships and business models** that can offer young people the seamless experience they need, while financially sustaining digital health services.

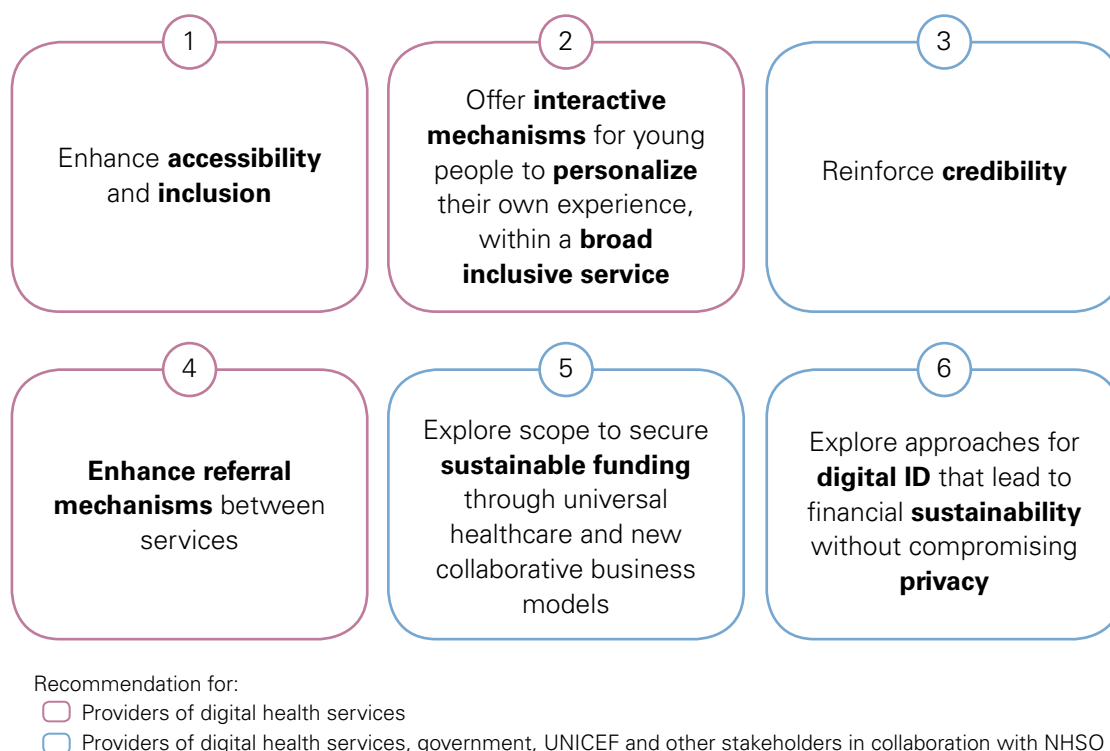
The primary mechanism for sustainable, scalable public funding is registration with the National Health Security Office (NHSO). However, the study found that digital health services that seek NHSO funding face a unique challenge as, for a service provider to receive NHSO funding, it **must be able to verify eligible individual service users**. Since some digital service providers may provide guidance and information, but do not connect with service users in person, they are unable to verify the number of individual service users accessing the service. The issue of user verification also **raises concerns around how to verify user numbers without compromising user privacy and confidentiality**. The NHSO is exploring options for how best to approach this issue. The only digital services which have managed to solve this issue are those which effectively act as a referral channel into a practical service with a health professional, either remotely via a telemedicine channel or in-person at a health facility.

Another issue raised by stakeholders regarding the NHSO registration process is the **lack of a standard assessment mechanism for digital health services**. This was mentioned both by digital health service providers, who have no guidance on how to design services according to accepted standards, and by the NHSO, who reflected on the time-consuming task of assessing each application individually.

Recommendations

Figure 1 below provides an overview of six actionable recommendations to be considered by providers of digital health services and other stakeholders. Exploring these recommendations will support digital health services in Thailand to align even more strongly with global best practice, and to better meet the needs and expectations of young people.

Figure 1: Six Actionable Recommendations



Recommendation 1: Enhance accessibility and inclusion

This is a recommendation for providers of digital health services. It draws from the best practice principle to *ensure inclusive and accessible design*.

In order to increase access to young people with disabilities, **technical accessibility audits should be conducted** to ensure that digital health services do not inadvertently exclude those using screen readers. This audit process should include **a review of accessibility** from other perspectives – e.g. captions on videos.

Further research must be done to explore the extent to which the accessibility and inclusion needs of young people living with other disabilities are met when the digital services are relevant for them and add value to their health outcome. **Services should also endeavour to engage with other groups of young people living with disabilities**, such as young people with hearing impairment, and young people with learning disabilities.

Services which are inadvertently presenting as female-targeted should reflect on the suggestions provided by young people for how to **make the service more inclusive to all genders**. This is not to say that all pieces of content need to be relevant for all. Rather, that across the whole range of content, there should be a balance of themes and topics that are relevant for all genders, as well as those with particular needs such as young people who identify as LGBTQI+. Services should consider ways to ensure that all young people are able to find sufficient content that feels relevant for them (see more below, in Recommendation 2).

Recommendation 2: Offer interactive mechanisms for young people to personalize their own experience, within a broad inclusive service

This is a recommendation for providers of digital health services. It draws from the best practice principle to *make user experiences engaging and interactive*.

Firstly, it should be made easier for young people to **rapidly identify the information and tools most relevant for them**. This builds upon and complements the first recommendation, helping to ensure that any young person can have a meaningful experience, easily navigating a wide range of inclusive content.

A basic approach to achieve this is to **improve how content and features are organized and presented, including improving the curation of large volumes of content so that out-of-date content is archived or updated**. Guidance and input should be taken from young people to ensure that navigation design is as intuitive as possible. To take this a step further, **interactive personalization may be built into the design** so that content and features are curated and presented based on user-defined characteristics (avoiding personally identifying information), or on user-defined topic preferences.

It should be noted that any approach that captures and stores user data to inform personalization should have a very transparent data privacy policy, describing in plain language how that data will be handled, to ensure informed consent from the young people.

Recommendation 3: Reinforce credibility

This is a recommendation for providers of digital health services, as well as government. It draws from the best practice principle to *design with sensitivity to the specific risks faced by young people online*.

Firstly, services that connect young people with professional advice should be as transparent as possible about the **credentials of experts**, to reassure young people about the reliability of the guidance. This could be done through presenting expert profiles or, at the very least, the qualifications of all experts.

Recognizing the potential risks faced by young people online when accessing public discussion fora, engaging an **expert moderator with clear credentials is recommended**. Peer responses should be moderated in order to minimize unhelpful comments and to validate those which offer meaningful and accurate advice.

The government has an important role to play in reinforcing the credibility of digital services, ensuring service quality through **standard setting, accreditation and capacity building for providers**. The Department of Health's ongoing development of national guidelines for the provision of online services to young people, with support from UNICEF, offers potential for a service accreditation mechanism that may further enhance credibility in the eyes of young people.

Recommendation 4: Enhance referral mechanisms between services

This is a recommendation for providers of digital health services. It draws from the best practice principle to *meet an unmet need*.

Opportunities for positive collaboration between existing services should be explored, especially those that may have scope for **technical integration** between services to enable a seamless user journey for young people which flows from information source to practical support.

Links with pre-existing services that work well are encouraged. This may be integration with services that offer appointment booking, either for a telemedicine service linked to a legal medical clinic, or a physical service, or with services that already offer rapid response remote counselling.

Care must be taken when designing these integrated services to **balance the requirements of young people with the practicalities of service delivery**. For instance, the incorporation of appointment booking systems should be considered carefully and collaboratively so that they work for and add value to both the young person and the service provider.

Recommendation 5: Explore scope to secure sustainable funding through new collaborative business models

This is a recommendation for providers of digital health services, UNICEF and other stakeholders in collaboration with NHSO. It draws from the best practice principle to *design for scale and sustainability, avoiding fragmentation*.

NHSO registration offers the potential for sustainable funding. It would be interesting to **explore the viability of a linked business model** between information-based digital services and those which provide high-quality counselling and services (either in person or remote) that would allow NHSO funding to be shared between the service provider and the digital service channel engaging young people and guiding them to use the service. This integration would avoid the burden of referral validation falling to busy health providers, and a formal partnership may allow digital information-based services to co-benefit from NHSO funding.

Since the NHSO does not currently have any requirements against which to assess digital health services, this may be an opportune moment for meaningful stakeholder engagement across the digital health sector in Thailand to **develop standardized guidelines as a part of a system strengthening approach**. UNICEF may play a critical role in continued advocacy on the needs of young people to access these online health services and in providing technical support to relevant stakeholders to improve funding modalities.

There may also be scope for some minimal element of co-payment from young users of the service, which would require simple and secure digital payment mechanisms such as bank transfer and e-wallet. However, this should be managed extremely carefully so as not to exclude those who are unable to pay.

Recommendation 6: Explore approaches for digital ID that lead to financial sustainability without compromising privacy

This is a recommendation for providers of digital health services, UNICEF and other stakeholders in collaboration with NHSO. It draws from the best practice principle to *design for scale and sustainability, avoiding fragmentation*.

NHSO is currently considering the appropriate way to digitally verify ID to ensure eligibility for NHSO funding.

Working with stakeholders and young people, stakeholders from across the digital health sector should **explore approaches that balance the critical need for privacy and anonymity that young people need online with NHSO's requirements for funding**. It will be vital to meaningfully engage young people in this process to ensure that an approach for digital ID that is well understood and accessible is agreed upon.

Moreover, guidelines for providers of digital health services should be developed that clearly show the minimum data requirements needed to demonstrate the “population registered with the service unit”, to give them the best chance of complying with NHSO requirements.



CHAPTER 1

INTRODUCTION

1.1 Background

Digital health involves utilizing routine and innovative forms of information and communications technology (ICT) to address health needs (WHO, 2019). The use of digital platforms is an increasingly popular approach for achieving health objectives, particularly among young people and to address health system shortcomings such as lack of access.

In recent years, Thailand has been progressively transitioning from purely facility-based health services to digital health services (Ministry of Public Health of Thailand, 2021). There are currently several government-led and NGO-led health platforms aiming to provide either specific or comprehensive adolescent health information to promote the health and development of young people. Some platforms also provide interactive features such as counselling chatrooms, referral mechanisms or chatbots (UNESCO, 2021). The COVID-19 pandemic accelerated the use of digital channels to provide health information and services. During this time, several new services were developed through different online channels such as Facebook, Line and websites. Yet despite these developments, the scope and scale of the existing services targeting young people is currently unknown.

In 2019, the *WHO Guideline: Recommendations on Digital Interventions for Health System Strengthening* was produced, providing guidance based on critical evaluation of the effectiveness, feasibility, resource use and equity considerations of emerging digital health interventions. In 2020, WHO issued a further guidance document entitled *Youth-Centred Digital Health Interventions: A Framework for Planning, Developing and Implementing Solutions with and for Young People* to support digital health intervention designers, developers, implementers, researchers and funders to make digital health smarter and to ensure that the specific needs of young people are addressed.

Building on the WHO guidelines, UNICEF is supporting the Government of Thailand in the development of national guidelines for the provision of online services to young people. Just as UNICEF previously supported the development of national standards for the provision of facility-based youth-friendly health services (YFHS), the new guidelines for digital services will provide a framework for quality assurance and will guide procurement of services.

In this context, UNICEF Thailand, in consultation with the Department of Health, commissioned this study on **Digital Health Services for Young People in Thailand**, to explore and assess the current landscape of available digital health and services targeting young people in Thailand.

This study presents a comprehensive evidence base from which recommendations have been developed for strengthening the position of existing digital health services so that they better meet the needs of the diverse populations of young people in Thailand, with a particular focus on accessibility, inclusiveness and sustainability.

1.2 Study Objectives

The study has three high-level objectives:

- To provide an analysis of the **existing landscape of digital health services** used by young people in Thailand, looking at the nature of the digital health services that exist in the country, their reach, accessibility and inclusiveness, and funding mechanisms.
- To assess the **extent to which these existing digital health services align with young people's needs**.
- To present a **set of actionable recommendations** to improve the current digital health services for young people, particularly in relation to their inclusiveness, accessibility, and considering sustainability as a key element.

In order to achieve these high-level objectives, the study has six sub-objectives:

- Understand how existing digital health services in Thailand align with global best practice in the design and delivery of digital health services for young people.
- Gather lessons from successful digital health services for young people in other countries that may be applied to support services in Thailand.
- Understand the current policies introduced by the Thai government that influence and govern the purpose, nature, design and implementation of digital health services for young people.
- Understand what digital health services are currently being used by young people across Thailand: the nature of these services (their purpose, accessibility, inclusiveness and sustainability), and the nature of engagement by young people.
- Gather perspectives and lessons from stakeholders working on digital health for young people in Thailand to understand challenges with regards to impact, scale and sustainability.

- Understand the needs and motivations that shape the digital engagement behaviour of diverse segments of young people in Thailand, with particular care taken to capture perspectives from vulnerable groups of young people (including young people who identify as LGBTQI+, those with disabilities, those from different ethnic and religious backgrounds, or young people with specific chronic health conditions). This includes understanding young people's lived experience of using key existing digital health services, and assessing the extent to which these platforms align with their needs and motivations, and in particular the extent to which they are inclusive of the needs and motivations of vulnerable groups.

1.3 Key Definitions

Young people: The study recognizes the United Nations definition of young people as individuals between 10 and 24 years.

Digital health services for young people in Thailand: The focus of the study was on services that fulfil both of the following criteria:

- **Demographic:** Digital health services specifically created to engage young people in Thailand, or which have young people as a key user group.
- **Nature of service:** Services with a specific focus on providing users with access to the necessary information, tools and expert care they need to care for their health and wellness.

Specifically, under the *WHO Classification of Digital Health Interventions* (WHO, 2018), the services of interest are classified either as **interventions for clients**, which includes:

- Targeted client communication – transmission of targeted health information tailored according to audience segmentation
- Untargeted client communication – transmission of general health promotion content
- Client to client communication – communication between clients as peers
- Personal health tracking – use of digital tools by clients to review and track their health status, for instance wearable sensors, web tools or mobile applications
- Citizen based reporting – clients providing feedback on or reporting issues with health services, or reporting local health events
- On-demand information services to clients – publicly available health information, accessed and triggered on request by the client, such as a website, helpline or mobile app
- Client financial transactions – payments and transactions facilitated digitally related to health service delivery.

Or **interventions for healthcare providers**, which includes:

- Telemedicine – provision of healthcare services remotely, which may include consultation, provision of clinical guidance, and health monitoring.

This definition of digital health services for young people was used to inform the scope of the study, for instance in the mapping of existing services.



1.4 Methodology

A multisectoral Steering Committee was also established to offer strategic direction, monitoring and support for the project.

The study utilised a mixed-methods approach, with a range of data collection approaches required to address the study objectives effectively. Appendix 1 includes all the data collection tools, and the sections below provide an overview of the data collection approaches conducted between December 2022 and August 2023.

A **desk review was conducted** to gather and synthesize evidence of **global best practice** in designing accessible, engaging and impactful digital health services for young people. Google, Google Scholar and Research Gate were used to identify appropriate literature. Key search terms included “digital health”, “digital health platform”, “digital health service”, “best practice”, “best practice principles”, “best practice standards”, “design principles”, “youth-friendly”, “youth-centred”, “youth”, “young people”, and “adolescent”. Peer-reviewed journal articles, research reports and other publications were catalogued, assessed and scored for relevance, recency and quality.

The search terms and scoring rubric were designed to target literature that is as focused as possible on the objective: evidence-based best practice and principles for digital health services for young people. Care was also taken to include UNICEF’s publications on the subject matter; evidence explicitly focusing on best practice as applicable to the Global South, as well as the Global North; and evidence generated within the Global South, as well as that from the Global North.

Four **international case studies** were developed through desk research. The case studies were used to provide examples of how the global best practice identified through the desk review can be applied in practice to produce accessible, engaging and impactful digital health services for young people, and as lessons that can be applied in the Thailand context.

In order to understand the landscape **of existing digital health services** designed for young people in Thailand, the desk review also involved **mapping services** that met the following criteria:³

³ Please see Appendix 5 for the mapping analysis framework. It should be noted that the aim of the mapping was not to compile an exhaustive list of all available digital health services for young people in Thailand, but rather to capture key digital health services based on suggestions from the Steering Committee and available information.

- **Demographic:** Digital health services specifically created to engage young people in Thailand, or which have young people as a key user group.
- **Nature:** Services with a specific focus on providing young people in Thailand with access to the necessary information, mindset and expert care they need to care for their health and wellness.

Finally, research was conducted to appraise **the national policy landscape** through identifying and considering relevant current policies introduced by the Royal Thai Government that can influence and govern the purpose, nature, design and implementation of digital health services for young people. This review looked at any government legislation that affects the design or implementation of digital health platforms and services for young people, as well as government strategies indicating priorities for public investment that will affect the design or implementation of digital health platforms and services for young people. Guidance and local insight to inform the review were also provided by UNICEF Thailand and members of the Steering Committee.

To deepen the understanding of the existing landscape of digital health services for young people in Thailand, **a total of 20 key informant interviews (KIIs) and 5 focus group discussions (FGDs) were conducted.** Firstly, **10 KIIs were conducted with a range of stakeholders, including government agencies and non-government digital health service providers in Thailand.** These KIIs gathered perspectives and insight on **how these existing services have been conceptualized, designed and implemented,** with a particular focus on the factors which shape **funding sustainability.** The organizational affiliations of the 10 stakeholders interviewed are included in Appendix 2.4. Individual names of participants are not included in this report.

Primary research was then conducted via **5 focus group discussions (FGDs) and 10 KIIs with a wide range of young people in Thailand** to understand their **perspectives, needs and priorities** in relation to using digital health services and the **extent to which existing digital health services meet their needs and expectations** based on **lived experience.**

Recruitment was coordinated by UNICEF with key local youth organizations to ensure inclusion of young people from marginalized and vulnerable groups such as girls, youth with disabilities, young key populations, adolescents from ethnic minorities and LGBTQI+ youth.

Table 1 below shows an overview of the **43 young people** who participated in the study. The full list of profiles of participating young people and charts analysing participant profiles are provided in Appendix 2.

Table 1: Young People Participants

Group ⁴	16-18		19-21		22-24		Total
	Female	Male	Female	Male	Female	Male	
Disabilities (visual impairment)			2	1	1	2	6
Ethnic minorities	7			1			8
LGBTQI+ ethnic minorities		2					2
General	6	4	2	1	3	3	19
LGBTQI+	1	1	3	2	1		8
Total	14	7	7	5	5	5	43

⁴ Group refers to the focus of the local youth organization(s) through which the young people were recruited.

To achieve the depth of exploration required to gain young people's perspectives and lived experience, **two digital health services were chosen as the primary focus for a deep dive**, alongside exploration of the young people's usage of other digital health services. The two services – Lovecare Station and Teen Club – were selected by UNICEF Thailand in collaboration with the Steering Committee. **Lovecare Station** was amongst the very first digital health service developed for young people in Thailand. It has more than 1 million users per year and has developed as a comprehensive adolescent digital health service, both in terms of the range of health topics it covers and in terms of the nature of the features (information, web board, counselling, referral). **Teen Club** is a newly launched government-led service which aims to be the national digital health service for adolescents, comprehensively covering adolescent health needs through six features aiming to promote health literacy and providing health counselling. It currently has approximately 50,000 registered users.

Out of the 43 young people recruited to participate in the study, 33 had not previously used these two key services. These 33 participants were **remotely onboarded to carry out a deep dive of the services**, using an **interactive chat on the Line platform** to support small groups through a series of **simple daily activities**, over a period of one week. **These participants were organized into five small groups**, keeping together those who were linked to the same local youth organization. The activities gave participants scope to explore the different aspects of each service, and provided opportunity to gather first impressions as they explore the services, as well as immediately identifying accessibility or usability challenges. This approach ensured recent and validated usage of the two deep-dive services.

The five groups who had participated in the Line chats were then brought together for an in-depth FGD. The five FGDs explored the needs and motivations that shape the digital engagement behaviour of diverse segments of young people in Thailand and gathered specific perspectives and feedback from the 33 young people on their recent experience of using Teen Club and Lovecare Station for the first time, drawing comparisons with other digital health services.

Key informant interviews (KIs) were conducted with the remaining 10 young people who are long-term users of at least one of the two deep-dive services, exploring the needs and motivations that shape the digital engagement behaviour of diverse segments of young people in Thailand and gathering specific perspectives and feedback on their long-term experience of using Teen Club and Lovecare Station, drawing comparisons with other digital health services.

Data from the qualitative discussions were coded using an inductive process to drawing out key themes. Themes included the design process of digital health services, inclusivity and accessibility, and sustainability.

Data and insights from across the study were triangulated thematically, analysing and exploring similarities and comparisons in the data and either coming to a common understanding in the analysis, or highlighting differences where they may exist.

An online results validation workshop was conducted to present the preliminary results of the study, and to gather feedback from the Steering Committee. Further validation was conducted by UNICEF with a group of young people. The final report was developed based on comments received via the validation process.

Researchers' roles and responsibilities

The study was conducted by an international consultant and a national consultant. The international consultant was the overall study lead and Principal Investigator, responsible for the study design, methodology, design of the research instruments and analysis frameworks, coordination with the Steering Committee, data analysis and reporting.

The national consultant was trained by the international consultant to conduct the local in-person data collection.

Implementation challenges and mitigation approaches

Recruitment

The study originally aimed to recruit 58 young people to participate in the study, but recruiting the desired number of young people was challenging. This was due to two main reasons: 1) The contact details provided by some of the local youth organizations contained outdated information, meaning that some young people could not be reached; and 2) In some cases, young people had not been effectively sensitized by the local youth organization and therefore were not expecting to receive the introductory message, leading to a reluctance to participate. This was remedied through further engagement with the local youth organizations, and a snowball approach was utilised to attempt to mitigate the low number of participants. In the end, the study recruited 43 young people.

Data collection

Most of the young participants were engaged in education during the day, and had limited time to participate in some of the Line chat activities and provide feedback on their experiences. Additional follow-up on these activities was therefore conducted in FGDs.

As the young people were only available for the FGDs and KIIs at the weekends, the study schedule was adapted to facilitate young people's participation.

Ethics approval

This study was conducted in accordance with UNICEF's *Procedure on Ethical Standards in Research, Evaluation, Data Collection and Analysis* (UNICEF, 2021). The study design and all data collection tools were underpinned by a comprehensive protocol for ensuring inclusive, safe and ethical consultations.

Ethical approval for the study was obtained in April 2023 from the Health Media Lab Institutional Review Board (IRB). Please see Appendix 4.

All participants provided informed consent/assent. Interviewers ensured that all participants understood the project's nature, purpose, and outcomes to obtain informed consent. Participants were allowed to leave the data collection activities at any time.

All data was anonymized to ensure complete confidentiality. Personal data will be disposed of within one year.



CHAPTER 2

GLOBAL PRINCIPLES AND BEST PRACTICE

This chapter provides perspective and context from global best practice relating to the design and implementation of impactful, engaging, inclusive, accessible and sustainable digital health services for young people, in order to provide lessons to inform how services in Thailand may be further strengthened. The first section presents key principles and lessons from best practice identified in the global literature. The second section showcases four international case studies which provide real-life examples of how best practice has been implemented.

2.1 Key Principles of Digital Health Services for Young People: Lessons from Best Practice

Seven principles were identified as common themes across the literature. Each of the seven principles are described below, along with clarification of how they may be implemented in practice, to provide more tangibility.

Principle 1: Meaningfully centre young people throughout the process, ensuring diversity of representation

Putting this principle into practice involves engaging young people throughout the scoping and design process, allowing them to take an active role in co-creation. This includes focusing design decisions on the needs, motivations and perspectives of young people, and young people playing an active role in making key decisions. Care should be taken to include diverse young people in the consultation process, with specific care taken to include those who may be vulnerable to marginalization. The approach to consultation and co-creation is non-hierarchical, focusing on collective knowledge-building and sharing. All young people involved in the process should feel empowered and equipped to voice their views, including views that are critical of the process. Colonial biases which may be inadvertently inherent in the donor mechanism should not be reflected in the design process.

Principle 2: Ensure inclusive and accessible design

To uphold this principle, care should be taken to avoid entrenching existing inequalities through the exclusion of those with potential constraints to digital access. These constraints may be structural (e.g. cost or connectivity), physical (e.g. due to disability), social (e.g. social norms that govern and shape the inclusion of different potentially vulnerable groups), or systemic (e.g. legal status, identification requirements). Specific care should be taken to intentionally include young people from a range of potentially vulnerable groups in the consultation and co-design process, grounding the process in a deep understanding of the diverse needs and barriers to inclusion and access. The power differential between designers and young people should be acknowledged and mitigated in the co-design process. Both the language and imagery used need to be tailored to be inclusive, as well as sensitive and responsive to local cultures. This should be reflected throughout the youth consultation process and in the digital service itself. A variety of content techniques should be used to accommodate different learning styles and accessibility needs (e.g. video, visual, written) and ensure that fundamental accessibility standards are met. For instance, images should have alt text captions to support those using screen readers and transcripts should be provided for audio content.

Principle 3: Meet an unmet need

To put this principle into practice, the digital health service should offer a clear value proposition that addresses a specific unmet need. To review what services are already available, the scoping process should begin with gaining a comprehensive understanding of the existing digital health landscape. New designs should only be developed where there is a clear gap. Wherever feasible, existing content, technologies and delivery channels should be leveraged and adapted, rather than develop an identical service from scratch.

Principle 4: Design for scale and sustainability, avoiding fragmentation

Putting this principle into practice involves designing a service based on a deep understanding of the stakeholder landscape and priorities. The digital health service should be designed to ensure a valuable proposition to the stakeholders who are necessary to achieving sustainability. Key stakeholders should be engaged from the outset, so that they feel motivated and able to support the process. Government stakeholders should also be centred within this process, ensuring alignment with national policy so that technologies invested in have a route to scale-up in line with national plans and priorities. To support sustainable management and scale-up, a clear plan and financial model needs to be in place from the outset for how the intervention will be managed, maintained and adapted beyond the initial funding available for build, set-up and launch. Moreover, technical requirements for scale should be factored into the design from the outset, such as a robust architecture and hosting capacity. Equally, requirements for interoperability with stakeholder systems should be considered in the design from the start.

Principle 5: Design with sensitivity to the specific risks faced by young people online

Putting this principle into practice means ensuring that the design process is sensitive to safeguarding young people against the digital risks to which they may be especially vulnerable, such as “predatory marketing and data extraction processes, infringements on consent and other rights violations” (Holly et al., 2022). Assessment of the digital literacy of young people through the user consultation process acknowledges the different dimensions of digital literacy, and does not assume that young people are comprehensively “tech savvy” because they seem to use digital devices and services fluently. This process intentionally explores the extent to which young people understand the different risks faced online, and the extent to which they are equipped to protect themselves. The design of the digital service should minimize risks to young people wherever possible, and mitigate risks through explicit signposting and educational content to strengthen digital literacy. Policies and protocols need to be in place to keep young people safe online, and guide them on the appropriate use of technology, including acceptable user agreements; safeguarding, including against sexual exploitation and abuse and cyberbullying; password safety; and data protection. Moreover, all support staff who engage with young people through the digital service should be trained on these policies.

Principle 6: Make user experiences interactive and engaging

Putting this principle into practice involves ensuring that user journeys centre interactivity rather than passive scrolling. Activities should be fun and engaging, avoiding a “homework-like” feel. The digital service may offer young people the opportunity to connect with peers to share experiences, building confidence through a sense of supportive community. From a content perspective, the design should incorporate a range of multimedia and images, and text content should be clear and concise. To ensure that content is relatable and relevant, the co-design process should be informed and led by the priorities shared by young people. Moreover, the content should be non-judgmental and avoid a patronizing tone, especially when discussing potentially sensitive issues. The content relevance to potentially marginalized groups such as LGBTQI+ should be “intentional and not superficial, and should avoid stereotypes” (Gilbey et al., 2020). Lastly, it is important that the visual design is youth-friendly with appropriate use of colour, images and graphics.

Principle 7: Test, learn and adapt

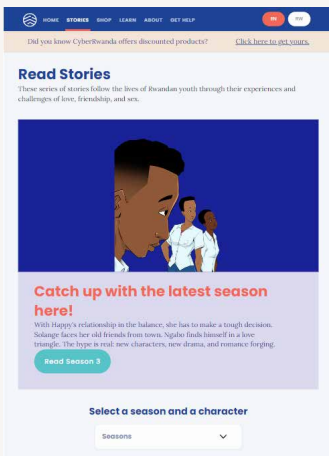
Putting this principle into practice means that assumptions inherent in the Theory of Change and design strategy are clearly acknowledged, with a defined approach for testing and validating these assumptions. Prototypes should be created and tested directly with young people. This testing process should avoid tokenism, ensuring that the genuine scope to adapt is built into the programme from the outset. Young people’s views should be meaningfully listened to, learned from and incorporated through conscious adaptation. Moreover, adaptation should not be viewed as a failure, but rather as an integral part of the process of continuous improvement.

These principles were explored in KIIs with stakeholders in order to understand the extent to which the design and delivery of key digital health services in Thailand are aligned with global best practice. The critical reflections and gap analysis in Chapter 5, as well as the recommendations on how digital health services in Thailand may be strengthened, have been guided by consideration of these principles and examples of best practice.

2.2 Lessons from Case Studies

The four case studies below aim to provide real-life examples of how the principles identified in 2.1 can be applied in practice to produce accessible, engaging and impactful digital health services for young people, including lessons that can be applied in the Thailand context.

Table 2: Case Studies of Global Best Practice

Case study 1: Cyber Rwanda	
	<p>CyberRwanda is a direct-to-consumer digital service targeting urban and peri-urban adolescents (aged 12-19 years) in Rwanda. It includes educational content on reproductive health content utilizing fun, engaging narrative storylines, accompanied by a comprehensive library of frequently asked questions (FAQs).</p> <p>As well as providing youth-friendly information, CyberRwanda facilitates access to youth-friendly services through a pharmacy locator. The intervention assures youth-friendliness through a corresponding supply-side intervention, engaging pharmacists with blended digital and in-person training on youth-friendly care. CyberRwanda also offers an e-commerce facility for young people to purchase health products.</p> <p>For those without phones, the service is available pre-loaded on tablets at 60 schools across six districts, as well as youth centres across the country.</p>
<p>The design phase began in 2016, and the current development and testing phase is funded through a six-year project (2018-2024), supported by USAID, Packard Foundation and The Agency Fund.</p>	
<p>Cyber Rwanda: Best Practice Principles in Action</p>	
<ul style="list-style-type: none"> • Meaningfully centre young people throughout the process, ensuring diversity of representation <ul style="list-style-type: none"> • Human-centred design processes were fundamental throughout the initial scoping and design phase. Every aspect of the design strategy, from the scope and purpose to the content topics, tone and colours, were co-designed with over 800 young people. A total of 200 parents, teachers, health care providers, and community leaders were also included in the process. • Ensure inclusive and accessible design <ul style="list-style-type: none"> • Following testing and feedback, it was found that some young people may experience barriers to access due to connectivity challenges. The project adapted accordingly and is developing an offline mode. • Meet an unmet need <ul style="list-style-type: none"> • Following human-centred design principles, a specific focus was given to problem recognition during the design phase. This aimed to uncover needs, challenges, perspectives, behaviours and experiences, to ensure that the design of CyberRwanda was centred on addressing the specific issues on both demand-side and supply-side through a causal model. • Design for scale and sustainability, avoiding fragmentation <ul style="list-style-type: none"> • Implementation is managed by YLabs in partnership with Society for Family Health, with guidance from the Ministry of Health, Rwanda Biomedical Centre, and Rwanda Education Board. • The CyberRwanda team has collaborated closely with key stakeholders to ensure that content and key messages are aligned with Rwanda's existing national health priorities. All content has been reviewed, validated, and approved through the appropriate technical working groups within the Rwandan government. • Quarterly reflection meetings are held with schools and district officials to ensure schools' ownership and support of the programme. 	

- **Make user experiences interactive and engaging**

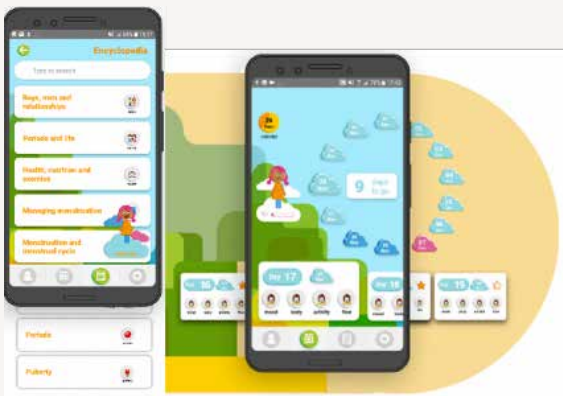
- The design choices were made in collaboration with young people. Engaging character-based storytelling is used to communicate complex and sensitive issues in an informal yet informative way.

- **Test, learn and adapt**

- The initial design phase involved multiple rounds of prototyping (analogue, digital, and live piloting), working with diverse groups of young people and key stakeholders to refine the design.
- The project is now implementing a Randomized Controlled Trial (RCT) Impact Study (2021-23), to assess CyberRwanda's impact and cost-effectiveness. The RCT is being run in 60 schools across six districts. The midline data collection on a cohort of 6,182 students demonstrated 95 per cent retention after 12 months.
- If the RCT demonstrates impact, access to the platform will be scaled nationally throughout 2024. The launch will be promoted through media, community events, and mass media marketing.
- A further example of an adaptation made following testing and feedback is the addition of crisis flows, a feature that addresses emergency scenarios in which young people require immediate support.

Sources: CyberRwanda, 2023; Hémono et al., 2022; Ippoliti et al., 2021; Nolan et al., 2020; YLabs Global, 2023.

Case study 2: Oky Period Tracker



The Oky Period Tracker app was developed by UNICEF's East Asia and Pacific Regional Office, in a collaborative effort by the gender, water, sanitation and hygiene (WASH), and Technology for Development (T4D) teams. With support from both the UNICEF Innovation Fund and Accelerate to Scale teams, it has now scaled across multiple countries.

The Oky Period Tracker is an Android app designed to help young women track their menstrual cycles and manage their reproductive health.

The app provides a simple and easy-to-use interface for tracking menstrual cycles, including features such as a period tracker, fertility tracker, and a symptom tracker. Users can also access educational content related to reproductive health, such as information on contraception, sexually transmitted infections (STIs) and relationships, presented in fun, creative and positive ways.

The content is evidence-based, created and vetted by experts. Yet the style and tone are all in girl-friendly language, and the priority topics are chosen by girls.

Oky also has referral information directing girls to online and offline advice and services, in case they need support.

Oky Period Tracker: Best Practice Principles in Action

- **Meaningfully centre young people throughout the process, ensuring diversity of representation**

- Girls were engaged as decision makers throughout the design and development, to ensure that the design focused on the daily realities of target users. Through ideation and design, over 400 girls were engaged in two different contexts: Indonesia and Mongolia. From scoping and refining features, to deciding on the name Oky, girls' needs and wants were centred throughout.

- **Ensure inclusive and accessible design**

- Acknowledging the gender divide in digital access, exacerbated by limited connectivity in rural areas, the Oky app was designed with full offline capabilities (following initial download). Even the machine learning required for the period prediction engine works offline.
- The girl-led design process uncovered the fact that many do not have email addresses, necessary to use the Android Play Store, so the app is also available as a direct web download.
- Acknowledging the gender divide in digital literacy (or at least, in personal confidence levels about digital literacy), the girl-led design uses gamification, avatar support and interactive visual tutorials to minimize barriers to access.
- Text-to-speech features are available in multiple local languages.

- **Meet an unmet need**

- The girl-led design for Oky drives the content topics and tone, with a focus on the real concerns and perspectives of girls. Content was initially based on findings from Indonesia and Mongolia and then updated according to each new country adaptation. This differs from the majority of available period trackers, often tailored to Western adult women and focused on fertility.
- The app includes information and educational content that is specific to each local culture and context. For instance, in the Indonesian context, it includes information on traditional herbal remedies for menstrual cramps.

- **Design for scale and sustainability, avoiding fragmentation**

- While the original design and prototyping was conducted in Mongolia and Indonesia, Oky was always designed with multi-country scale in mind. It is now being scaled through a franchise model by implementing partners in Tanzania, Ukraine, Kyrgyzstan, Kenya, Mexico, India, Burundi, and the Philippines.
- Partners have access to the brand and assets, and localize the content, language and imagery as appropriate for local culture, needs and preferences. They host and maintain their own instance of the Oky app, while benefiting from central global code upgrades and security patches, to ensure quality.
- “Oky shows the value of a well-connected and supported innovation pipeline that builds the foundations for scaling” (Tyers, 2020).

- **Design with sensitivity to the specific risks faced by young people online**

- Recognising through the girl-led design process that many girls do not own a phone, but borrow devices from friends or share a household device, Oky was designed to facilitate multiple user logins. This means that multiple girls can use the app on the same device, with their own personal account.
- User login is required every time the app is opened, to protect the privacy of personal period tracking data.
- To deepen user protection, girls are not asked to share any personally identifiable data, but simply to make up a username and password, as well as providing an answer to a secret question. If they use the app offline, account details and data remain on the device only. Even online usage minimizes the extent to which data is stored off-device: this is restricted only to historical cycle data stored in a secure database, which allows a girl to access her period tracking data from a different device.

- **Make user experiences interactive and engaging**

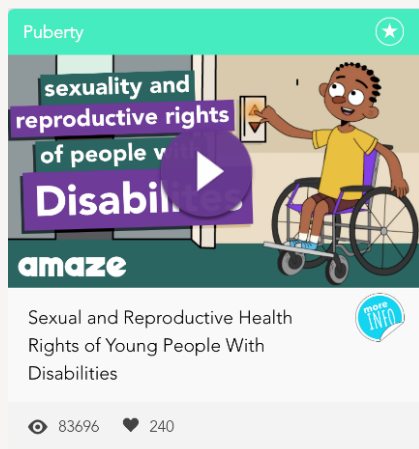
- The girl-led approach has produced a fun, gamified approach to driving engagement, enabling girls to personalize their experience. The educational content is pitched with a supportive and empowering tone to encourage learning.

- **Test, learn and adapt**

- Throughout the design phase, girls were engaged to test and provide feedback to refine the design. Various formats of low-fidelity and high-fidelity prototypes were used, and testing took place both in-person and remotely via WhatsApp groups.
- In order to continue Oky’s evolution, the code and content are open source, publicly available for anyone to copy, distribute or modify at no cost. The code is available on GitHub under an APGL 3.0 license and the content is available under a Creative Commons license.
- The open source nature of the code and content allows for continuous co-creation and iteration. Girls are actively encouraged and supported to contribute to the coding community.

Sources: Binder & Tyers, 2021; Oky, 2023; Oky Period Tracker App, 2022; Tyers, 2020; UNICEF Philippines, 2021.

Case study 3: AMAZE



The service was launched in 2018 in the United States by Advocates for Youth, a non-profit organization focused on reproductive and sexual health education, and it has since been scaled to multiple.

AMAZE is a multi-platform digital health service designed to help young people learn about sexual health in an engaging and non-judgmental way. Across a website, YouTube channel, and a range of social media accounts, AMAZE uses video-based content to engage young people on a range of sexual health topics, including puberty, healthy relationships, consent, contraception, STIs, and pregnancy. As well as videos, the website features interactive tools, such as quizzes designed to engage young people and support learning.

AMAZE also targets adults, including parents, guardians, educators and health care providers, providing toolkits, lesson plans and promotional material, aiming to support them to communicate effectively with young people about sex, relationships and sexual health.

According to Amaze's 2020 Annual Report, Amaze videos had been viewed over 50 million times, and the initiative had engaged over 20,000 educators and healthcare providers with guidance on how to use the videos with their students and patients. They also convened a global virtual event to build capacity amongst educators to build Amaze content into their curricula.

AMAZE: Best Practice Principles in Action

- **Ensure inclusive and accessible design**

- AMAZE's large reach has been achieved through its multi-channel presence – especially leveraging social media such as TikTok and Snapchat to reach young people. They have also used Instagram and Facebook to engage parents.

- **Meet an unmet need**

- Planned Parenthood reported that “Bringing a message that growing up is normal and healthy, the AMAZE videos fill a critical gap in what's been available” (AMAZE, 2023).
- The video topics are selected with input from young people, so they are tailored to their interests and unmet concerns. Video topics requested by young people for 2023 include: Substance use and sex; how to access SRH services as a minor; what you can do if you know someone affected by violence; reproductive anatomy; Gender-Based Violence; telemedicine; medical abortion; anxiety and depression; intimacy and boundary setting; self-confidence and self-respect; and critical thinking.
- The extremely comprehensive quality review process ensures that the content is accurate and engaging. AMAZE's International Content Review Committee includes individuals who have experience in public health, educational theory, adolescent development, age-appropriate sex education and health education, as well as a panel of other subject matter experts and partners.

- **Design for scale and sustainability, avoiding fragmentation**

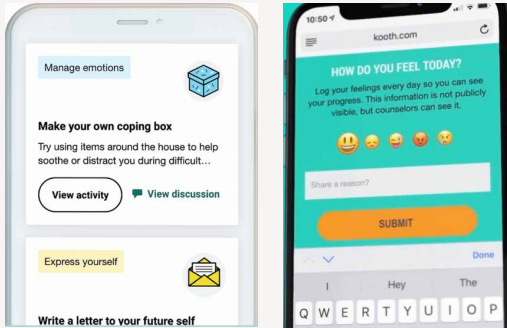
- Since its launch in 2018, the platform has expanded its reach beyond the United States to countries such as Kenya, India, and Mexico, through partnerships with NGOs, UN agencies including UNESCO and UNFPA, other international organizations such as IPPF, and Ministries of Education, Health and Youth around the world. AMAZE videos have been viewed by people living in over 196 different countries.
- AMAZE content is free for partners to use, under the Creative Commons Attribution-ShareAlike International license. When scaling to new contexts, the diverse needs and contexts of the target audience are carefully considered, so a flexible and adaptable approach is taken to ensure content is locally tailored for different regions and cultural contexts.
- AMAZE videos have been dubbed, adapted or subtitled into a wide range of languages from around the world, including Spanish, French, Korean, Japanese, Afrikaans, Xhosa, Arabic, Vietnamese, Swahili, Hindi, Urdu, and Russian.

- **Make user experiences interactive and engaging**

- The videos and interactive tools on the AMAZE platform are designed to be fun and engaging, making it easier for young people to learn about sexual health.

Sources: Advocates for Youth, 2020; AMAZE, 2023; hundrED, 2023.

Case study 4: Kooth



Kooth was introduced to the US population in late 2022. Kooth launched in Pennsylvania with a landmark statewide pilot contract, opening access to over 150,000 young people. The platform continues to scale.

Kooth, established in 2001, is the longest running digital mental health provider in the UK. Today, Kooth is the largest mental health platform for young people. Its success has allowed international expansion, as well as more tailored services for adults.

Kooth's range of free tools, resources and activities offers the user a choice of therapies so that they can determine what works best for them. It offers immediate access to trained expert support 24/7, as well as resources, chat and tools such as a journal and goal setting to help users track and support their own mental well-being.

The platform is unique in that it works with children and young people who may need advice and signposting, help, more ongoing help or immediate risk support. The clinical model is informed by the National Institute for Health and Care Excellence (NICE) and the service has pathways for ongoing service provision mapped across the UK.

Kooth.com is commissioned both in the UK and the US. In the UK there are over 1.3 million logins per year: the NHS, local authorities, charities and businesses have access to anonymous and personalized mental health support for children and young people.

Kooth: Best Practice Principles in Action

- **Meaningfully centre young people throughout the process, ensuring diversity of representation**
 - The Kooth platform has been designed and evolved over 15 years with children and young people. Their views have been centred in the design: how they want to access services, what they want to know and how they want to engage.
- **Ensure inclusive and accessible design**
 - All aspects of the platform meet the Web Content Accessibility Guidelines (WCAG) 2.1, level AA.
 - Kooth has multiple components that can be accessed either as standalone elements or as a multi-faceted user experience, including messaging, live counselling, peer forums, activity centres and magazines.
- **Meet an unmet need**
 - Kooth offers a live counselling that can either be booked through an appointment, or as a drop-in-session.
 - The counsellors are qualified practitioners with clear credentials, all with expertise in working with children and young people.
 - There are no waiting lists or time-consuming referrals to access help: the service is immediate and available 24/7.
- **Design for scale and sustainability, avoiding fragmentation**
 - In 2020, Kooth was floated on the London Stock Exchange to enable investment in long term growth of the platform.
- **Design with sensitivity to the specific risks faced by young people online**
 - Young people can feel safe and confident using Kooth completely anonymously. It is an online application, which removes the need for Apple or Androids accounts or other data requirements. It also removes the potentially harmful visibility of a mental health app on their device.
 - Kooth has a robust risk profiling system across all parts of the platform that allows them to prioritize potential safeguarding issues. Based on NICE guidelines, they have a protocol for when to signpost and refer on, and how to psychologically hold people and keep them safe during crisis.
- **Make user experiences interactive and engaging**
 - As well as direct access to counsellors, Kooth offers tools such as a mental well-being journal, goal setting, and a wide range of interactive activities to help young people manage and support their own mental health.
- **Test, learn and adapt**
 - Every part of the Kooth platform offers space for feedback on functionality which is then used to inform continual improvement and product evolution. A total of 94 per cent of users would recommend Kooth to a friend.

Source: Kooth, 2023.



CHAPTER 3

CURRENT LANDSCAPE OF DIGITAL HEALTH SERVICES FOR YOUNG PEOPLE IN THAILAND

This chapter provides a comprehensive view of the current landscape of digital health services for young people in Thailand. The first section explores the policy context, examining the government policy strategies and published guidelines that influence the nature, design and implementation of digital health services. The second section discusses the findings from the mapping of existing digital health services for young people, exploring the nature, purpose and status of the services identified. This section also includes insights from KIIs with stakeholders involved in the design or implementation of a sample of these services, to gather deeper insight into how these services have been developed and managed. The final section in this chapter looks at the various models through which the services are funded. It explores challenges faced in relation to financial sustainability across the different models, and provides an example of a service that is sustainable, looking at the factors that are supporting this position.

3.1 Policy Context

Digital health as a priority for health system strengthening

Digital health has been recognized by the MoPH as a key priority, as indicated by the publication of a comprehensive **Digital Health Strategy (2021-2025)**. This strategy acknowledges that the adoption of digital technologies has a key role to play in health system strengthening and achieving the objectives of national health policies, addressing key public health challenges by increasing public health capacity. The strategy takes a holistic view of the scope of digital health technologies, spanning all four overarching categories in the 2018 *WHO Classification of Digital Health Interventions*: clients; healthcare providers; health system or resource managers; and data services (WHO, 2018). This means that while the Digital Health Strategy of the MoPH is relevant for this study's focus on interventions for clients, it also has wider relevance across the sector.

The strategy lays out various initiatives to enable public and private national health agencies to accelerate the adoption of digital technologies. While the strategy is intended to support the health needs of the whole population of Thailand, **there is no specific focus on the needs of young people**. Nevertheless, several of these initiatives have the potential to provide tangible benefits for young people, including the following:

- **Digital health infrastructure development:** This includes the development of standards and guidelines for health information exchange, the establishment of a national health information exchange platform, and the implementation of electronic health records (EHRs) in healthcare facilities. EHRs could make it easier for young people to access their health records and ensure that they receive appropriate and timely care.
- **Telemedicine and e-health services:** The strategy emphasizes the use of telemedicine to provide remote healthcare services. This includes the use of mobile health (mHealth) applications, remote patient monitoring devices, and virtual consultations. It could be beneficial for young people in rural or remote areas who may face barriers to accessing traditional healthcare services. mHealth applications could also encourage young people to take an active role in managing their health and well-being using tools with which they are familiar, such as fitness and nutrition tracking apps, and support the management of chronic conditions.
- **Capacity building for digital health:** The strategy recognizes the importance of training and education for healthcare providers, managers, and other stakeholders to ensure they have the necessary skills to implement and use digital health technologies effectively. It also includes digital health literacy for the general public. This could help young people to better understand how to use digital health tools to manage their health and wellness, as well as help ensure that providers are sufficiently equipped and confident to engage young people remotely.
- **Healthcare data management:** This element aims to improve data management systems to ensure the accuracy, confidentiality, and security of healthcare data. This includes the development of data-sharing agreements, the establishment of data protection and privacy regulations, and the implementation of cybersecurity measures, as well as the development of a National Digital Health Platform (NDHP). This could help to ensure that young people's health data is properly collected and used to inform healthcare policies and practices.
- **Collaboration and partnerships:** The strategy recognizes the importance of fostering collaboration with other government agencies, the private sector, and international organizations to promote the development and adoption of digital health solutions. This includes the establishment of public-private partnerships to accelerate the development of digital health technologies and the promotion of international cooperation to share experiences and examples of best practice in digital health.

Thailand's Digital Health Strategy is ambitious and wide-reaching. Yet at present, there is **no costed plan** to resource the delivery of the initiatives laid out in the strategy.

Telemedicine as a key vehicle for specialized service provision

The recognition of telemedicine as a key initiative within the Digital Health Strategy builds upon the foundation already established by the Medical Council of Thailand, which issued its *Notification of Guidelines in Respect of Telemedicine and Online Clinics No. 54/2563* in July 2020.

These guidelines aim to promote the appropriate use of telemedicine and online clinics by healthcare providers while ensuring that professional standards are maintained, and patient safety and quality of care are prioritized.

The guidelines cover the following areas:

- Definition and scope of telemedicine and online clinic services
- Professional standards
- Technology requirements
- Patient safety and quality of care
- Patient confidentiality
- Legal registration: The guidelines recommended that telemedicine and online clinic services need to be operated only through a legal medical facility.

As with the wider Digital Health Strategy, **no specific focus is given to the specific needs of young people** using telemedicine services, such as the specific risks faced by young people online.

Promotion of digital health to reduce adolescent pregnancy rate

As noted above, the needs of young people have not been specifically identified within the general national policies relating to digital health. However, **the value of digital health as a means for engaging young people has been identified within the National Strategic Action Plan for the Prevention and Solution of Adolescent Pregnancy Problems (2017–2026)**. The plan, published by the Bureau of Reproductive Health, aims to promote, support and coordinate the participation of all sectors in prevention and solution of adolescent pregnancy problems.

One of the key components of the plan to reduce the rate of adolescent pregnancy is **the promotion of digital health services to improve access to reproductive health information and services for young people**. This includes using the Teen Club platform to increase access to sexual and reproductive health information and services, promoting gender equality, and addressing social and cultural factors that contribute to adolescent pregnancy. The plan also includes utilization of a national e-Learning platform, which offers a range of online resources and courses for students in primary and secondary schools. The platform provides access to digital textbooks, interactive lessons, and educational games, and is designed to support remote learning and flexible learning.

While young people may not be identified as a specific segment within the general digital health policies, digital health has been recognized as a priority within a strategy targeting young people.

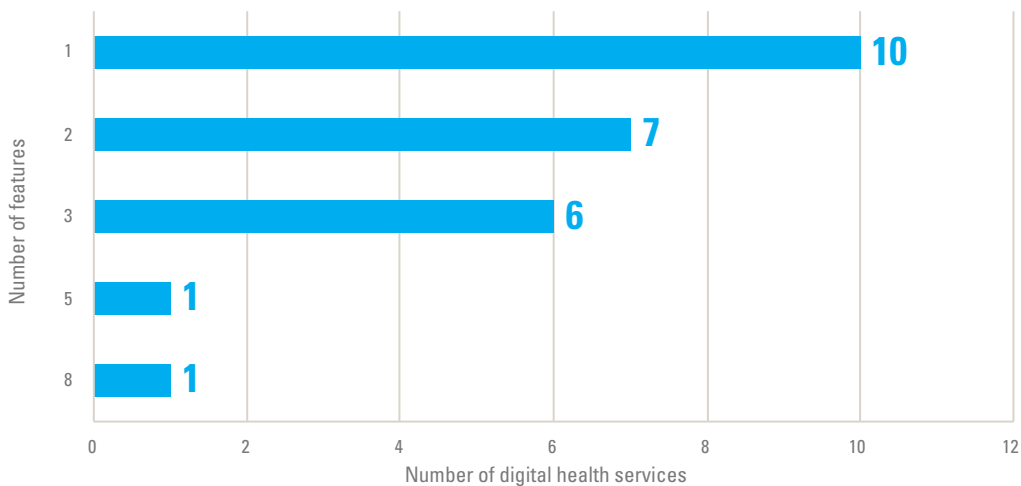
3.2 Existing Digital Health Services Used by Young People

This section covers an analysis of 25 digital health services currently used by young people in Thailand identified through the mapping process (see Appendix 5 for the full map), and provides further insight from the KIIs conducted with government officials and stakeholders from some of the leading digital health services for young people in Thailand: Teen Club, Lovecare Station, Stand by You, RSA Thai, Guan Teen, Ooca and Wall of Sharing, Pribta and Tangerine, and Buddy Square.⁵ These findings are structured under the key themes that emerged from inductive analysis of the KIIs.

Nature of services

As shown in Figure 2, the majority of digital health services offer a **clearly defined service focus** with 1-2 key features (17/25). Teen Club and Lovecare Station are outliers in that they offer users a wider range of features (8 and 5 respectively).

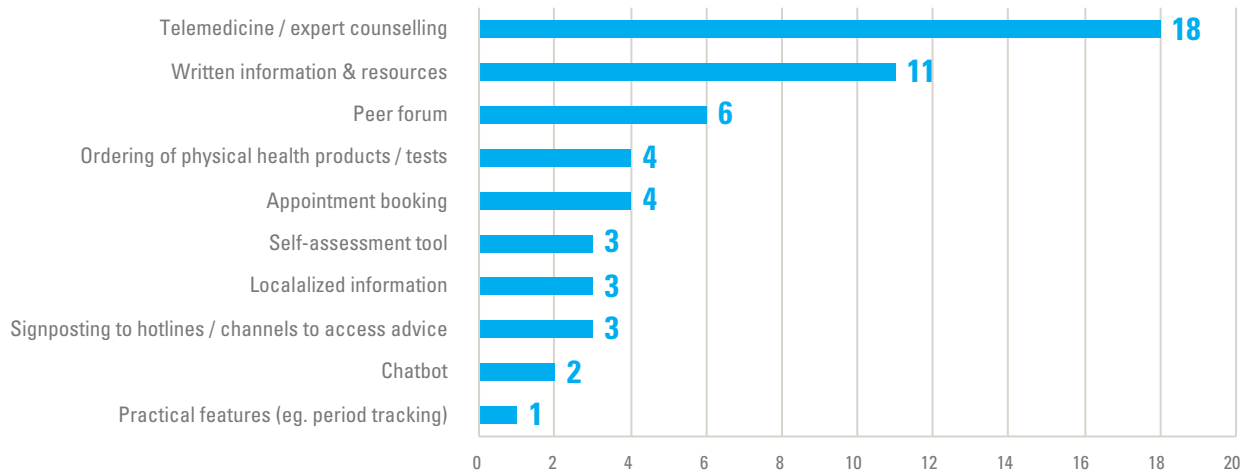
Figure 2: Number of Features Offered per Digital Health Service (n=25)



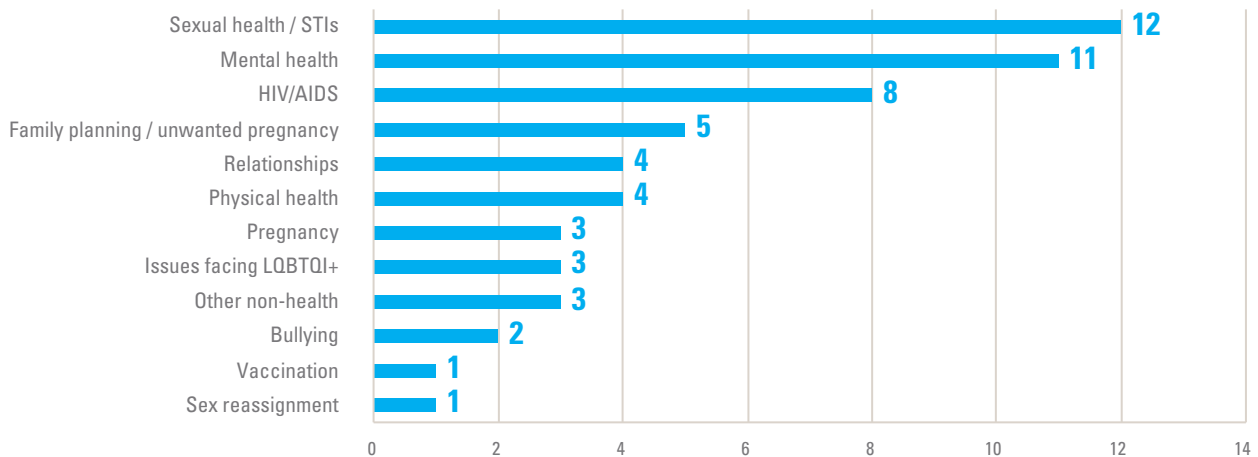
Amongst the range of features on offer (see Figure 3), the most common is expert counselling (with a few services offering telemedicine), whereby **young people can connect directly to a trained expert professional for one-to-one support** (18/25 digital health services offer this feature).⁶ The second most common feature is the provision of written information and resources for users to engage with individually (11/25).

⁵ Appendix 2.5 provides an overview of the eight digital health services represented by these stakeholders.

⁶ It is important to acknowledge that, from a regulatory perspective, telemedicine and remote counselling services are treated and legislated for differently. However, since this analysis is conducted from the perspective of a young person using a digital feature they have been grouped together, as both enable the young person to connect directly to an expert.

Figure 3: Frequency of Features Within Digital Health Services

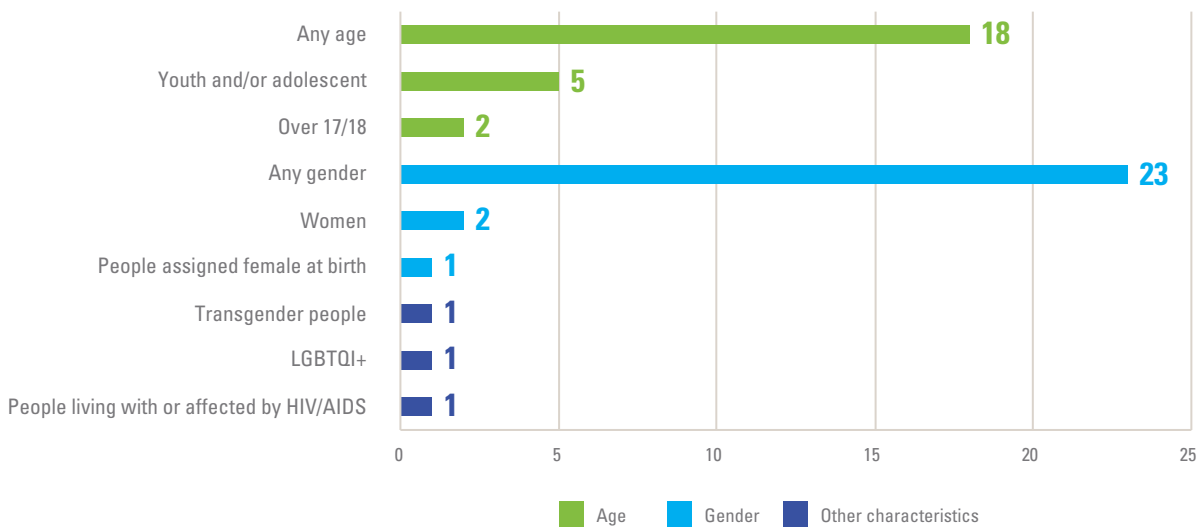
As shown in Figure 4, when considering the nature of the content provided, the most common thematic focus is sexual health and sexually transmitted infections (STIs) (12/25), followed by mental health (11/25) and HIV/AIDS (8/25).

Figure 4: Frequency of Thematic Focus

Target demographics

In general, many of the digital health services used by young people are **widely inclusive in their target demographics**. As shown in Figure 5 below, the majority of the 25 digital health services are **not targeted specifically at one age group or one gender**: 18/25 are suitable for any age group, 23/25 are inclusive of all genders, and only 5/25 services are targeted specifically at adolescents or youth. A minority of the services available are targeted at people with specific other characteristics, such as transgender people or people living with HIV/AIDS (3/25).

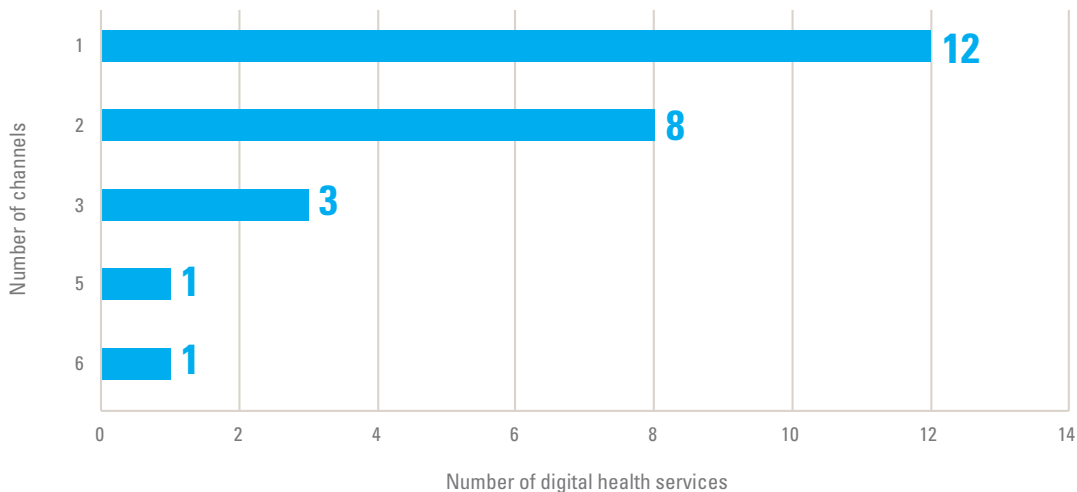
Figure 5: Frequency of Demographic Being Targeted by Digital Health Service



Delivery channels

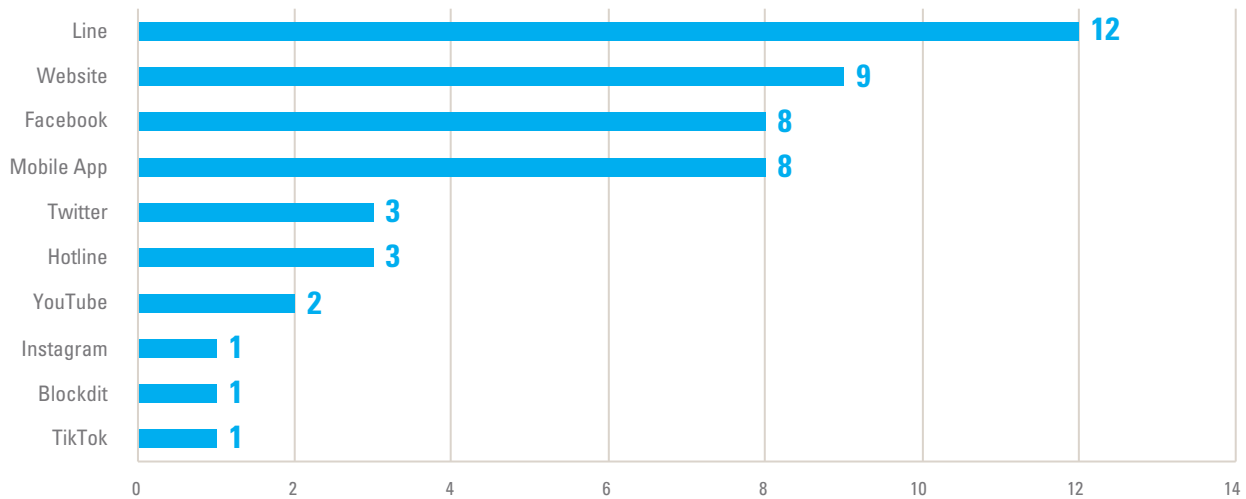
Digital health services are commonly implemented using a **focused approach to channel selection**. Figure 6 shows that the majority of the 25 digital health services engage users through one (12/25) or two (8/25) channels.

Figure 6: Number of Channels Utilised per Digital Health Service



As shown in Figure 7, the most common channel utilised is Line (12/25), followed by website (9/25), Facebook (8/25) and mobile app (8/25).

Figure 7: Frequency of Channel Usage (n=25)



Design process

As discussed in Chapter 2, it is important to meaningfully engage young people throughout the scoping and design process, giving them an active role in co-creation and to ensure that their voices are heard. Stakeholder feedback suggested that this is currently taking place in Thailand. For services which specifically target young people, **involving a range of young people is generally recognised as a fundamental part of the design process**. Young people's suggestions have been used to inform creative decisions such as **service model design, language used and visual design**:



"During the design of the website and the service model, we conducted many focus groups with young people... For example, the name "Lovecare Station" was designed by youth. In addition, the colours, pictures, and layout of the website came from youth design."

Lovecare Station

"[YPAB] gave reflections on our prototype service. We considered all their comments, and we adjusted our prototype. For example, we reduced the number of questions in the risk assessments for STIs to only four questions because young people don't want to answer too many questions."

Buddy Square



This genuine commitment to engaging young people has been maintained after the initial development period. The study found evidence suggesting that the best practice principle of 'test, learn and adapt' is also being practised, as **feedback from young people has been used to inform continuous improvement as services evolve:**



"We adjust our service with the technology all the time. For example, chat room services have been added to use with Facebook Messenger and Line application, which are channels which youth use more and more."

Lovecare Station



However, providers of digital services have also faced difficult decisions and have had to make **compromises to balance the requirements of young people with the practicalities and priorities of other stakeholders.** For instance, Buddy Square had to compromise on the design of the service model for directing young people from their digital service to accessing in-person services at hospitals and clinics. While young people wanted to be able to make an appointment online to limit their waiting time at the clinic, this had to be altered due to **practical concerns from clinic providers:**



"Following feedback from the YPAB... we proposed an appointment by location feature through which young people could choose the hospital/clinic that they wanted to attend to get the test and make an appointment online. But our hospital/clinic partners said they don't have the time or enough people to take care of this process. Finally, we could only provide a list of hospitals/clinics and young people could go without an appointment."

Buddy Square



Another example of compromise was mentioned by representatives from Guan Teen, which is implemented through a school-based delivery model. Although young people expressed a preference for using direct, informal language to make them feel comfortable with the health content provided, the nature of the delivery model meant that more **polite terminology was considered more appropriate:**



"[Young people] helped us to choose the language used on the website. We changed some words according to their comments, for example "sex by anus" was changed to "aud tood" which is impolite but is a real phrase that [young people] are using... Our partners asked us to compromise by using more polite words because this website is public and should appear professional."

Guan Teen



Services which engage young people, but which are not youth specific, have also recognised the need for meaningful engagement with their target demographic in the design process. However, they **may not have conducted intentional engagement with young people within that demographic** to ensure their specific needs are met.

For instance, Tangerine’s target demographic is transgender people, so their user engagement focuses on including a diverse range of transgender people. Despite this, young transgender people may not have been considered as a particular segment with specific needs within Tangerine’s core demographic. Similarly, while Wall of Sharing’s target demographic is underprivileged young people, its service design leverages the existing Ooca service, which focuses on mental health support for all age groups. Therefore, the specific user needs of young people may not have been considered thoroughly as a sub-set of the overall target demographic.

Privacy and confidentiality

Privacy and confidentiality are fundamental principles of many of the digital health services used by young people. As discussed in Chapter 2, a key principle of best practice is that services should be sensitive to safeguarding young people against the specific risks they may face online. Anonymity online is one key approach, utilised by services such as Teen Club and Buddy Square, where users may **access information and counselling without being required to share personal data:**



“We designed Buddy Square to be an anonymous service (providing only a phone number) and free of charge because we want to be inclusive and make it easy to access.”

Buddy Square



Services through which young people can order physical delivery of items such as testing kits provide a **thoughtful approach to packaging**, ensuring that nothing is marked in such a way as to communicate the contents:



“Our service is confidential, and the users don’t need to give names, only give us nicknames. They have to give us an address but we will not indicate anything related to Stand by You or Siriraj Hospital on the packaging.”

Stand by You



Privacy is also prioritized through practical implementation models that rely on in-person engagement, such as Guan Teen, which encourages teachers to introduce young people to the service and then **leave them alone to engage with the content independently:**



“Teachers will explain this service to children and coordinate with the library or the computer room to access the computer. Then the students must be left alone to spend their time using Guan Teen in privacy.”

Guan Teen



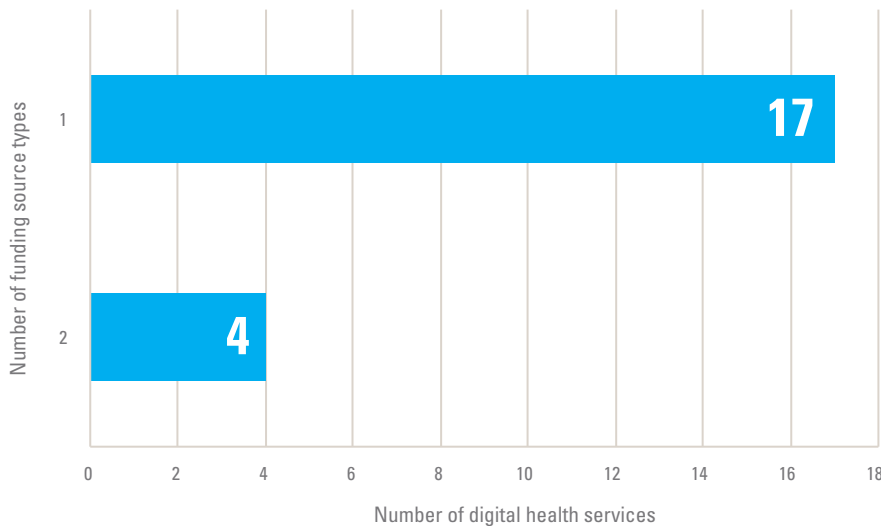
3.3 Financial Sustainability

As noted in the lessons from best practice in Chapter 2, the importance of designing for scale and sustainability from the outset is a fundamental best practice for effective digital health services. Ideally, a clear plan and financial model should be in place from the outset for how the intervention will be managed, maintained and adapted beyond the initial funding available for build, set-up and launch.

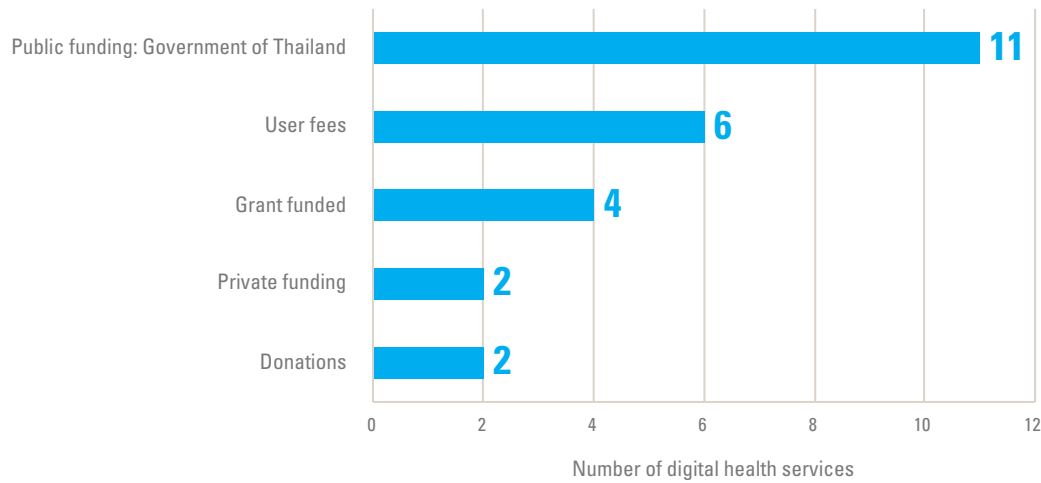
Yet through the eight KIIs conducted with digital health service stakeholders, as well two further KIIs with officials from the NHSO and Office of the Permanent Secretary, MoPH, this study found that **financial sustainability is a key challenge** for many of the digital health services used by young people in Thailand.

As shown in Figure 8, the type of funding source was identifiable for 21 of the 25 services mapped, with the majority of these having just one funding source type (17/21).

Figure 8: Number of Funding Source Types per Digital Health Service



Amongst these, the **most common funding source type is public funding from one or more departments of the Government of Thailand** (11/21), as shown in Figure 9. The digital health services that receive public funding usually receive it from more than one government department. For instance, Stand by You receives funding from the Division of AIDS and STIs, Department of Disease Control, MoPH, and the MOPH–TUC Coordinating Unit.

Figure 9: Funding Source Types Utilised by Digital Health Services

Each funding model poses its own challenges for digital health service providers, as explored below.

NHSO funding

The primary mechanism for sustainable, scalable public funding is registration with the National Health Security Office (NHSO). Teen Club is exploring registration with the NHSO for this reason. Yet in practice, there are a number of challenges for digital health services being financially sustained through NHSO funding.

The first challenge for digital health services is the NHSO registration process, as there is currently no accepted guidelines for digital health services against which an application will be assessed:



“We have national guidelines which we follow regarding requirements for medical products or existing medical services. But currently, we don’t have solid requirements for digital services. It would be great if the MoPH or professional associations could provide guidelines for digital services. Until this gap is addressed, we have to consider approving services on a case-by-case basis, which isn’t easy.”

NHSO



The lack of a standard assessment mechanism for digital health services poses a challenge both to digital health service providers, who are unable to design services according to accepted standards, and to NHSO employees, who face the onerous and time-consuming task of assessing each application individually. This lack of clarity may leave some digital health services currently unable to access NHSO funding. For instance, a member of the Steering Committee raised the example of a digital health service that offers a self-assessment tool and signposting to other services for follow-up, which has been determined as ineligible.

Furthermore, **since the NHSO is a national agency supporting all age groups, it does not have any specific standards relating to the discrete needs of young people.** Any standards that are to be developed for digital health services should include intentional consideration of the specific needs of young people.

The second challenge for digital health service providers is that NHSO funding support is linked to the number of verifiable eligible individual service users. For a service provider to receive NHSO funding, there must be a mechanism for verifying each individual service user. Since digital service providers do not meet service users in person, the only way to do this is through digital identification. This is a concern for both the NHSO and for digital health service providers.

From the perspective of the NHSO, they are concerned about the accuracy of digital identification, and are currently considering how to develop appropriate guidelines for digital health services. At the same time, digital health service providers trying to access NHSO funding face the **challenge of balancing the requirement for individual identification with a concern for privacy and anonymity** which, for many young people, is one of the key draws of using a digital service. Moreover, the fact that funding is linked to the number of service users, rather than the number of services provided, deepens the challenge for service providers. For services such as remote counselling, the desired health impact may typically require multiple sessions per individual, and the per capita allowance may be insufficient to cover costs.

Public investment

The challenge of financial sustainability is also felt by digital health services established by the public sector. One example is the Mor Pom application, the MoPH's flagship digital health service which provides all Thai citizens with a platform for managing their vaccinations. Despite its national mandate and the crucial role it played during the COVID-19 pandemic, public funding remains siloed and inaccessible:



“We can't integrate with other health funds, such as the government officer's fund, social security fund, and immigrant fund, because those belong to different ministries... This is a pain point for Mor Prom.”

MoPH



To support the long-term sustainability of Mor Prom, the MoPH is now exploring options for investment from the private sector.

Grant funding

Many services have been designed and developed through grant-based funding sources, which **limit long-term financial investment and planning** and place a continuous burden on service providers for grant renewal:



“We have received financial support from many sources including the Global Fund, the United Nations Population Fund (UNFPA), UNICEF, and the Thai Health Promotion Foundation. But financial support is mostly provided in the form of one-year grants. It means we have to find financial support every year.”

Lovecare Station



Services such as Lovecare Station and Teen Club have recognized the need to move away from relying on short-term grants to secure long-term sustainability.

User fees

The challenge of financial sustainability is also felt by services that have an income-generating business model through user fees. For instance, Ooca was founded from the outset with an income-generating business model in mind, as the founder did not want to rely on volunteerism from the psychiatrists who provide its counselling services. Wall of Sharing was launched as a sister service, offering free counselling to young people, subsidized through fees and donations from Oocas’s users. Yet this model has been challenging to implement in practice due to **high operating costs**, and the service provider is now seeking private investment:



“Ooca is a business platform with a service charge, but Wall of Sharing is a mental wellness social initiative for underprivileged users... I think it hasn’t been as successful as it should be.... We have very high operating costs for both Ooca and Wall of Sharing services. We are now in the phase of fundraising from various investors.”

Ooca and Wall of Sharing



Meanwhile, Pribta and Tangerine moved away from being reliant on short-term grants and business loans, and are now sustaining themselves via a combination of user fees and NHSO support (see Box 1 for more detail). This model may offer a potential way forward for digital health services wishing to achieve financial sustainability:



“We try to do business as a social enterprise because if it’s run as an NGO it’s all up to donors who run the risk of budget termination which is not sustainable. We try to profit from the business to feed our research and marketing too.”

Pribta and Tangerine



Box 1:

Linking Digital Services with In-Person Services to Achieve Financial Sustainability

While many digital health service providers face challenges with financial sustainability, **Pribta and Tangerine are examples of services that are now successfully sustaining their financial position through income generation.** There are several key points to note from their success. Firstly, although these services were initially set up with support from research grants and business loans, they were not reliant upon these sources for long-term financial sustainability. Sustainable income is now generated through a combination of user fees and NHSO support. Secondly, these revenue streams are generated by physical sites, rather than through the digital service elements. While the digital service elements engage their target demographic through provision of information, they also direct users to access in-person services. The in-person element also helps to address the challenge of verifying the identity of individual users (a requirement to access NHSO funding), thus avoiding the need for digital identification.



CHAPTER 4

YOUNG PEOPLE'S PERSPECTIVES, PRIORITIES AND LIVED EXPERIENCE

This chapter synthesizes all insights collected from the primary research with young people.

The first section captures a holistic perspective of what matters for young people with regards to digital health services. It explores how they are currently typically using digital health services and the factors that drive these behaviours. It discusses young people's perspectives on the value of digital health services when considered against in-person services. Finally, it examines the factors prioritize the most when choosing which digital health service to use and includes their depictions of the "ideal" digital health service they would like to create.

The next section provides a deep dive into the lived experience of diverse groups of young people of using Teen Club and Lovecare Station. The insight includes positive points of feedback from their lived experience using these services, as well as any issues faced along the way, and practical suggestions for improvement from the young people themselves.

Across both sections, the data is triangulated from across all 43 participating young people who participated in the Line chats, FGDs and KIIs, with segmentation analysis where it provides relevant nuance. It is important to note that these insights are based on free-flowing qualitative discussion, consisting of perspectives and priorities that participants expressed naturally and independently.

4.1 Typical Usage, Perspectives and Priorities

This section explores the typical habits of young people using digital health services and the factors that drive these habits, their perspectives on the value of digital health services, and the characteristics they prioritize when choosing a digital health service. It also includes descriptions of their “ideal” digital health service.

Typical usage habits

When young people have a need for health information or services, they **do not typically have a digital health service to which they regularly turn**. Instead, they use general information resources to target what they need for their specific current circumstances:



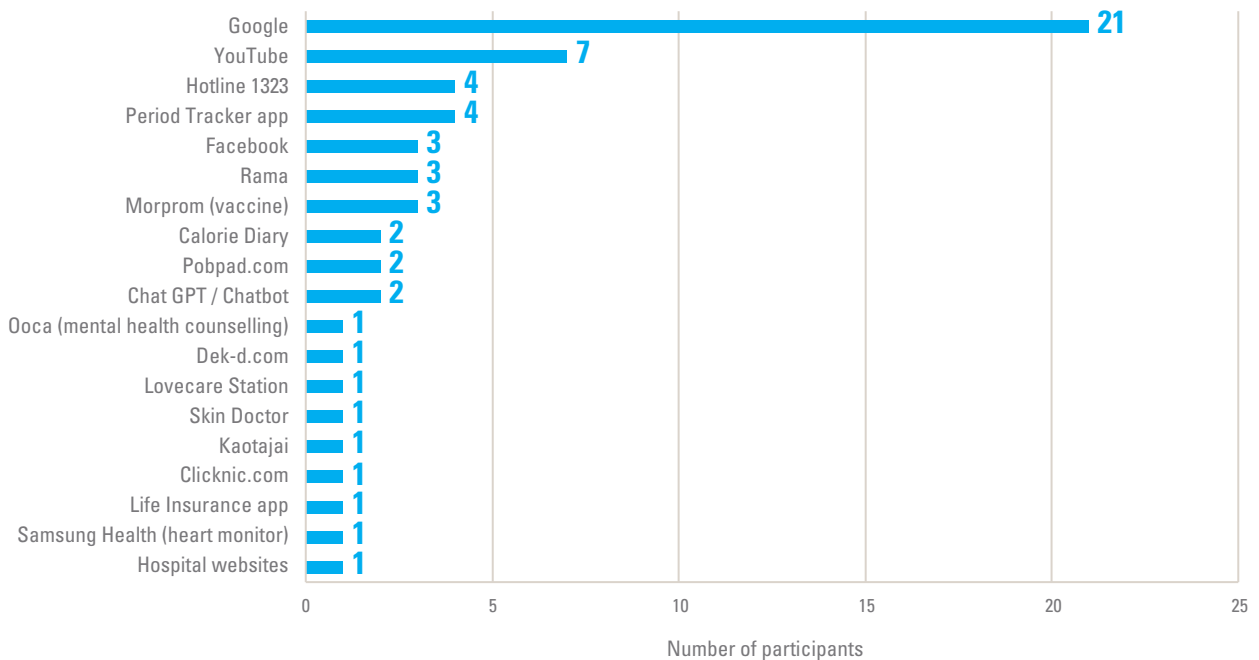
“I don’t have any digital services that I use often. If I want to get information about health, I will start by searching on Google. Then, I will check those websites and learn from them.”

Female, 24 – LGBTQI+ group



When asked about the digital health services they typically use, across all participating young people, **Google was by far the most common** response (21/33) followed by YouTube (7/33). Others also described how they use general information services that are not health-specific, such as Facebook and Dek-d, as their primary channel for finding health information.

Figure 10: Current Digital Health Usage of Young People



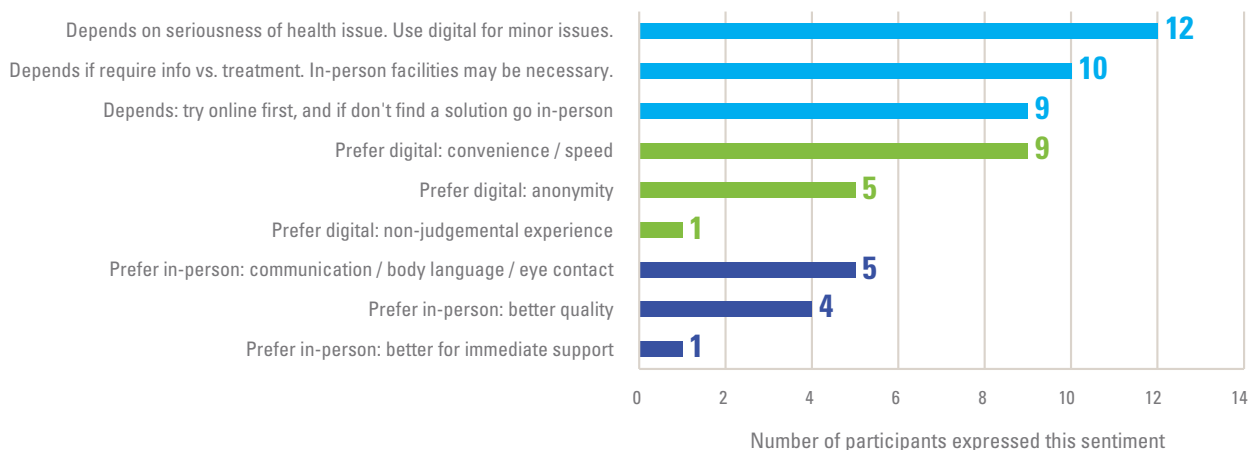
Of the few health-specific digital services that were mentioned by young people, these were not typically youth-targeted services. Only one participant mentioned a digital health service targeted specifically at young people (Lovecare Station). This aligns with the finding that **young people tend to seek widely inclusive services** (for more discussion of this preference, see below).

Less frequently mentioned were practical digital health services with a clearly defined specific function, such as menstruation trackers (4/33), calorie counters (2/33) and Mor Prom (3/33), an application launched by the MoPH to allow residents to access vaccination services. This suggests that, while these **practical digital health tools** may be used for specific purposes, they are **not commonly first in mind** for most young people when considering digital health services.

Perspectives on digital versus non-digital health services

Young people **recognize that digital health services and in-person health services may be appropriate at different times and for different needs**. When asked what would influence their decision to use a digital health service or an in-person health service, the majority of participants suggested that it would depend on the situation. Figure 11 below shows the frequency with which each sentiment was expressed.

Figure 11: Reasons for Preferring Digital Health or In-person Health Services



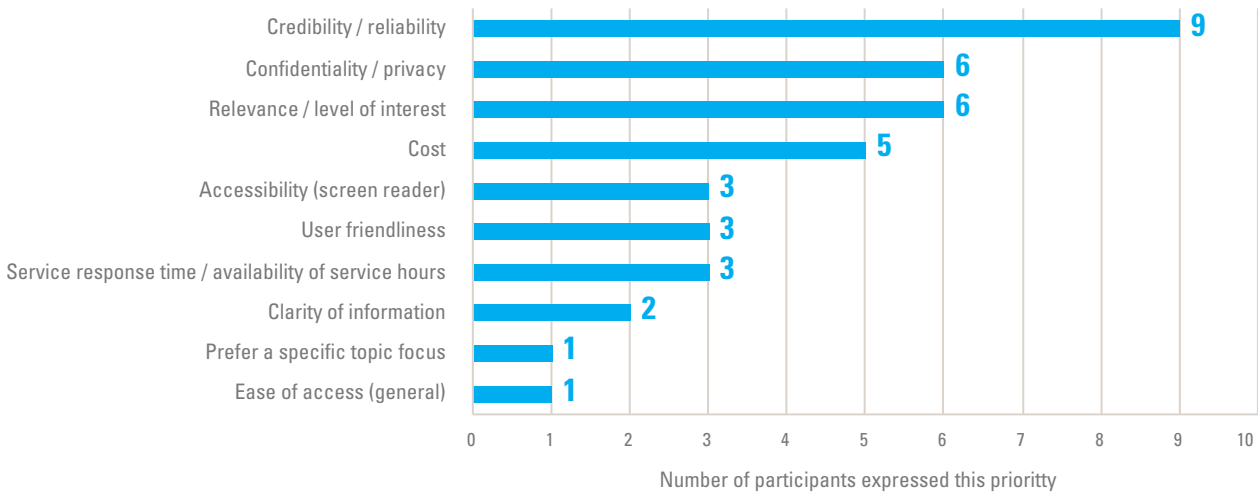
Young people suggested that their preference would depend upon several factors, the key factor being the severity of the health issue (12/43), whereby a digital health service would be preferred for minor issues, but in-person support preferable for something more serious. Young people also recognized that while an online service is a useful tool to gather information, an in-person service (10/43) may be necessary if treatment is required. Some also expressed that they would seek a solution online first, and go in-person as a second option if this wasn't successful (9/43).

Amongst those who expressed a clear preference for using digital health services over an in-person one, the **rapid and convenient experience** of using a digital health service (9/43) was a key draw for young people, as well as **anonymity and privacy** (5/43). Others perceived the **quality of in-person health services to be higher**. Participants who expressed a preference for in-person services referred to the quality of the service (4/43) and the quality of communication (5/43), especially face-to-face communication involving body language and eye contact.

Priorities when choosing a digital health service – what is important to young people?

Young people were asked to reflect on the priorities that would influence which digital health service they use. Figure 12 below represents the full analysis of the priorities identified by young people.

Figure 12: Priorities when Selecting a Digital Health Service



The importance of seeking reliable, credible health information online was commonly expressed by young people (9/43). Websites and Facebook pages owned by hospitals were cited as examples of credible sources, indicating that young people trust information provided by trained medical professionals.

Maintaining privacy or anonymity while seeking support online was another key consideration. Many young people felt strongly about protecting their privacy online (6/43), stating that they are reluctant to share personal information unless it is fundamentally necessary for the service.

For those who use a screen reader, accessibility was a priority. For the eight young people with visual impairment, accessibility when using a screen reader was commonly expressed as important (3/8). During the FGDs, they mentioned specific examples of information formats that are accessible (YouTube) and formats that are not accessible (PDF). It is important to note that when these young people came to use Lovecare Station, they all experienced major issues with accessibility (please see Section 4.2 below for a deep dive into the feedback from young people based on their lived experience).

When considering digital services that involve connecting directly with an expert professional for telemedicine or remote counselling, there was consensus that the service must be able to respond at the point when it is needed. **Response time and availability of service hours** were therefore important to young people, particularly for mental health support:



"I think the response time is also important. When someone needs help they want to get help as soon as possible, particularly for a mental health problem. They can't wait too long."

Female, 20 – LGBTQI+ group



When considering their priorities for choosing one digital service over another, a **preference for a particular channel was not commonly expressed**. Although channel preferences varied, those who did state a channel preference tended to feel strongly about it:



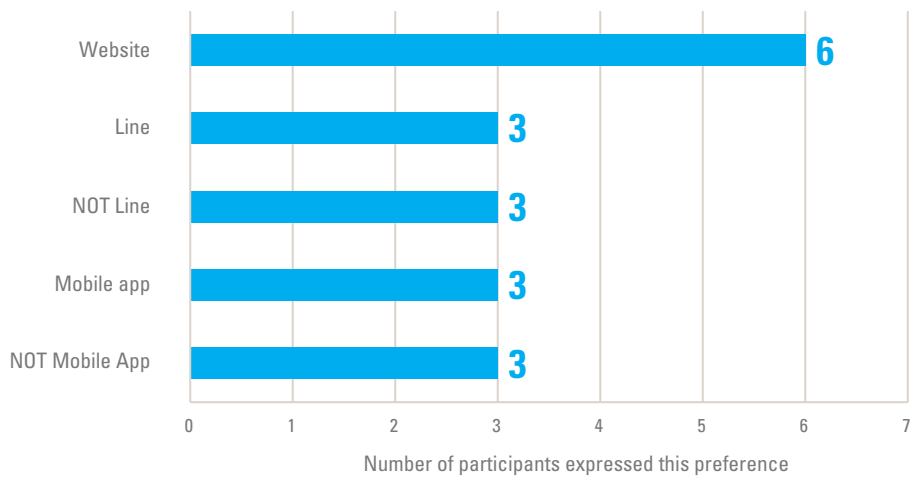
"I will not use the service if it is an application that I have to download. I will not use it every day and I have limited space on my phone. Line official and websites are better for me."

Male, 16 – general group (KII)



Figure 13 below shows the preferences relating to delivery channel, with website being the most commonly expressed preference (6/43).

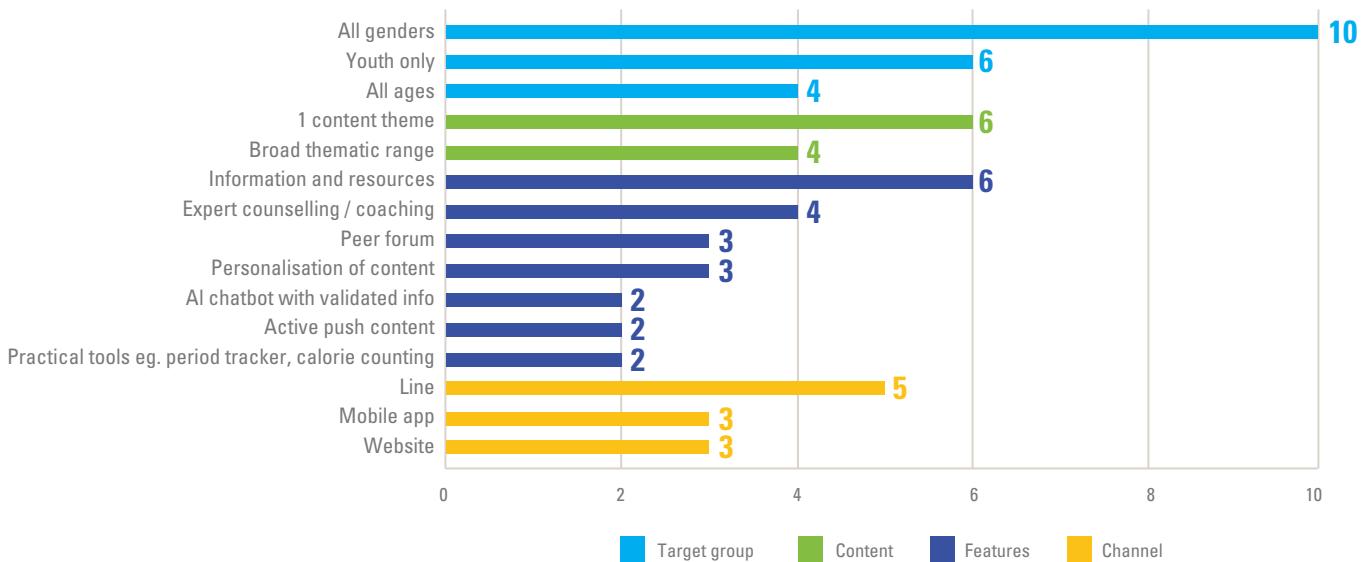
Figure 13: Channel Preference for Digital Health Services



Ideal digital health service

Participants in the 10 KIIs were asked to reflect on what they would create if they could design their own perfect digital health service. The figure below shows the frequency with which different characteristics were mentioned by participants when imagining their ideal digital health service.

Figure 14: Characteristics of Ideal Digital Health Service According to Young People



Inclusivity is a key concern for participants when considering their ideal digital health service. **All participants wanted a service that is non-gender specific.** A youth focus was of interest for many (6/10), but several also wanted a service that encompassed all ages (4/10). The desire for inclusivity was expressed both by participants from the general group and participants from marginalized groups such as LGBTQI+ and ethnic minorities.

In terms of content topics, there was a mix between those who wanted a digital service focusing on one specific issue (6/10), and those who wanted a broad thematic focus (4/10).

Participants were creative with the types of features they envisage for their ideal digital health services. The main desired feature was for health information and resources to be presented in an **interactive, engaging and tailored** way (6/10). Additional details provided about the nature of the content included a desire for personalized content tailored to individual needs (3/10), content actively pushed to users (2/10), and the use of infographics (1/10).

Beyond provision of information, young people expressed a desire for **personalized support through expert counselling or through a sophisticated AI-based chatbot.** Additional detail provided about the nature of this expert support included the need for a **responsive service**, the ability to **book appointments**, and the importance of providing **reassurance on reliability through clear medical credentials.**

Peer forums were fairly commonly expressed as a desirable feature, but with additional features to improve the quality of the forum information and the user experience, again reflecting the value placed by young people on the credibility of information or support received. Additional details suggested by participants included **thoughtful curation of peer comments** by an admin to minimize unhelpful or offensive responses, or **user credibility ratings** to help a reader assess the reliability of the advice provided:



“When people come to answer questions in the forum, the answer should be sent to admin first. The admin could screen out any words that may hurt the reader’s feelings and then approve the post... It would also be great if we can indicate the status of the person responding... so that the reader can gauge the level of reliability of those answers.”



Female, 17 – ethnic minorities group (KII)

Lastly, **Line was the preferred channel** (5/10), followed by mobile app and website (both 3/10). This aligns with findings from young people’s lived experience (see Section 4.2 below), where Line was also mentioned as a useful and easy-to-use delivery channel.

4.2 Deep Dive: Feedback and Lived Experience

This section provides a deep dive into the lived experience of diverse groups of young people of using Teen Club and Lovecare Station, discussing positive feedback from their lived experience, as well as issues young people have faced when using the service, and practical suggestions for improvement from the young people themselves.

Participants shared many positive comments on both digital health services, incorporating design, style and user experience. The two figures below shows the frequency with which a range of positive sentiments were expressed regarding Teen Club and Lovecare Station.

Figure 15: Positive Sentiments on Teen Club

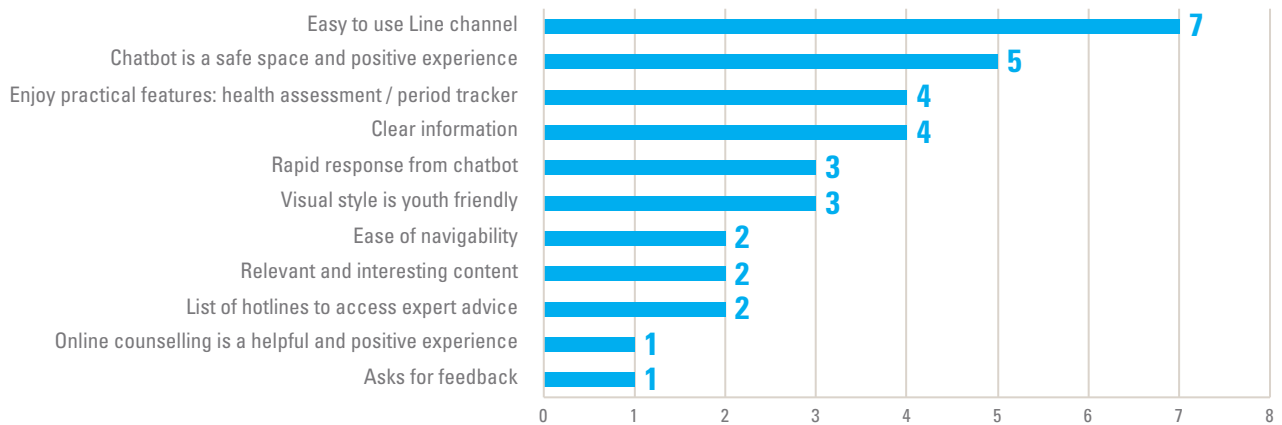
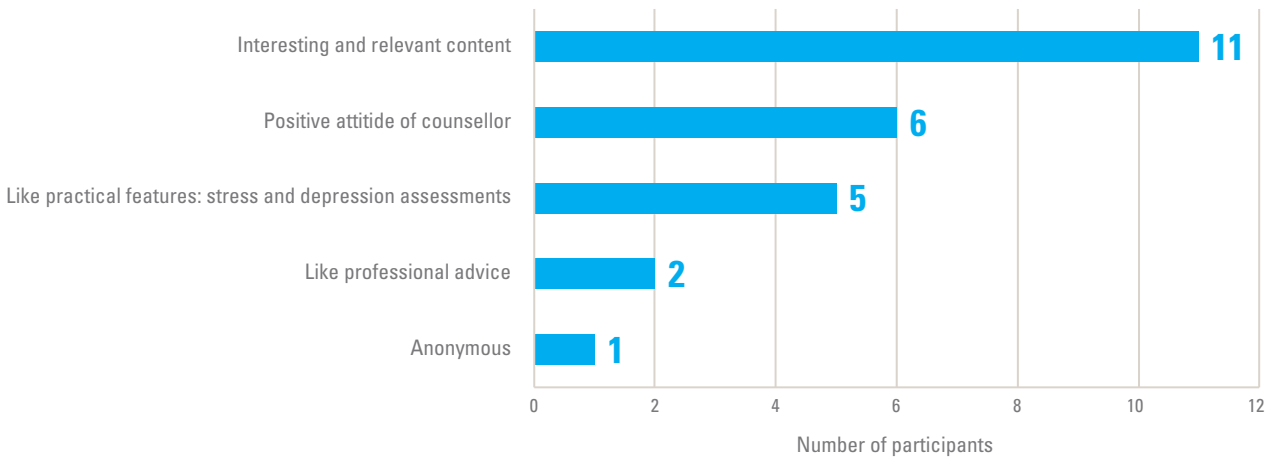


Figure 16: Positive Sentiments on Lovecare Station



Participants also highlighted some areas for improvement across both services. The two figures below shows the frequency with which a range of issues were expressed with regards to Teen Club and Lovecare Station.

Figure 17: Issues with Teen Club

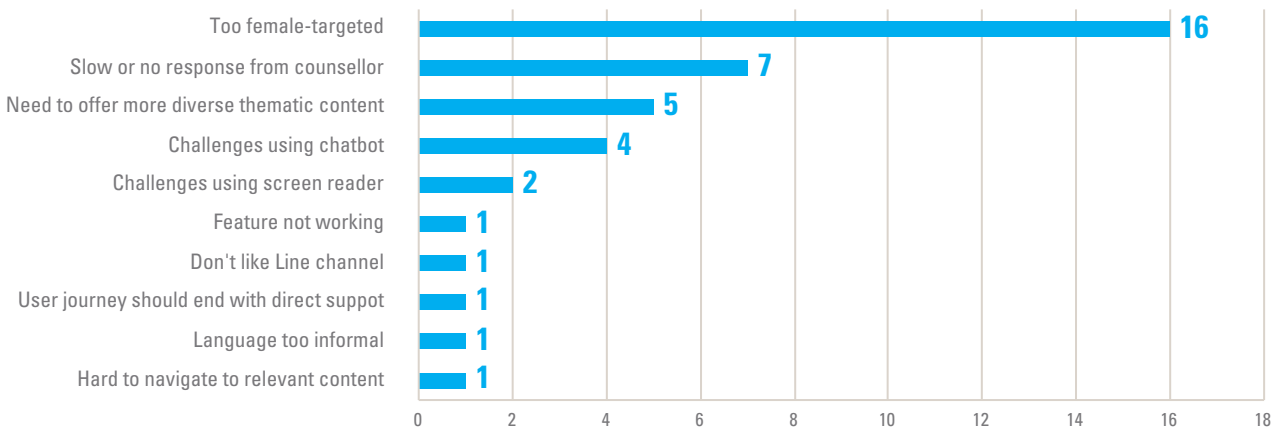
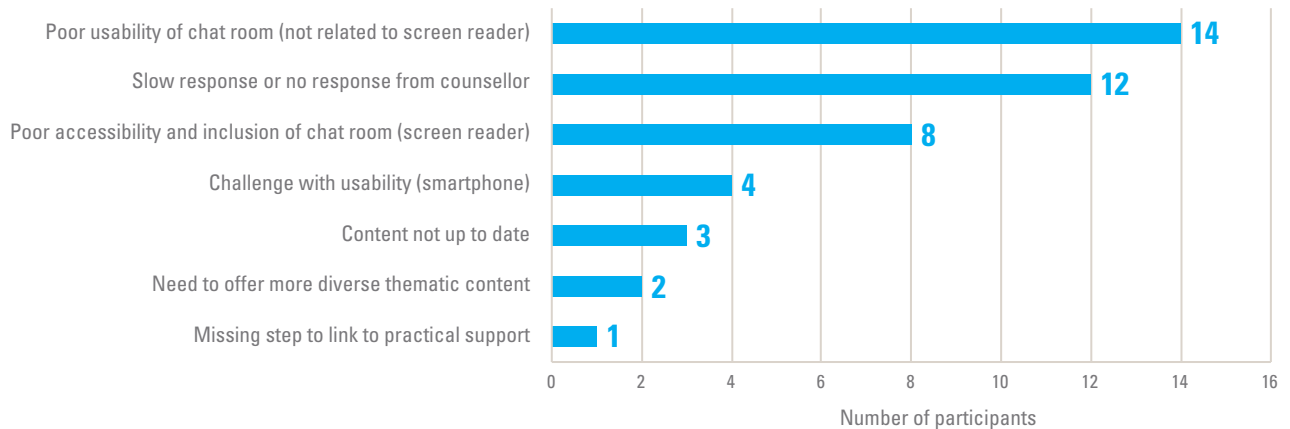


Figure 18: Issues with Lovecare Station

The feedback provided by participants mostly related to the **user-friendliness, accessibility and inclusiveness of the content**, including their experiences with **chatbot and counselling services**. The following sub-sections discuss young people's positive feedback in relation to these features, highlight the areas they identified for improvement, and present suggestions from young people on specific features they would like to see incorporated to improve the services offered. Across both services, young people had a range of practical suggestions for how the services could build on the positive and further evolve to meet their needs even more effectively.

Content

The most commonly expressed **positive aspect** of Lovecare Station was the **relevant and interesting nature of the content** (11/41):



"There is information about sex that I can't ask my family. I can study by myself."

Female, 17 – general group

"There is lots of interesting information on Lovecare Station. I will spend more time reading it."

Male, 19 – ethnic minorities group



Furthermore, of the 33 participants who were introduced to Lovecare Station for the first time through the study, 29 participants reported a **positive first impression**, largely based on the content (1 said their impression was neutral, and 3 didn't respond to that question).

Meanwhile, the most commonly expressed positive aspect of Teen Club was its **accessibility via the Line app**, as participants find this easy to use (9/43). Young people also **valued the interactive practical features** such as Teen Club's period tracker and health entitlement checker (4/43) and Lovecare Station's stress and depression self-assessment (5/41). Teen Club's period tracker was mentioned by male as well as female participants.



"I used Teen Club last time last month because I tried to help my girlfriend with her period."

Male, 21 – general group (KII)

"I like the stress and depression assessments. This function is the best match for our age group."

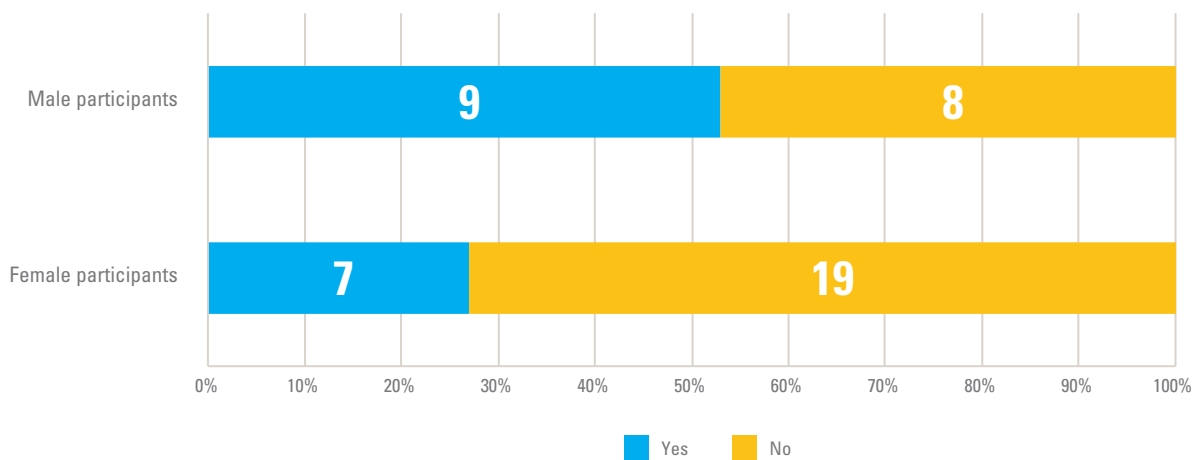
Male, 19 – ethnic minorities group



Despite this, **some issues were identified**, specifically relating to perceptions that the **content presented was too gender-specific, narrow in scope, or difficult to navigate**.

The most commonly expressed issue for Teen Club was a strong view that the **content is too female-targeted (16/43)**. This was reflected in their perception of the content topics and the imagery used to illustrate the content. It is interesting to note that, of the 16 participants who expressed a need for Teen Club content to have less of an explicitly female focus, 7 were female. The view that the content is too targeted towards female users was expressed by over half the male participants, and over a quarter of the female participants as shown below in Figure 19. These 16 individuals also represented diversity in terms of age and included representatives from all of the participant groups, reflecting that this is not a niche opinion.

Figure 19: Participants who would Prefer Teen Club Content to be Less Female-Focused



For Teen Club, there was a desire for more **diverse thematic content** beyond sexual health (5/43) as the young people expressed sentiments that suggest they consider their own health and well-being in a more holistic sense.

In terms of navigability, some participants experienced **challenges using and navigating Lovecare Station on their smartphone** (4/41) – one previous user even highlighting this as the reason they no longer use the service. They expressed that the layout was confusing and messy, and the **volume of content** meant that they couldn't easily find what was relevant for them. Meanwhile, for Lovecare Station, challenges with content management and curation led to some **content feeling outdated** (3/41). For instance, participants flagged that posts from 6-7 years ago were displayed at the top of their feed, and they expressed a feeling that the language used was not in line with the current style.

When asked for **practical suggestions for improvement**, young people suggested they would like to see **more diversity and thematic breadth of content** across both services to offer more value for all genders and diverse groups (see Box 2 below for comprehensive list of suggestions from participants).

Box 2:

Content Themes Requested by Young People

- Diet and nutrition
- LGBTQI+ sensitive sex education
- Male hygiene
- Relationship counselling and healthy relationships
- Stress management, especially study-related stress
- Mental health
- Drug issues
- Domestic violence
- Symptoms of congenital and chronic diseases
- Primary healthcare for disease prevention
- Health and welfare for all ages
- Eye health
- Hearing health
- Family issues
- Gender diversity, gender identity, and gender equality

Participants recognized that within a broader more inclusive range of content, **ways to personalize the display of content would be helpful so that each individual can find what is most relevant for them**, presented in the most appropriate way. This personalization could be either by user-defined characteristics, for instance age, gender or sexuality, or by user-defined priorities, for instance a particular topic of interest.

Across both services, participants were also keen to see a **reconfiguration of information-centred user journeys to lead to accessing practical support**. This included **signposting to local services**, and expanding the utility of the interactive health tools and self-assessments to generate **linkages to relevant practical care tailored for personal needs**.

Chatbot and counselling services

Across both services, participants who used the personalized expert advisory features had a positive experience. Participants enjoyed using the Teen Club P'khong Kwan chatbot and found it a positive, comforting experience (5/43), with a rapid response rate (3/43). On Lovecare Station, those who were able to access the counselling service had very positive feedback about the attitude and helpfulness of the counsellors (6/41):



Teen Club: "I liked the P'khong Kwan chatbot. She answered my questions very well. I felt comfortable chatting with her."

Male, 22 – disabilities group (blind)

Lovecare Station: "[The counsellor]... tried to understand my problems and find a solution without blaming me or making me feel uncomfortable."

Female, 18 – general group



However, the most commonly expressed issue with Lovecare Station was that participants were **unhappy with the usability of the chat room counselling service** (14/41) with the **slow (or no) response from counsellors**, sometimes linked to restricted service hours (12/41). One of the Line chat activities conducted during the deep dive involved young people trying out the Lovecare Station counselling service, during which many were simply unable to speak with a counsellor. Of those who were able to speak with a counsellor, most had to wait a long time to get a response (over an hour). Participants also raised similar issues with the experience of using Teen Club's live counselling service, highlighting their frustration with the **slow response time (or no response at all)**, and the **limited counselling hours (7/43)**.

Critical concerns were also raised regarding Lovecare Station's chat room counselling service in terms of accessibility and inclusion. **Those using screen readers were effectively excluded from the chat room counselling service.** None of the participants who use a screen reader were able to locate the chat room. One of the participants who has partial vision realized that if the screen reader is turned off, the chat room could be found. However, even once found, the usability was extremely poor. Some realized that they could try the chat through the Line application, but when doing so, **usability remained extremely challenging.**

Based on their experiences, participants had a range of practical suggestions for improving the service model and user experience of the live counselling across both services. These included **longer service hours and faster response times** to enable them to get the support they need at the time they need it. Participants recognized that staffing may need to be increased to achieve this. There was also a **desire for clearer information** about how to use the live counselling services, the nature of the service hours, and realistic expectations around response time.

Building on these suggestions in relation to the operationalisation of counselling services, participants also had suggestions to **expand the nature of the support available to include psychiatrists**, recognizing the complexity of the mental health challenges faced by young people. Participants also suggested a way to enhance the credibility of the counsellors by **indicating their training and qualifications**, so that the user may feel reassured about the reliability and trustworthiness of their guidance.

Lastly, a key aspect of accessibility and inclusion raised by participants from the disabilities group is the need to ensure that all aspects of both services are **fully screen reader accessible**. For example, users with visual disabilities raised that the stress assessment form is only available as a PDF file that cannot be read by a screen reader, and suggested that Google Forms may be more suitable. They also reiterated the importance of **redesigning the chat room counselling to make it accessible by screen reader**.





CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

This section provides critical reflections that synthesize insights from across all aspects of the study, to assess the extent to which the existing landscape of digital health services in Thailand meets the needs of diverse populations of young people. In order that the reflections might be linked to practical, actionable recommendations, the focus is on the gaps that require attention.

5.1 Critical Reflections: Gap Analysis of Current Digital Health Services Against the Needs of Diverse Young People in Thailand

Accessibility and inclusion

As discussed in Chapter 3, the idea of user involvement in design is well accepted by stakeholders. **The study found that young people have been meaningfully engaged in the design process for most of the youth-targeted services.** While compromises have sometimes had to be made to align with the capacity of

healthcare facilities or to satisfy the expectations of partner organizations, feedback from young people is generally being recognized and incorporated to improve services, especially in response to young people's preferences for informal, youth-friendly language or by adding further channels through which the service can be accessed. Young people's strong desire for **privacy and confidentiality has also been recognised and carefully reflected in the design** across digital health services.

However, the majority of the digital health services used by young people are not specifically targeted only at young people. Therefore, while non-youth specific services have certainly recognised the need for meaningful engagement with their target demographic in the design process, they have not always carried out intentional engagement with the young people within their target demographic, to ensure their specific needs are met. This suggests that **more could be done to consider young people as a discrete group whose digital health needs may differ** from other age groups.

Ensuring inclusive design for young people with disabilities is an area that remains in need of further testing and improvement. As discussed in Chapter 4 when reflecting on young people's lived experience, difficulties faced by young people with disabilities to access certain features, such as chat rooms and PDF documents, clearly highlight that more could be done to ensure that all features are accessible, especially for those using screen readers. As digital health services get more sophisticated and new features are added, accessibility must remain a constant priority. While the general principle of **test, learn and adapt** has been recognised, with piecemeal amendments being made following testing with young people, **this principle should be explicitly applied to accessibility and inclusion.** The case studies discussed in Chapter 2 may provide inspiration for services in Thailand to take their commitment to the principle of test, learn and adapt even further.

Young people tend to prefer services which prioritize broad inclusion for all genders. Most digital health services identified through the mapping exercise for this study are not deliberately targeted at one gender, which aligns with young people's preferences. However, young people reported that services which do not intend to be gender exclusive may still as though they are female-targeted, suggesting that **more could be done to ensure that the presentation of services is gender inclusive and appeals to the interests of all groups.**

Ability to personalize content within a broad inclusive service

Currently, the majority of digital health services focus on one content theme, most commonly sexual and reproductive health. However, the study found that **young people have a number of emerging health concerns which they would like to see reflected in digital health services**, including topics such as mental health and nutrition. More thematic breadth would allow digital health services to align more with **young people's holistic approach to health and well-being.**

Young people have **sophisticated expectations** as users of digital health services. They appreciate **interactive and practical tools** that add value, such as self-assessments and personal trackers for periods and nutrition, and are familiar with sophisticated chatbots and AI that respond to their personal prompts. While many of the digital health services incorporate these elements, there may be scope to evolve these further to keep young people engaged and excited. For instance, tools to help young people understand and track their own mental health over time, rather than a one-off static form, may be preferable.

Young people want to be able to rapidly find what is most relevant for them, and primarily use Google as their first port of call because it directs them straight to what they need. Young people's lived experience has shown that, as the information-based elements of digital health services such as Lovecare Station have grown over time, it has become harder to navigate through the content volume to find the most directly relevant, up-to-date advice. Therefore, there is scope to **use features such as chatbots and AI to help users access a more personalized content experience.**

Credibility

The importance of seeking credible information online is another key concern for young people. They have a sophisticated awareness of how to discern what is credible, and will often seek out digital health information that has a clear link to a medical facility. **There is scope for improving the ways in which some digital health services reassure young users about the credibility and recency of their information and services.** The development of national guidelines for the provision of online services to adolescents by the Department of Health, with support from UNICEF, along with the possibility of developing a service accreditation mechanism, will also contribute to give more visibility to services under the supervision of the government.

Responsive, integrated services

Young people are keen to complete their digital user journey by accessing direct, personal expert support, either remotely or in-person. **There is a significant desire for quality, responsive remote expert advice which is delivered in a timely manner and available at the point of need.** However, young people's lived experience demonstrates that **remote counselling services does not always meet young people's expectations.** While those who are able to access a counsellor report a very positive, engaging and empathetic experience, some users are frustrated with issues such as **complex usability, slow response times and limited service hours.**

Furthermore, while many digital services provide contact details of physical sites for those who require or prefer an in-person health service, in most cases, **there is no direct integration for contacting and booking appointments that could make the user experience more seamless.** Rather than reinventing the wheel and expanding existing services to do everything, there may be value in exploring partnerships to ensure a smoother transition between information points and services, and to facilitate more timely service delivery.

Sustainability

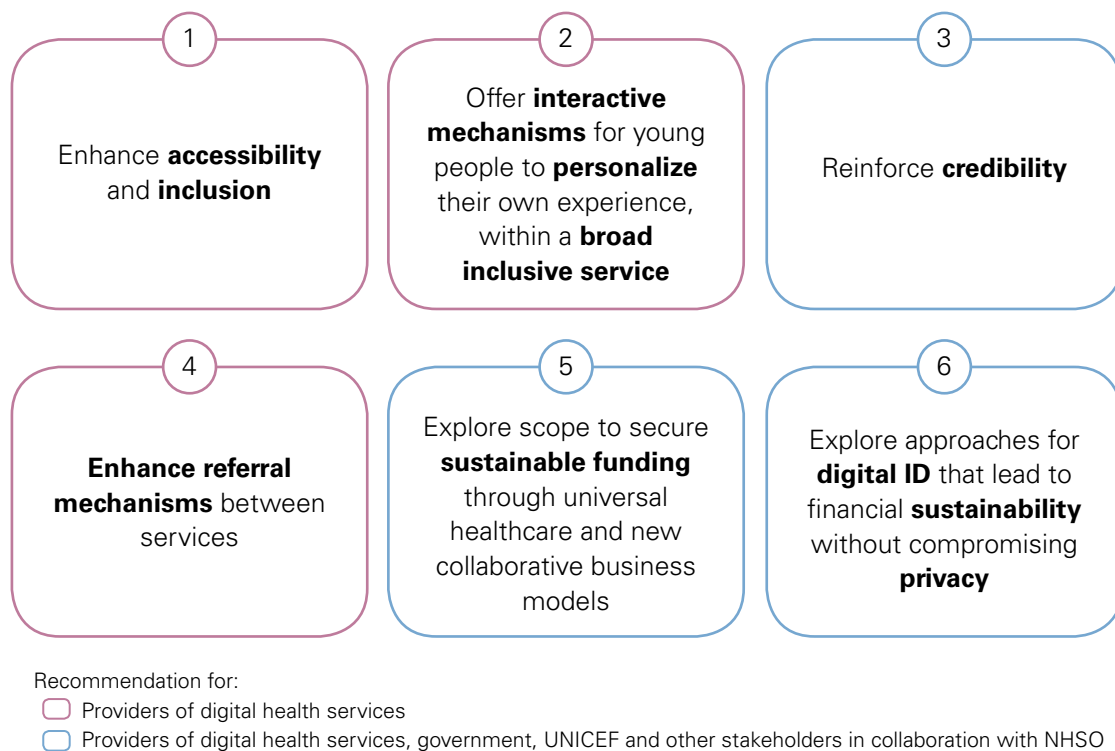
As discussed in Chapter 3, **sustainability is a key issue facing the majority of digital health services in Thailand.** It was found that, out of the 25 digital health services reviewed for this study, most rely on one funding source type. Those who receive public funding may receive it from various public departments, but are still subject to annual planning cycles, limiting the ability for long-term product planning, while those which have been designed and developed through grant-based funding sources face the continuous burden of grant renewal. Therefore, there is a need to explore new partnerships and business models that can offer young people the seamless experience they desire, while financially sustaining digital health services.

The primary mechanism for sustainable, scalable public funding is registration with the National Health Security Office (NHSO). At present, accessing sustainable public funding from the NHSO as a part of universal health coverage depends on practical service provision, and on services being able to provide verifiable service user numbers, which poses a barrier for many digital health services who do not have verifiable quality data on the volume of users they serve. The issue of user verification also raises **concerns around how to verify user numbers without compromising user privacy and confidentiality.** The NHSO is exploring options for how best to approach this issue. The only digital services which have managed to solve this issue are those which effectively act as a referral channel for a practical service with a health professional, either remotely via a telemedicine channel or in-person at a health facility.

Another issue raised by stakeholders regarding the NHSO registration process is the **lack of a standard assessment mechanism for digital health services.** This was mentioned both by digital health service providers, who have no guidance on how to design services according to accepted standards, and by NHSO employees, who reflected on the time-consuming task of assessing each application individually.

5.2 Actionable Recommendations for Digital Health Services in Thailand

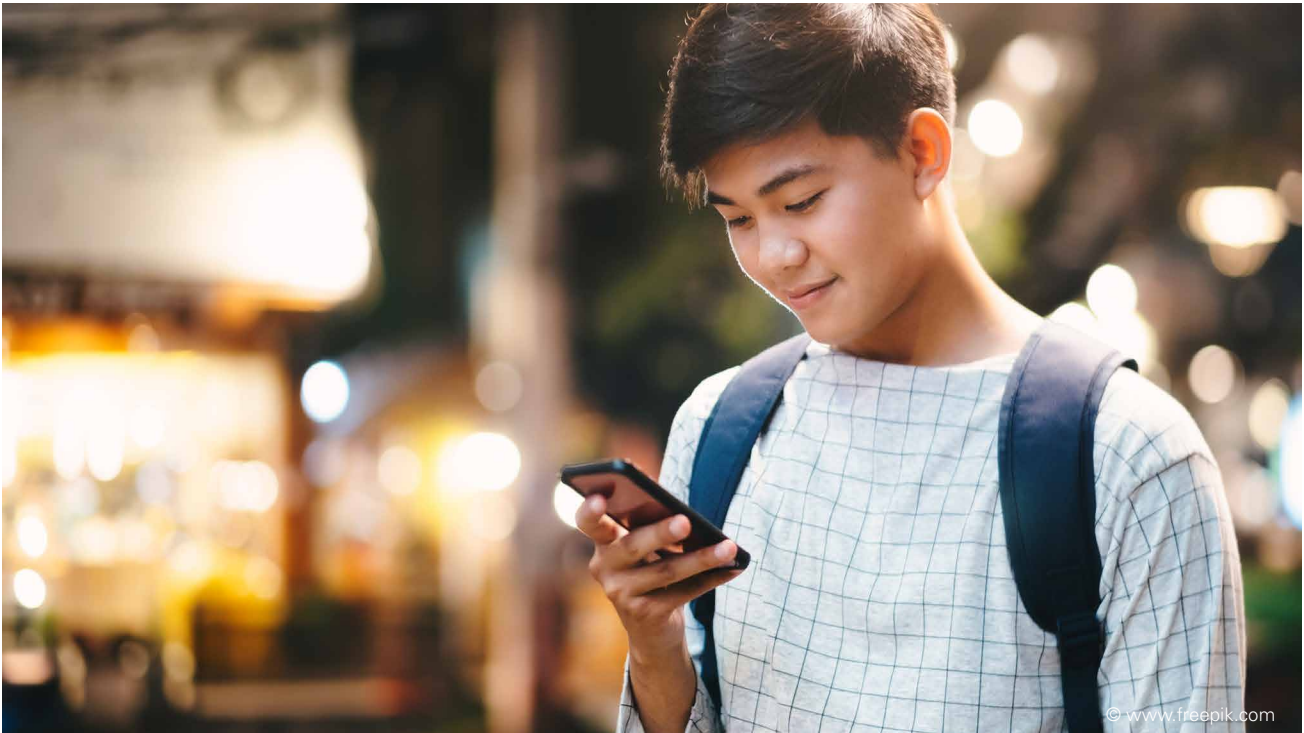
Figure 1 below provides an overview of six actionable recommendations to be considered by providers of digital health services and other stakeholders. Recommendations 1–3 are for providers of digital health services, while Recommendations 4–6 are for providers of digital health services along with government, UNICEF and other stakeholders. Exploring these recommendations will support digital health services in Thailand to align even more strongly with global best practice, and to better meet the needs and expectations of young people.



Each of the recommendations is explored in more detail below, along with an indication of its alignment with global best practice principles and examples from international case studies which may provide further insight.

In order to successfully explore the potential of these recommendations, it will be important to establish the following:

- Scope for positive, creative partnerships that bring together key decision makers from across the sector, including digital health service providers, traditional health service providers, private sector and representatives across the public sector
- Mechanisms through which to meaningfully engage young people in the process
- A positive, problem-solving mindset to address complex challenges
- Financial resources to implement the recommendations
- Expertise in design strategy, accessibility and user experience.



Recommendation 1: Enhance accessibility and inclusion

This is a recommendation for providers of digital health services. It draws from the best practice principle to *ensure inclusive and accessible design*.

In order to increase access to young people with disabilities, **technical accessibility audits should be conducted** to ensure that digital health services do not inadvertently exclude those using screen readers. This audit process should include **a review of accessibility** from other perspectives – e.g. captions on videos.

Further research must be done to explore the extent to which the accessibility and inclusion needs of young people living with other disabilities are met when the digital services are relevant for them and add value to their health outcome. **Services should also endeavour to engage with other groups of young people living with disabilities**, e.g. D/deaf young people, young people with learning disabilities.

Services which are inadvertently presenting as female-targeted should reflect on the suggestions provided by young people for how to **make the service more inclusive to all genders**. This is not to say that all pieces of content need to be relevant for all. Rather, that across the whole range of content, there should be a balance of themes and topics that are relevant for all genders, as well as those with particular needs such as young people who identify as LGBTQI+. Services should consider ways to ensure that all young people are able to find sufficient content that feels relevant for them (see more below, in Recommendation 2).

Case studies to learn from:

- All aspects of the Kooth platform meet the Web Content Accessibility Guidelines (WCAG) 2.1, level AA.
- Kooth and Cyber Rwanda both offer content and tools that are widely inclusive of all genders.

Recommendation 2: Offer interactive mechanisms for young people to personalize their own experience, within a broad inclusive service

This is a recommendation for providers of digital health services. It draws from the best practice principle to *make user experiences engaging and interactive*.

Firstly, it should be made easier for young people to **rapidly identify the information and tools most relevant for them**. This builds upon and complements the first recommendation, helping to ensure that any young person can have a meaningful experience, easily navigating a wide range of inclusive content.

A basic approach to achieve this is to **improve how content and features are organized and presented, including improving the curation of large volumes of content so that out-of-date content is archived or updated**. Guidance and input should be taken from young people to ensure that navigation design is as intuitive as possible. To take this a step further, **interactive personalization may be built into the design** so that content and features are curated and presented based on user-defined characteristics (avoiding personally identifying information), or on user-defined topic preferences.

It should be noted that any approach that captures and stores user data to inform personalization should have a very transparent data privacy policy, describing in plain language how that data will be handled, to ensure informed consent from the young people.

Case studies to learn from:

- Kooth's interactive tools are designed to help young people understand and monitor their own mental health as well as to help signpost the most relevant content and services based on their specific need.

Recommendation 3: Reinforce credibility

This is a recommendation for providers of digital health services, as well as government. It draws from the best practice principle to *design with sensitivity to the specific risks faced by young people online*.

Firstly, services that connect young people with professional advice should be as transparent as possible about the **credentials of experts**, to reassure young people about the reliability of the guidance. This could be done through presenting expert profiles or, at the very least, the qualifications of all experts.

Recognizing the potential risks faced by young people online when accessing public discussion fora, engaging an **expert moderator with clear credentials is recommended**. Peer responses should be moderated in order to minimize unhelpful comments and to validate those which offer meaningful and accurate advice.

The government has an important role to play in reinforcing the credibility of digital services, ensuring service quality through **standard setting, accreditation and capacity building for providers**. The Department of Health's ongoing development of national guidelines for the provision of online services to young people, with support from UNICEF, offers potential for a service accreditation mechanism that may further enhance credibility in the eyes of young people.

Case studies to learn from:

- Kooth clearly communicates the credentials of expert professionals, and young people have the option to choose a different professional if the one they are allocated does not suit their needs.

Recommendation 4: Enhance referral mechanisms between services

This is a recommendation for providers of digital health services. It draws from the best practice principle to *meet an unmet need*.

Opportunities for positive collaboration between existing services should be explored, especially those that may have scope for technical integration between services to enable a seamless user journey for young people which flows from information source to practical support.

Links with pre-existing services that work well are encouraged. This may be integration with services that offer appointment booking, either for a telemedicine service linked to a legal medical clinic, or a physical service, or with services that already offer rapid response remote counselling.

Care must be taken when designing these integrated services to **balance the requirements of young people with the practicalities of service delivery**. For instance, appointment booking needs to be designed carefully and collaboratively so that it works for and adds value to both the young person and the service provider.

Case studies to learn from:

- Cyber Rwanda directs young people to local youth-friendly health facilities where they can receive practical help. While the service still relies on the young person contacting the facility themselves, there is an interactive user journey to help the individual identify the type of support they need, and identify which local youth-friendly facility can meet that need.
- Kooth's referral pathway is comprehensive and integrated, offering care pathways tailored for individual needs, including appointment scheduling.
- Oky provides referral information directing girls to online and offline advice and services.

Recommendation 5: Explore scope to secure sustainable funding through new collaborative business models

This is a recommendation for providers of digital health services, UNICEF and other stakeholders in collaboration with NHSO. It draws from the best practice principle to *design for scale and sustainability, avoiding fragmentation*.

NHSO registration offers the potential for sustainable funding. It would be interesting to **explore the viability of a linked business model** between information-based digital services and those which provide high-quality counselling and services (either in person or remote) that would allow NHSO funding to be shared between the service provider and the digital service channel engaging young people and guiding them to use the service. This integration would avoid the burden of referral validation falling to busy health providers, and a formal partnership may allow digital information-based services to co-benefit from NHSO funding.

Since the NHSO does not currently have any requirements against which to assess digital health services, this may be an opportune moment for meaningful stakeholder engagement across the digital health sector in Thailand to **develop standardized guidelines as a part of a system strengthening approach**. UNICEF may play a critical role in continued advocacy on the needs of young people to access these online health services and in providing technical support to relevant stakeholders to improve funding modalities.

N.B. There may also be scope for some minimal element of co-payment from young users of the service, which would require simple and secure digital payment mechanisms such as bank transfer and e-wallet. However, this should be managed extremely carefully so as not to exclude those who are unable to pay.

Case studies to learn from:

- Kooth has been commissioned in the UK through the National Health Service, as well as charities and businesses, and receives funding based on service provision.

Recommendation 6: Explore approaches for digital ID that lead to financial sustainability without compromising privacy

This is a recommendation for providers of digital health services, UNICEF and other stakeholders in collaboration with NHSO. It draws from the best practice principle to *design for scale and sustainability, avoiding fragmentation*.

NHSO is currently considering the appropriate way to digitally verify ID to ensure eligibility for NHSO funding.

Working with stakeholders and young people, stakeholders from across the digital health sector should **explore approaches that balance the critical need for privacy and anonymity that young people need online with NHSO's requirements for funding**. It will be vital to meaningfully engage young people in this process to ensure that an approach for digital ID that is well understood and accessible is agreed upon.

Moreover, guidelines for providers of digital health services should be developed that clearly show the minimum data requirements needed to demonstrate the “population registered with the service unit”, to give them the best chance of complying with NHSO requirements.

Case studies to learn from:

- Kooth is a completely anonymous service that prioritizes privacy and confidentiality. If specialist intervention is required, identification is managed as needed in a sensitive way, leveraging the trusted relationship between the young person and counsellor, as well as extremely robust data security mechanisms.

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APPENDICES



Appendix 1: Data Collection Tools

Appendix 1.1: Stakeholder KII Invitation Email

The following is to be used as a guide template for the invitation emails to individual stakeholders. It will be tailored for individuals as appropriate with guidance from UNICEF Thailand.

Dear [Name]

Greetings from the UNICEF Thailand Office. I hope this message finds you well.

UNICEF Thailand is conducting a Study on Digital Health Services for Young People in Thailand.

The study aims to gather a comprehensive evidence base to understand the landscape of digital health services for young people in Thailand, and to explore how they meet the needs of the diverse populations of young people in Thailand, with a particular focus on accessibility, inclusiveness and sustainability. The final product of this study will be a comprehensive report with a synthesis of the evidence, including a set of actionable recommendations to help guide strategic roadmaps.

As part of this study, we are conducting a series of key informant interviews with a range of stakeholders involved in existing digital health services for adolescents in Thailand. The purpose of the interviews is to understand the strategic vision of these services with regards impact, scale and sustainability, the process for design, development and implementation, and to explore any challenges faced in achieving this vision.

Due to your role [describe role in relation to digital health service] we would like to invite you to take part in this interview process.

The interview may be conducted either in-person at a location convenient to you or over video call, depending on your preference. We anticipate that the interview will take approximately an hour of your time.

Please kindly review the following information carefully along with the attached consent form. Please respond to this message to confirm your interest and availability to participate in this study, along with a copy of your signed consent form.

Thank you so much for your consideration.

Why have I been chosen?

You have been chosen by UNICEF Thailand to take part in this study due to your involvement with [insert name of digital health service]. As part of the study, we would like to understand the strategic vision with regards impact, scale and sustainability, the process for design, development and implementation, and to explore any challenges faced in achieving this vision.

What will I be asked to do if I say yes?

If you say yes to taking part in the consultation by responding to this email and returning your signed consent form, [National Consultant] will be in touch to arrange a suitable time and place for your interview.

The interview may be conducted either in-person at a location convenient to you, or over video call, depending on your preference. We anticipate that the interview will take approximately an hour of your time.

What will happen to the results of this consultation?

Once the consultation is completed, the information will be written into a report. The results will help UNICEF Thailand work towards improving digital health services for young people in Thailand. The report will be discussed with relevant decision makers, and the organizers will get back to you to explain how the consultation influenced decisions regarding the topics you discussed.

Do I have to take part in this consultation?

Participation is voluntary and you do not have to take part. If you choose to participate, you will need to sign the attached consent form. You will not be paid for participating.

What if I say yes and then change my mind?

You can change your mind during the consultation process and choose to leave. Just let the interviewer know that you wish to withdraw. However, please consider that anything you say before you leave the discussion will remain in the record, but your name will not appear anywhere.

Will my participation in the study be kept confidential?

Yes, your views will remain confidential. Your name will only be shared in writing with the organizers. The consultation report may include what you say but will not include your name. However, please consider that your comments may be cited with reference to [insert name of digital health service].

An audio recording will be made of the discussion so that we can accurately capture what is said in a summary report, but everything will be anonymised so nothing you say will be linked back to you. The recording will be deleted after the summary report is completed.

Finding out more about the purpose of this consultation:

If you would like to find out more about this project and consultation, please contact [name and contact information of National Consultant] or if you would like to contact UNICEF Thailand directly please contact Sirirath Chunnasart, Adolescent Development Specialist: schunnasart@unicef.org and Jagkrapan Janchatree, Adolescent Development Officer: jjanchatree@unicef.org.

What next?

If you want to take part in the study, read and sign the consent form attached. Return the signed form to [name and contact information of National Consultant]. They will then be in touch shortly to arrange a suitable time and place to conduct the interview.

Appendix 1.2: Informed Consent Form – Stakeholders

Consent Form: Consultation on Digital Health Services for Young People in Thailand.

Before you agree to participate, make sure you read and understand the invitation message and this consent form. Then make sure you tick each box to provide your consent and sign below.

If you have any questions or concerns about this form please contact: Sirirath Chunnasart, Adolescent Development Specialist: schunnasart@unicef.org and Jagkrapan Janchatree, Adolescent Development Officer: jjanchatree@unicef.org.

	Please tick to confirm
I have read the invitation message explaining the consultation and its purpose.	
I agree to taking part in the consultations referred to in the invitation letter.	
I understand that all the personal information gathered will be kept strictly confidential.	
I allow my views, stories or other contributions shared during the consultation to be used in whole or in part in publications, such as reports, journal articles, newsletters, or social media channels. I understand that my identity will remain anonymous.	
I understand the interviewer may make an audio recording of the consultation for note-taking purposes and that the audio file will be deleted after the consultation report is completed.	
I understand that my participation is voluntary and that I can withdraw from the consultation at any time. If I choose to withdraw during the consultation, I will notify the interviewer.	
I understand that the input provided by me during this consultation will be anonymized in the consultation report and that my comments may be cited with reference to [insert name of digital health service] .	

Participant:

I have read the information sheet and understand all of the points above, and I AGREE to take part in this consultation.

Participant's name:

Participant's role and organization:

Contact number:

Contact email:

Signature:

Date:

Appendix 1.3: Stakeholder KII Discussion Guide

The following is to be used as a guide template for KIIs with stakeholders. It will be tailored for individuals as appropriate with guidance from UNICEF Thailand.

Interviewer Guide

Use the questions below as a guide for a semi-structured discussion. Use your judgment: if the response to one question has expanded to cover a second question too, be flexible and omit the second question so as to keep the conversation progressing.

Explain to the participant that the discussion will be structured around a series of questions across a few sections. Introduce each section before starting the questions.

It may be that they don't have the answers immediately to hand, especially on the data questions. If appropriate, ask if they would be able to share this information as a follow up via email.

Introduction

1. Describe your role at [insert name of stakeholder organization]

In this section we want to understand the strategy and vision:

2. Describe the background to the decision to create [insert name of digital health service]
3. What issue is [digital health service] aiming to address?
4. How was the decision made to use a digital approach to address this issue (i.e. rather than a non-digital approach)?
5. How was the decision made to create a new digital health service? Did you consider whether it might be possible to adapt any existing digital health service?
6. What was the strategy for how [digital health service] would drive impact?
7. What was the vision for scale – in terms of numbers of young people who would be impacted?
8. Does the strategy focus on targeting any particular segment of young people in particular?
9. Where did the original investment come from?
10. Was a vision for sustainability considered from the outset? If so – what was this vision?

In this section we want to understand the design process:

11. Describe the design process for [digital health service]
12. What important factors were considered in the design process?
13. Were young people engaged in the design process? If so, in what ways?
14. Were any key design decisions influenced by young people? If so, describe them.
15. Were other stakeholders / partners engaged in the design process? If so, describe these decisions?
16. Were any key design decisions influenced by stakeholders / partners? If so, describe these decisions.
17. In what ways was inclusivity considered in the design process?

18. In what ways was accessibility considered in the design process?
19. In what ways were the risks faced by young people online considered in the design process?

In this section we want to understand the development and testing process:

20. Describe the development process for [digital health service]
21. Did the development process involve testing a prototype with any young people? If so, describe how this worked? What lessons were learned? How was the design adapted following testing?

In this section we want to understand implementation:

22. When was [digital health service] launched?
23. What indicators do you use to measure and monitor impact?
24. How many active users do you have in a typical month?
25. What data do you have on the demographics of the young people who are using the service? Are you able to look at engagement patterns for different demographics? If so, what patterns do you see?
26. Has looking at the data influenced any adaptation in the design strategy? If so, describe how.
27. Does [digital health service] connect with any external software systems? If so, which?
28. What customer support is available for young people using the service? How many trained staff are currently working to respond to the needs of young people?

In this section we want to understand progress against the vision:

29. To what extent has [digital health service] achieved the vision in terms of outcomes for young people? What are the key drivers of success? What are the key pain points?
30. To what extent has [digital health service] achieved the vision in terms of scale? What are the key drivers of success? What are the key pain points?
31. To what extent has [digital health service] achieved the vision in terms of inclusivity? What are the key drivers of success? What are the key pain points?
32. To what extent has [digital health service] achieved the vision in terms of sustainability? What are the key drivers of success? What are the key pain points?
33. Overall, are there any other key successes or challenges you'd like to share?
34. What does the future vision look for [digital health service]?

Appendix 1.4: Code of Conduct

This code of conduct is adapted from the one provided in the UNICEF Guidance on Consultations with Young People.

It must be reviewed and signed by all individuals involved in delivering workstreams 5-8 with young people, including:

- Study team members
- Representatives from youth organizations
- Accompanying adults

UNICEF Thailand, in consultation with the Department of Health, is conducting a study on digital health services for young people, to explore and assess the situation and landscape of available digital health and services targeting young people in Thailand. The study involves direct consultation with a range of young people.

UNICEF Thailand strives to ensure that the activity does not in any way harm, abuse, or commit any act of discrimination or violence against children. UNICEF Thailand gives primary importance to the best interest of the child in all decisions and actions.

As a member of the study team or supporting the study process, I agree that I WILL:

- Adhere to this code of conduct and contribute to creating a safe, inclusive, and gender-sensitive environment that is free from discrimination and violence against children, including neglect and physical, mental, and sexual exploitation and abuse.
- Treat children with respect and dignity and consider their best interests, irrespective of their race, colour, sex, language, religion, political or other opinions, national, ethnic or social origin, property, disability, health, birth, sexual orientation, gender identity and expression, family composition, or other status.
- Listen to children's voices, give due weight to their ideas and opinions, and empower them so they learn about and are able to exercise their rights.
- Be a positive role model to other children by displaying high standards of behaviour at all times.
- Seek the informed consent of children and of their parents or guardians prior to taking children's photos or videos.
- Ensure that children are represented in a dignified, respectful manner and that accurate context for the child's story or image is always provided.
- Raise any concerns, problems, or issues pertaining to child safety and well-being with the safeguarding focal point as soon as possible.
- Immediately report any violations of this policy.
- Encourage children to speak out and raise concerns about any issue, including any kind of harm.
- Cooperate fully and confidentially in any investigation of concerns or allegations of discrimination and violence against children.

I will NOT:

- Engage in any form of physical, emotional or sexual violence against children.
- Use language, images, emojis or make suggestions or offer advice that is inappropriate, offensive, abusive, discriminatory, sexually provocative, or culturally insensitive.
- Act in ways intended to shame, humiliate, belittle, or degrade children or otherwise perpetrate any form of emotional abuse.
- Encourage children or young people to do something harmful to themselves, others or property.
- Take photos or images of children that could endanger or adversely affect them by showing their home, community or general whereabouts; further stigmatize any child; include categorizations or descriptions that expose a child to negative reprisals, such as additional physical or psychological harm or lifelong abuse, discrimination or rejection.
- Take and share screenshots or recordings of online activity without the consent of all children and young people included in recording, photo or video.
- Publish a child's last name or any personal information that could be used to identify a child's location.
- Ask for personal contact details (i.e., email address, phone number, social media contact) of a child, unless there has been explicit authorization from the organizers to do so for business purposes.
- Communicate with a child via digital platforms (e.g., Facebook, Twitter), mobile technology (e.g. texting, WhatsApp, Skype), or online without consent and knowledge of the child's parents or legal guardians.
- Condone or participate in activities with children that are illegal, unsafe or abusive.
- Stay silent, cover up, or enable a known or suspected child safeguarding incident or breach of this code of conduct.
- Threaten a child with violence or abuse.
- Discriminate against or show preferential treatment or favour to a particular child to the detriment of that child or other children.
- Access, view, create, download, or distribute sexually abusive images and materials of children.

Appendix 1.5: Sensitization Message and Screening Questions for Young People

The National Researcher and UNICEF Thailand will work with the local youth organizations to conduct rapid screening of young people who may be potentially eligible to participate. Each local youth organization will advise on the most appropriate way to conduct the screening with their network of young people.

UNICEF Thailand would like to consult with young people to find out what they think about digital health services. They want to understand how these services meet the needs of different groups of young people at the moment, and how they might be improved in the future.

Young people who are connected with three different youth organizations like [insert name of youth organization] are being asked to take part.

There will be two different research groups: one for those who have previously used Teen Club or Lovecare Station, and one for those who haven't. In order to make sure that you are invited to join the right group, we have some quick questions. Once we know which group would be right for you, you will be provided with all the detailed information you need to know about what is involved, what would be expected from you, and how the information will be used.

Data to be captured during screening:

1. Gender identity
2. Age
3. Have you ever used the Teen Club digital health service?
4. Have you ever used the Lovecare Station digital health service?
5. If answer "yes" to either 3 or 4, would you say that you have been using [insert name of service] for at least six months?

Appendix 1.6: Invitation Message for Young People (Line Chats and FGDs)

The message below is based on the one provided in the UNICEF Guidance on Consultations with Young People.

The National Researcher and UNICEF Thailand will work with the local youth organizations to communicate this sensitisation message to young people. Where necessary or more appropriate, it may be communicated verbally initially.

The sections in brackets, highlighted in yellow, should be tailored with each local youth organization at the time of implementation.

Hello,

Please read this letter with your parent or guardian.

We are UNICEF Thailand and we are consulting with young people to find out about what they think about digital health services in order to understand how they meet their needs at the moment, and how they might be improved in the future.

We would like to invite you to take part in this consultation. Before you make a decision, it is important for you to know why this is happening and what it will involve. If you agree to take part, we will ask you to sign the attached consent form. If you are under 18, we will also ask your parent or guardian to sign the informed consent form.

Please take your time to read the following information carefully and discuss it with others if you wish.

Why have I been chosen?

Young people who are connected with three different youth organizations like [insert name of youth organization] are being asked to take part. You have been asked to participate because we would like to find out more about your own experience and your views on digital health services.

You have been invited to join this section of the research in particular because you have indicated that you have not previously used Teen Club or Lovecare Station.

What will I be asked to do if I say yes?

If you say yes to taking part in the consultation, you will be asked to participate in two activities.

Activity 1 - Try Out Teen Club and Lovecare Station

The first activity is to spend a little time trying out Teen Club and Lovecare Station. To support you through the process, you will be invited to join a Line chat group with a small group of young people of a similar age, some of whom you may know from [insert name of local youth organization].

A facilitator from UNICEF Thailand will lead the chat group. A representative from [insert name of local youth organization] will also be included in the chat group and, if you are under 18, your parent or guardian may choose to join as well.

Over a period of roughly one week, the facilitator will message through the chat group, asking you to take a look at the Teen Club and Lovecare Station digital health services, and giving you some quick, simple activities to do every day. These activities should take no more than 15 minutes each, and you will be able to do them at a time convenient to you, using your mobile phone.

Activity 2: Participate in a group discussion

After you have had a chance to try out Teen Club and Lovecare Station, the second activity will be to meet with the group to participate in a discussion together.

The session will involve you discussing your experience using Teen Club and Lovecare Station, as well as discussing your views on digital health services more generally.

The location of the consultation will be [insert location if in-person, or details of digital channel for remote delivery], and the discussion will last for approximately two hours.

The same facilitator from the Line chats will lead the group discussion. A representative from [insert name of local youth organization] will be there to focus on young people's protection and well-being.

What is the benefit of taking part?

The main benefit of taking part in this consultation process is that you will contribute to improving how digital health services meet the needs of young people.

To cover the cost of the mobile data you will need to use to participate in the Line chats and to do the activities on Teen Club and Lovecare Station, you will be provided with a 500 Baht mobile phone data recharge voucher. This will be provided to you in advance, using the phone number you provide to us.

In return for the time you take to participate in this process, UNICEF Thailand will provide you with 1,000 Baht. This will be provided to you on the day of the group discussion.

[Only include this statement regarding travel costs if applicable – i.e. if the decision has been made with the local youth organization to deliver the focus group in person]. You will also receive reimbursement for your travel costs to attend the discussion group to the value of 500 Baht.

Do I have to take part in this consultation?

Participation is voluntary and you do not have to take part.

If you choose to participate and are over 18, you will need to sign the attached consent form.

If you are under 18, this letter will be shared with your parent or guardian. You will sign the attached form to give your assent, and your guardians will sign to give their consent. Your choice to take part or not will not affect any services that you currently receive.

What if I say yes and then change my mind?

You can change your mind during the consultation process and choose to leave. Just let the facilitator know that you wish to withdraw. However, please consider that anything you say before you leave the process will remain in the record, but your name will not appear anywhere.

Will my participation in the study be kept confidential?

Yes, your views will remain confidential. Your name will only be shared in writing with the organizers. The consultation report may include what you say but will not include your name.

An audio recording will be made of the group discussion so that we can accurately capture what is said in a summary report, but everything will be anonymized so nothing you say will be linked back to you. The recording will be deleted after the summary report is completed.

It is possible that one or more of the people in your group may be familiar to you if you are both connected to [insert name of local youth organization]. In order to take part in the study, you must agree that you will not share the personal details or personal views of others in the study with anyone else. This means that everyone in your group must also agree that they will not share your personal details or personal views.

The confidentiality of everything you say would only be affected if you report any case of type of abuse happening to yourself or others. In this case, we may be required to share this information with the relevant authorities.

What will happen to the results of this consultation?

Once the consultation is completed, the information will be written into a report. The results will help UNICEF Thailand work towards improving digital health services for young people in Thailand. The report will be discussed with relevant decision makers, and the organizers will get back to you to explain how the consultation influenced decisions regarding the topics you discussed.

Finding out more about the purpose of this consultation:

If you would like to find out more about this project and consultation, please contact [name and contact information of National Consultant].

What next?

If you want to take part in the study, read and sign the consent form below. If you are under 18, have your parent or guardian also sign. Return the signed form to [name and contact information of National Consultant].

Appendix 1.7: Informed Consent Form for Young People and Parents/ Guardians (Line Chats and FGDs)

This informed consent form is adapted from the one provided in the UNICEF Guidance on Consultations with Young People.

Consultation on Digital Health Services for Young People in Thailand.

Before you agree to participate, make sure you read and understand the invitation letter and this consent form. Then make sure you tick each box to provide your consent and sign below. If you are under 18, we need your signature for informed assent, as well as your parent or guardian's signature for their consent on this form.

If you have any questions or concerns about this form contact [name of youth organization representative].

	Young Person	Parent or Guardian (only for those below 18)
I have read the invitation letter (or someone has read it to me), explaining the consultation and its purpose.		
I agree to (my child) taking part in the consultations referred to in the invitation letter.		
I understand that all the personal information gathered will be kept strictly confidential.		
I declare that I will not share the personal details or personal views of others who are taking part in the consultation.		
I allow my (my child's) views, stories or other contributions shared during the consultation to be used in whole or in part in publications, such as reports, journal articles, newsletters, or social media channels. I understand that my (my child's) identity will remain anonymous.		
I understand the facilitator may make an audio recording of the consultation for note-taking purposes and that the audio file will be deleted after the consultation report is completed.		
I understand that a safeguarding focal point will be present for support and any relevant follow-up in case I talk (my child talks) about anything that could cause harm or distress to myself (my child) or others.		
I understand that if I report (my child reports) any type of abuse happening to myself (my child) or others, the safeguarding focal point may be required to share this information with the relevant authority.		
I understand that my (my child's) participation is voluntary and that I (my child) can withdraw from the consultation at any time. If I withdraw during the consultation, I will notify [name of organization representative].		
I understand that the input provided by me (my child) during this consultation will be anonymized and synthesized in the consultation report.		
[Only include this statement regarding travel if applicable – i.e. if the decision has been made with the local youth organization to deliver the focus group in person].		
I declare that I will not consider UNICEF responsible and I will not ask for any sort of payment in case of any accident that occurs with my (my child's) travel to and from the consultation, including injuries, sickness or costs related to the travel beyond what was agreed.		

Participant:

I have read the information sheet and understand all of the points above, and I AGREE to take part in this consultation.

Participant's name:

Contact number:

Gender: Male; Female; Other: please specify

Date of birth:

Signature:

Date:

Parent or guardian (if participant is under 18):

I have read the information sheet and understand all of the points above, and I AGREE to let my child take part in the consultation.

Parent or guardian's name:

Contact number:

Signature:

Date:

Appendix 1.8: Line Chat Script

1. Facilitator Guide

This is to be used as a script within the Line chat groups. Each chat group will have roughly eight participants. They will all be young people, aged 16-24 years. They will have been recruited in collaboration with a local youth organization with which they are involved, so many may already know each other. The same group will meet in person for the Focus Group in workstream 7.

The script will support each group through a series of simple daily activities, over a period of one week.

Where daily activity boxes are indicated within the script, these boxes may be created as small images (or some other approach to break up the text that is suitable for a Line chat).

Spaces are indicated where Line stickers may be appropriate, but these are indicative as a guide. Specific appropriate stickers and the appropriate places to insert them in the script will be identified through the process of translation and localization of the script.

2. Script

<p>Day 1</p> <p>Welcome and orientation</p>	<p>Hi everyone! Welcome to the group. [insert appropriate Line sticker]</p> <p>My name is Tanawan - I am so happy to meet you all.</p> <p>Thank you for agreeing to participate in this research project and joining the group! We are so excited to learn from you.</p> <p>What will happen this week?</p> <p>Over the next week we will be sharing some links to digital health services for you to try out. Each day we will share a quick, simple daily activity. Each activity should take no more than 15 minutes, and you will be able to do them using your mobile phone.</p> <p>You should all have already received a mobile data recharge voucher - please let me know if you haven't received yours.</p> <p>When should I do the daily activity?</p> <p>We will share the activity each morning, and you can do the activity at a time that day that is convenient to you. We ask that you complete the activity by the end of that same day, as this helps us all stay together as a group.</p> <p>What happens if I have an issue?</p> <p>If you have any issues with any of the activities, or with anything else - please message me and I will do my best to help :)</p> <p>How will the group behave?</p> <p>We expect everyone to act in a friendly and polite manner within this group. We will all treat each other with respect.</p> <p>We expect you to respect each others' privacy. Do not share each others' personal details or personal views outside this group.</p> <p>How do I stay anonymous in this chat?</p> <p>If you prefer to stay completely anonymous, you may choose to update your Line "display name" and profile picture. You can do this under "edit profile" in your Line settings. Please let me know if you need help to do this.</p> <p>What happens now?</p> <p>I will be in touch tomorrow morning with the first daily activity.</p> <p>In the meantime - if you would like to, you may introduce yourselves to the group [insert appropriate Line sticker]</p>
<p>Day 2</p> <p>Lovecare Station Task 1</p>	<p>Good morning! [insert appropriate Line sticker]</p> <p>I hope you are excited to get started!</p> <p>The first digital health service we will be looking at is Lovecare Station.</p> <p>Our very first daily activity is simply to go to Lovecare Station and have a look around.</p> <p>When you have spent a few minutes checking it out, please come back to this chat before the end of today and share your comments. We especially want to know:</p> <ul style="list-style-type: none"> • How interesting do you find the information on Lovecare Station? • How relevant is the information to you personally? • Can you think of any other information topics that would be helpful?

Daily activity 1

1. Go to www.lovecarestation.com and look around the site.
2. Come back to this chat and share your feedback!
 1. How interesting do you find the information on Lovecare Station?
 2. How relevant is the information to you personally?
 3. Can you think of any other information topics that would be helpful?

when people start to share

Thank you for sharing your thoughts!

later in the day - if needed

Thank you for the feedback you have shared so far. If you haven't shared yours yet, please remember to do so before the end of the day.

after everyone has shared

Thanks so much for all your first impressions. Remember to check back tomorrow for the next daily activity!

Day 3**Lovecare
Station task 2**

Good morning!

In **tomorrow's** daily activity, we are going to try out the online counselling service within Lovecare Station.

So for **today's** daily activity, we are doing some planning! We simply want you to choose a health situation that you will ask for advice on tomorrow.

If you want, you can choose a real situation that you or a friend have experienced, or you can choose an imaginary situation that a young person like you might face.

****You don't have to share any details of the health situation here in this group****

Once you've chosen the health situation, think of three specific questions you want to ask in the Lovecare Station online counseling room. The three questions should relate to the health situation you have chosen.

****You don't have to share any details of the health situation or the questions here in this group****

Let us all know that you're ready for tomorrow - just say "I'm ready!"

Daily activity 2

1. Choose a health situation.
2. Choose three specific questions related to that health situation.
3. Don't share them within this group - just tell us "I'm ready!"

[insert appropriate Line sticker]

when people start to say "I'm ready"

Thank you for letting us know that you are ready for tomorrow!

later in the day - if needed

If you are struggling to think of anything, have a look through the Lovecare Station site again and it may give you some inspiration.

Remember to check back tomorrow for the next daily activity!

Day 4**Lovecare
Station task 3**

Good morning!

[insert appropriate Line sticker]

No surprise here: for today's daily activity, we are going to try out the chat counselling service within Lovecare Station.

This advice service is open between 18.00-21.00.

After yesterday, you should all have your three questions ready to go.

So when the chat advice is open later today (18.00-21.00), please go to [insert link to Lovecare Station counselling service]. Once you're in the chat room, you can ask for advice on the health situation you have chosen. Use your three questions.

Then come back to this group, and tell us about your experience. We want to know:

1. How long did you have to wait before you connected to a counsellor?
2. How would you describe the attitude of the counsellor?
3. How helpful was the information? Did you feel the questions were answered sufficiently?
4. How long did the chat take in total?
5. How was your overall experience of the counselling service?
6. Any recommendations for how it could be improved?

Remember, you don't have to share any details of the health situation here in this group

Daily activity 3

1. When the chat advice is open later today (18.00-21.00), please go to [insert link to Lovecare Station counselling service].
2. Once you're in the chat room, ask for advice on the health situation you have chosen. Use your three questions.
3. Come back to this group and tell us about your experience. We want to know:
 - a. How long did you have to wait before you connected to a counsellor?
 - b. How would you describe the attitude of the counsellor?
 - c. How helpful was the information? Did you feel the questions were answered sufficiently?
 - d. How long did the chat take in total?
 - e. How was your overall experience of the counselling service?
 - f. Do you have any recommendations for how it could be improved?

at 18.00

The online counselling service is now open! Don't forget to visit [insert link to Lovecare Station counselling service] and get some advice from a counsellor, using your three questions.

when people start to share

Great - thank you for sharing your feedback!

at 20.30 - if needed

Thank you for the feedback you have shared so far. If you haven't had chance to visit [insert link to Lovecare Station counselling service] yet, you have 30 minutes to visit before the online advice closes for today. Don't miss out!

after everyone has shared

Thanks so much for all your feedback. Remember to check back tomorrow for the next daily activity!

<p>Day 5</p> <p>Teen Club Task 1</p>	<p>Good morning! [insert appropriate Line sticker]</p> <p>We now have a new digital health service for you to explore: Teen Club!</p> <p>Today's daily activity is a nice quick one after yesterday. Just sign up to Teen Club and have a look around.</p> <p>When you have explored a little, please come back to this chat before the end of today and share your first impressions!</p> <div style="border: 1px solid #ccc; border-radius: 15px; padding: 10px; margin: 10px 0;"> <p>Daily activity 4</p> <ol style="list-style-type: none"> 1. Sign up to [insert link to Teen Club channel on Line] and look around. 2. Come back to this chat and share your first impressions! </div> <p><i>*when people start to share*</i></p> <p>Thank you for sharing your thoughts!</p> <p><i>*later in the day - if needed*</i></p> <p>Thank you for the first impressions you have shared so far. If you haven't shared yours yet, please remember to do so before the end of the day.</p> <p><i>*after everyone has shared*</i></p> <p>Thanks so much for all your first impressions. Remember to check back tomorrow for the next daily activity!</p>
<p>Day 6</p> <p>Teen Club Task 2</p>	<p>Good morning!</p> <p>Today's daily activity is to get to know Teen Club a bit more.</p> <p>There are six different activities you can do on Teen Club:</p> <ol style="list-style-type: none"> 1. Health assessment 2. Checking your health care entitlement 3. Information 4. Period tracking 5. Hotlines for help 6. P'Khong Kwan chatbot <p>Take some time today to have a look at all six different functions.</p> <p>**Spoiler alert - tomorrow we will be focusing on trying out the P'Khong Kwan chatbot in more detail, so you can just take a quick look today.**</p> <p>[insert appropriate Line sticker]</p> <p>Then come back to this chat and let us know your feedback on the six functions! We especially want to know:</p> <ul style="list-style-type: none"> • Which of these six is the most helpful type of service for you personally and why? • Which is the least helpful and why? • What else could be added to make Teen Club more useful for you?

Daily activity 5

1. Go back to [\[insert link to Teen Club channel on Line\]](#) and look at all six functions on offer:

- Health assessment
- Checking your health care entitlement
- Information
- Period tracking
- Hotlines for help
- P'Khong Kwan chatbot

2. Then come back to this chat and let us know your feedback on the six functions! We especially want to know:

- a. Which of these six is the most helpful type of service for you personally and why?
- b. Which is the least helpful and why?
- c. What else could be added to make Teen Club more useful for you?

when people start to share

Great - thank you for sharing your feedback!

[\[insert appropriate Line sticker\]](#)

later in the day - if needed

Thank you for the feedback you have shared so far. If you haven't shared yours yet, please remember to do so before the end of the day.

after everyone has shared

Thanks so much for all your feedback. Remember to check back tomorrow for the very last daily activity!

Day 7**Teen Club
Task 3****Close and
next steps**

Good morning!

Today's daily activity is the last one. We gave a spoiler yesterday...

For our final daily activity, we want you to try using the P' Khong Kwan chatbot on Teen Club. Explore the questions and answers.

The P'Khong Kwan chatbot is open between 9.00-15.00.

Then come back to the chat and share your feedback. We especially want to know:

- How interesting do you find the information provided by P'Khong Kwan?
- How relevant is the information to you personally?
- Can you think of any other information topics that would be helpful?

Daily activity 6

1. Go back to [\[insert link to Teen Club channel on Line\]](#) and explore the questions and answers in the P'Khong Kwan chatbot section.

2. Then come back to this chat and let us know your feedback:

1. How interesting do you find the information provided by P'Khong Kwan?
2. How relevant is the information to you personally?
3. Can you think of any other information topics that would be helpful?

when people start to share

Great - thank you for sharing your feedback!

at 14.30 - if needed

Thank you for the feedback you have shared so far. If you haven't had chance to visit [\[insert link to Teen Club\]](#) yet, you have 30 minutes to visit before the chat with P'Khong Kwan closes for today. Don't miss out!

[\[insert appropriate Line sticker\]](#)

later in the day - if needed

Thank you for the feedback you have shared so far. If you haven't shared yours yet, please remember to do so before the end of the day.

after everyone has shared

Thanks so much for all your updates throughout the week. We hope you have enjoyed exploring Lovecare Station and Teen Club.

There are no more daily activities, so that's it for this chat group for now. The next step is for us all to meet together for a group discussion. We can't wait!

As a reminder, this group session will be held [\[insert location, date and time as previously communicated\]](#).

We look forward to meeting you all then and learning even more from you!

[\[insert appropriate Line sticker\]](#)

Appendix 1.9: Focus Group Discussion Guide

1. Guidance for Facilitator

Participants

Each FGD will have roughly eight participants. They will all be young people, aged 16-24 years. They will have been recruited in collaboration with a local youth organization with which they are involved, so many may already know each other. The group will have been together in a Line chat group in workstream 6.

Practicalities

The FGD logistics will have been arranged in collaboration with the relevant local youth organization, with recognition of specific access needs. If needed, a sign-language interpreter may be present.

The most appropriate delivery mode will have been arranged in collaboration with the relevant local youth organization. (Either in-person or remote using video conferencing software).

Agenda

2 hours total, divided roughly as follows:

Activity	Approx. Duration
Welcome and Orientation	5 mins
Introductory Icebreaker	10 mins
Theme 1 - Perspectives and Priorities for Digital Health Services	45 mins
Break	10 mins
Theme 2 - Feedback and Lived Experience	45 mins
Thanks and Close	5 mins

Time Management

Be flexible and gauge the needs of the group. They might need more or less time to discuss a particular question, and they may need a break sooner than anticipated.

It might not be possible to get through all prompts under each section. A quality insightful discussion around fewer prompts is more valuable than skimming the surface of all the prompts. Use your judgment to keep the discussion on track and at an appropriate pace.

2. Discussion Plan

N.B. This is not intended to be a verbatim script, but a guide for the facilitator.

Welcome and Orientation (5 mins)

Introduce yourself, acknowledging that you are the facilitator from the Line chats. Welcome participants and thank them for taking the time out of their busy days to spend the time together here today.

Explain that everyone will have a chance to introduce themselves in a few moments with a fun activity.

Explain the agenda for the session at a high level, consisting of two core discussions where they can share their stories and views:

- The first discussion is to understand their perspectives and priorities when it comes to digital health services - what they look for, what they need and want, etc.
- The second section is to understand their specific experiences using digital health services they tried out recently (Teen Club and Lovecare Station) and any others.

Explain that there will be a break in between the two sections.

Introduce some principles for the discussions:

- Our promise to participants:
 - o **Privacy:** We will listen carefully to everything you say. However, when we share what we have learnt from you, we will make sure that everything will be made anonymous. We will not share your name or any of your personal details, and nothing you say will be linked to you personally.
 - o We will be recording the audio session so we can capture what you're saying accurately, but this recording will not be made public. We will not be capturing any video.
 - o **To listen with care and respect:** Our role here is to guide the discussion, and to ensure that everyone gets a chance to share their stories and perspectives, within the time we have here together.

- What we would like from participants in return:
 - **Your honest experience and opinions:** You might all have different views. Every single viewpoint is valuable. So, feel free to express your opinion even if it is different to others. We want to learn from lots of different voices, and there are no right or wrong answers.
 - **To hear everyone's voices:** Please try to express yourself clearly and concisely and let others speak too.
 - We expect you to respect each others' privacy. Do not share each others' personal details or personal views outside this group.

Introductory Icebreaker (10 mins)

Two truths and a lie.

Invite the participants to spend a minute or two thinking of two true facts about themselves and a lie. For example: "Sirirath sings in a choir, plays football every week, and speaks four languages. Which one is false?"

After they have had a moment to think of their three statements, go round the group, with each participant saying their name and their three statements, and allow the others to guess which they think is false.

Theme 1: Perspectives and Priorities for Digital Health Services (45 mins)

Introduce the theme: explain we are interested to understand their perspectives on digital health services, why they might use them, what they look for and what specific factors are important to them.

Prompts for discussion:

- Start by asking for some examples of the digital health services they use. What benefit do they get from them?
- When they want to find health information or have a particular health need, how do they decide whether to use a digital health service versus an in-person health service? What factors would they consider when making that decision?
- When looking for a digital health service, what factors would make them choose one digital health service over another?
 - Which factors make them want to use one service over another?
 - Are there any factors that would prevent them from wanting to use a particular digital health service?
 - Which factors make them able to use one service over another?
 - Are there any factors that would prevent them from being able to use a particular digital health service?
 - Which factors are the most important?

Break (10 mins)

Theme 2: Feedback and Lived Experience (45 mins)

Introduce the theme: explain we are interested to understand their experiences trying out Teen Club and Lovecare Station. This includes finding out what they liked and didn't like, and how this compares to their experience using other digital health services.

Ask them to have in the back of their mind the factors that you have said are important to you in a digital health service.

What was your experience using Teen Club?

- What did you like about it?
- What didn't you like about it?
- How easy did you find it to use? Were there any challenges accessing it or finding your way around?
- What were your impressions of the way it looked?
- What were your impressions of the content?
- What were your impressions of the features?
- Overall, do you feel like Teen Club was designed with your needs in mind? Who would you say Teen Club is meant for?

What was your experience using Lovecare Station?

- What did you like about it?
- What didn't you like about it?
- How easy did you find it to use? Were there any challenges accessing it or finding your way around?
- What were your impressions of the way it looked?
- What were your impressions of the content?
- What were your impressions of the features?
- Overall, do you feel like Lovecare Station was designed with your needs in mind? Who would you say Lovecare Station is meant for?

Think back to the discussion earlier on what is important to you in a digital health service:

- Which of the two services do you feel better fulfils what you are looking for in a digital health service?
- How do Teen Club and Lovecare Station compare to other digital health services you use?
 - o Is there anything better about the experience of using Teen Club or Lovecare Station when compared to others?
 - o Is there anything worse?

Thanks and Close (5 mins)

Thank the participants for contributing to the discussions.

Hand out the participant benefits as reimbursement for their time and travel costs; they will be expecting to receive these.

Bring the session to a close.

Appendix 1.10: Invitation Message for Young People (KIIs)

The message below is based on the one provided in the UNICEF Guidance on Consultations with Young People.

The National Researcher and UNICEF Thailand will work with the local youth organizations to communicate this sensitisation message to young people. Where necessary or more appropriate, it may be communicated verbally initially.

The sections in brackets, highlighted in yellow, should be tailored with each local youth organization at the time of implementation.

Hello,

Please read this letter with your parent or guardian.

We are UNICEF Thailand and we are consulting with young people to find out about what they think about digital health services in order to understand how they meet their needs at the moment, and how they might be improved in the future.

We would like to invite you to take part in this consultation. Before you make a decision, it is important for you to know why this is happening and what it will involve. If you agree to take part, we will ask you to sign the attached consent form. If you are under 18, we will also ask your parent or guardian to sign the informed consent form.

Please take your time to read the following information carefully and discuss it with others if you wish.

Why have I been chosen?

Young people who are connected with three different youth organizations like [insert name of youth organization] are being asked to take part. You have been asked to participate because we would like to find out more about your own experience and your views on digital health services.

You have been invited to join this section of the research in particular because you have indicated that you have previously used Teen Club or Lovecare Station.

What will I be asked to do if I say yes?

If you say yes to taking part in the consultation, you will be asked to participate in an individual consultation with a representative from UNICEF Thailand.

The consultation will involve you discussing your experience using Teen Club and Lovecare Station, as well as discussing your views on digital health services more generally.

The consultation will be conducted by either telephone call or [insert most appropriate video conferencing software], and the discussion will last for approximately 45 minutes.

What is the benefit of taking part?

The main benefit of taking part in this consultation process is that you will contribute to improving how digital health services meet the needs of young people.

In return for the time you take to participate in this process, UNICEF Thailand will provide you with Baht 500. This will be provided to you in person on the day of your consultation.

Do I have to take part in this consultation?

Participation is voluntary and you do not have to take part.

If you choose to participate and are over 18, you will need to sign the attached consent form.

If you are under 18, this letter will be shared with your parent or guardian. You will sign the attached form to give your assent, and your guardians will sign to give their consent. Your choice to take part or not will not affect any services that you currently receive.

What if I say yes and then change my mind?

You can change your mind during the consultation process and choose to leave. Just let the interviewer know that you wish to withdraw. However, please consider that anything you say before you leave the process will remain in the record, but your name will not appear anywhere.

Will my participation in the study be kept confidential?

Yes, your views will remain confidential. Your name will only be shared in writing with the organizers. The consultation report may include what you say but will not include your name.

An audio recording will be made of the discussion so that we can accurately capture what is said in a summary report, but everything will be anonymised so nothing you say will be linked back to you. The recording will be deleted after the summary report is completed.

Confidentiality of everything you say would only be affected if you report any case of type of abuse happening to yourself or others. In this case, we may be required to share this information with the relevant authority.

What will happen to the results of this consultation?

Once the consultation is completed, the information will be written into a report. The results will help UNICEF Thailand work towards improving digital health services for young people in Thailand. The report will be discussed with relevant decision makers, and the organizers will get back to you to explain how the consultation influenced decisions regarding the topics you discussed.

Finding out more about the purpose of this consultation:

If you would like to find out more about this project and consultation, please contact [name and contact information of National Consultant] or if you would like to contact UNICEF Thailand directly please contact Sirirath Chunnasart, Adolescent Development Specialist: schunnasart@unicef.org and Jagkrapan Janchatree, Adolescent Development Officer: jjanchatree@unicef.org.

What next?

If you want to take part in the study, read and sign the consent form below. If you are under 18, have your parent or guardian also sign. Return the signed form to [name and contact information of National Consultant].

Appendix 1.11: Informed Consent Form for Young People and Parents / Guardians (KIs)

This informed consent form is adapted from the one provided in the UNICEF Guidance on Consultations with Young People.

Consultation on Digital Health Services for Young People in Thailand.

Before you agree to participate, make sure you read and understand the invitation letter and this consent form. Then make sure you tick each box to provide your consent and sign below. If you are under 18, we need your signature for informed assent, as well as your parent or guardian's signature for their consent on this form.

If you have any questions or concerns about this form please contact Sirirath Chunnasart, Adolescent Development Specialist: schunnasart@unicef.org and Jagkrapan Janchatree, Adolescent Development Officer: jjanchatree@unicef.org.

	Young Person	Parent or Guardian (only for children under the age of 18)
I have read the invitation letter (or someone has read it to me), explaining the consultation and its purpose.		
I agree to (my child) taking part in the consultations referred to in the invitation letter.		
I understand that all the personal information gathered will be kept strictly confidential.		
I allow my (my child's) views, stories or other contributions shared during the consultation to be used in whole or in part in publications, such as reports, journal articles, newsletters, or social media channels. I understand that my (my child's) identity will remain anonymous.		
I understand the facilitator may make an audio recording of the consultation for note-taking purposes and that the audio file will be deleted after the consultation report is completed.		
I understand that a safeguarding focal point will be present for support and any relevant follow-up in case I talk (my child talks) about anything that could cause harm or distress to myself (my child) or others.		
I understand that if I report (my child reports) any type of abuse happening to myself (my child) or others, the safeguarding focal point may be required to share this information with the relevant authority.		
I understand that my (my child's) participation is voluntary and that I (my child) can withdraw from the consultation at any time. If I withdraw during the consultation, I will notify [name of organization representative].		
I understand that the input provided by me (my child) during this consultation will be anonymized and synthesized in the consultation report.		
I declare that I will not consider UNICEF responsible and I will not ask for any sort of payment in case of any accident that occurs with my (my child's) travel to and from the consultation, including injuries, sickness or costs related to the travel beyond what was agreed.		

Participant:

I have read the information sheet and understand all of the points above, and I AGREE to take part in this consultation.

Participant's name:

Contact number:

Gender: Male; Female, Other – please specify

Date of birth:

Signature:

Date:

Parent or guardian (if participant is under 18):

I have read the information sheet and understand all of the points above, and I AGREE to let my child take part in the consultation.

Parent or guardian's name:

Contact number:

Signature:

Date:

Appendix 1.12: Young People KII Guide

The following is to be used as a guide template for KIIs with young people.

Interviewer Guide

Use the questions below as a guide for a semi-structured discussion. Use your judgment: if the response to one question has expanded to cover a second question too, be flexible and omit the second question so as to keep the conversation progressing.

Introduce yourself and thank them for taking the time out of their busy days to spend the time on the call today.

Remind them that the interview will be audio recorded, and that this will be deleted when the research is finished. Remind them that everything will be made anonymous. When we write up the report for this research, we will not share their name or any of their personal details, and nothing they say will be linked to them personally.

Reassure them that we want their honest experience and opinions and there are no right or wrong answers.

Explain to the participant that the discussion will be structured around a series of questions across a few sections. Introduce each section before starting the questions.

In this section we want to understand what is important for you when you are considering using a digital health service:

1. I believe you have previously used Teen Club and Lovecare Station. Have you used any other digital health services like this?
 1. If so, which ones?
 2. Which digital health service do you use most frequently?
 3. How often do you use it?
 4. Why do you use this one so often?
 5. What benefit do you get from using it?
2. In general, what benefit do you get from using digital health services?
3. When you want to find health information or have a particular health need, how do you decide whether to use a digital health service vs. an in-person health service?
 1. What factors would make you want to use a digital health service instead of an in-person health service?
 2. What factors would make you want to use an in-person health service instead of a digital health service?
4. When looking for a digital health service, what factors would make you choose one digital health service over another?
 1. Which factors make you want to use one service over another?
 2. Are there any factors that would prevent you from wanting to use a particular digital health service?
 3. Which factors make you able to use one service over another?
 4. Are there any factors that would prevent you from being able to use a particular digital health service?
 5. Which factors are the most important?

In this section we want to understand about your experiences of using digital health services, what you like and what you don't like.

5. [Refer back to the digital health service the participant said they use most frequently]. How would you describe the experience of using this digital health service?
 1. What do you like about it? Why?
 2. Is there anything you don't like about it? Why?
 3. How easy do you find it to use? Do you ever face any challenges accessing it or finding your way around?
 4. Overall, do you feel like this digital health service was designed with your needs in mind? Who would you say it is meant for?
6. How often do you typically use Teen Club?
7. How would you describe the experience of using Teen Club?
 1. What do you like about it? Why?
 2. Is there anything you don't like about it? Why?
 3. How easy do you find it to use? Do you ever face any challenges accessing it or finding your way around?

4. Overall, do you feel like Teen Club was designed with your needs in mind? Who would you say it is meant for?
 5. How does the experience of using Teen Club compare to the experience of using [insert most commonly used digital health service]?
8. How often do you typically use Lovecare Station?
 9. How would you describe the experience of using Lovecare Station?
 1. What do you like about it? Why?
 2. Is there anything you don't like about it? Why?
 3. How easy do you find it to use? Do you ever face any challenges accessing it or finding your way around?
 4. Overall, do you feel like Lovecare Station was designed with your needs in mind? Who would you say it is meant for?
 5. How does the experience of using Lovecare Station compare to the experience of using [insert most commonly used digital health service]?

In this final section we want to understand what you would like from digital health services in future.

10. If you had a magic wand and could create the perfect digital health service for you, what would it be like?
 1. What would you be able to do with it? Why is this important?
 2. What benefit would it give you? Why is this important?
 3. What features would it have? Why is this important?
 4. How would you access it? [clarify with examples if needed – e.g. Teen Club is accessed via Line, Lovecare station is accessed via a website]
 5. Who else would you invite to use your perfect digital health service? Is there any group in particular? Why?

Thank the participant for their time and close the interview.

Appendix 2: Study Participants

Appendix 2.1: Full List of Line Chat and FGD Participants

The following 33 individual young people participated in the Line chats and FGDs:

Participant ID	Gender	Age - actual	Age range	Group
A1	Female	21	19-21	Disabilities (Blind)
A2	Female	23	22-24	Disabilities (Blind)
A3	Male	22	22-24	Disabilities (Blind)
A4	Male	21	19-21	Disabilities (Blind)
A5	Male	22	22-24	Disabilities (Blind)
A6	Female	21	19-21	Disabilities (Blind)
A7	Female	18	16-18	General
A8	Female	18	16-18	General
A9	Female	23	22-24	General
A10	Female	18	16-18	General
A11	Female	17	16-18	General
A12	Female	17	16-18	General
A13	Female	22	22-24	General
A14	Female	21	19-21	General
A15	Male	20	19-21	General
A16	Male	18	16-18	General
A17	Male	18	16-18	General
A18	Female	20	19-21	LGBTQI+
A19	Female	19	19-21	LGBTQI+
A20	Female	18	16-18	LGBTQI+
A21	Male	20	19-21	LGBTQI+
A22	Male	17	16-18	LGBTQI+
A23	Male	20	19-21	LGBTQI+
A24	Female	20	19-21	LGBTQI+
A25	Male	19	19-21	Ethnic minorities

Participant ID	Gender	Age - actual	Age range	Group
A26	Female	18	16-18	Ethnic minorities
A27	Female	18	16-18	Ethnic minorities
A28	Female	17	16-18	Ethnic minorities
A29	Female	17	16-18	Ethnic minorities
A30	Male	16	16-18	Ethnic minorities + LGBTQI+
A31	Male	17	16-18	Ethnic minorities + LGBTQI+
A32	Female	17	16-18	Ethnic minorities
A33	Female	17	16-18	Ethnic minorities

Appendix 2.2: Full List of KII Participants

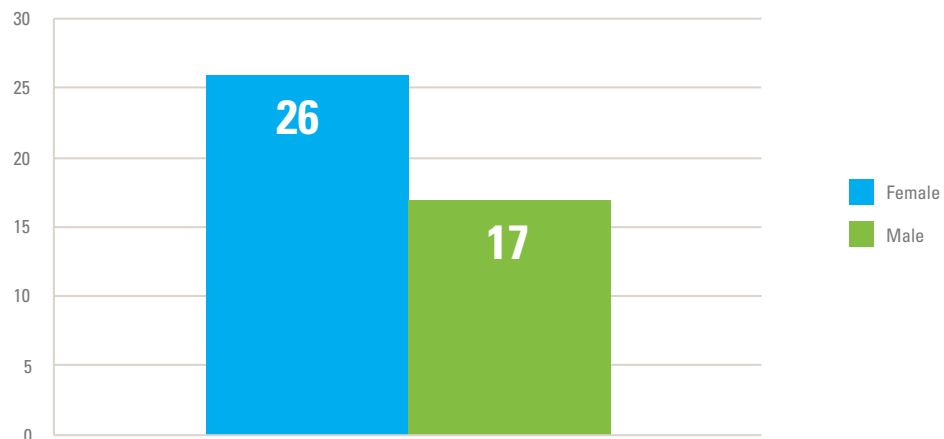
The following 10 individual young people participated in KIIs:

Participant ID	Gender	Age - actual	Age	Group
B1	Female	17	16-18	Ethnic minorities
B2	Female	19	19-21	General
B3	Female	24	22-24	LGBTQI+
B4	Male	21	22-24	General
B5	Female	22	22-24	General
B6	Male	21	22-24	General
B7	Male	21	22-24	General
B8	Male	16	16-18	General
B9	Female	18	16-18	General
B10	Male	16	16-18	General

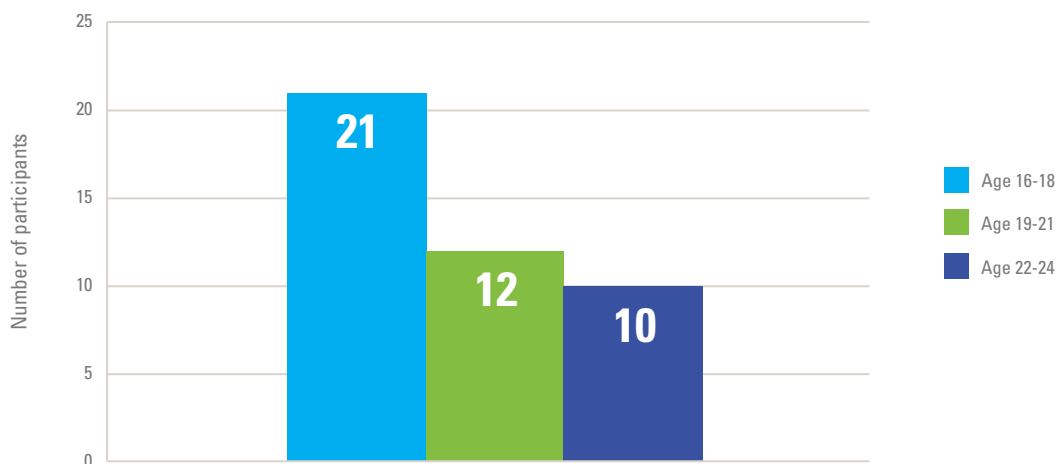
Appendix 2.3: Participant Profile Analysis

The following figures analyse the profiles of the 43 participating young people according to various characteristics. N.B. “group” refers to the nature of the local youth organization(s) through which the young people were recruited.

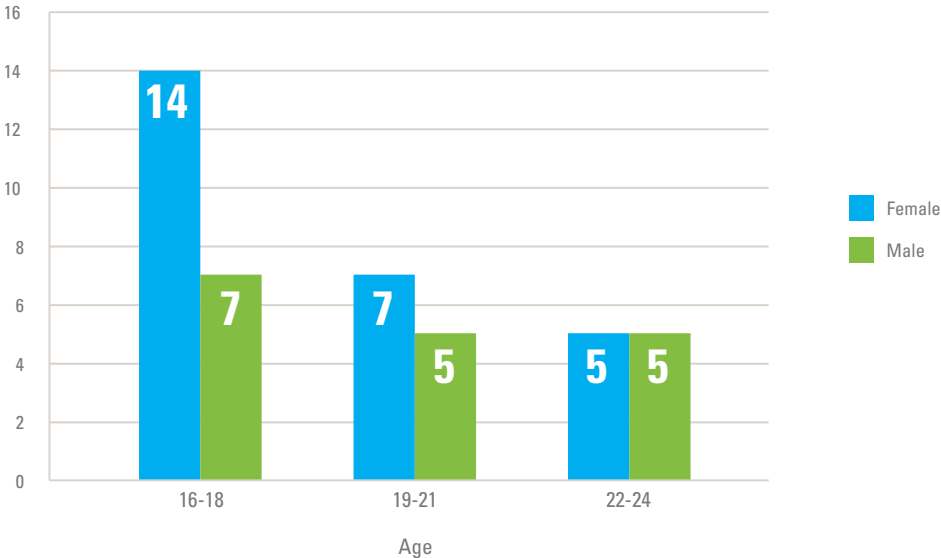
Participant gender (n=43)



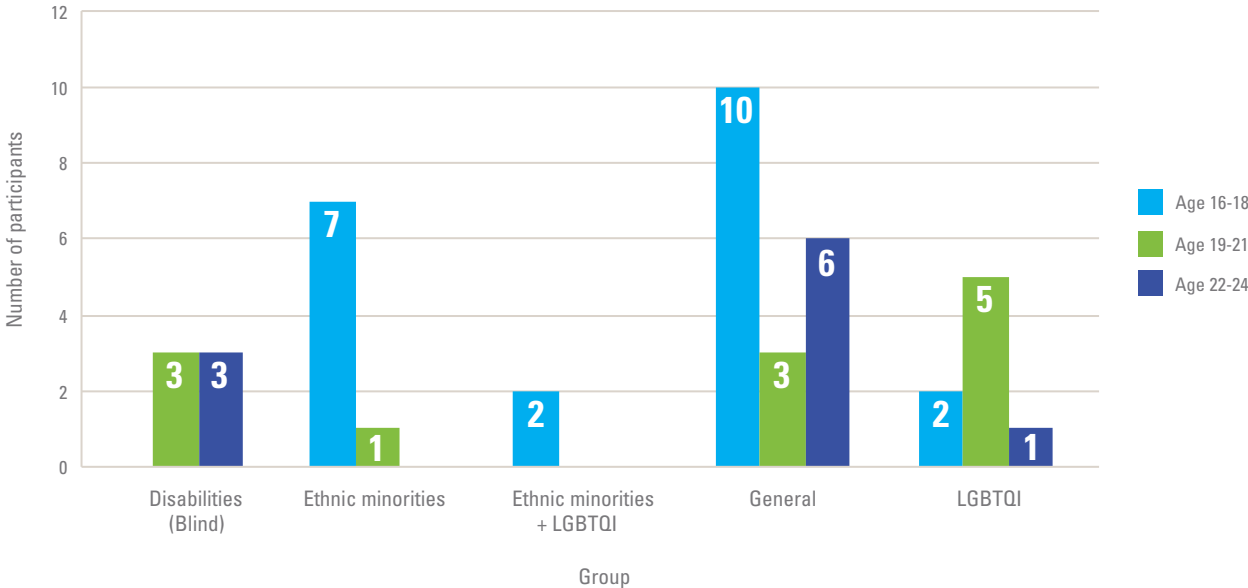
Participant age (n=43)



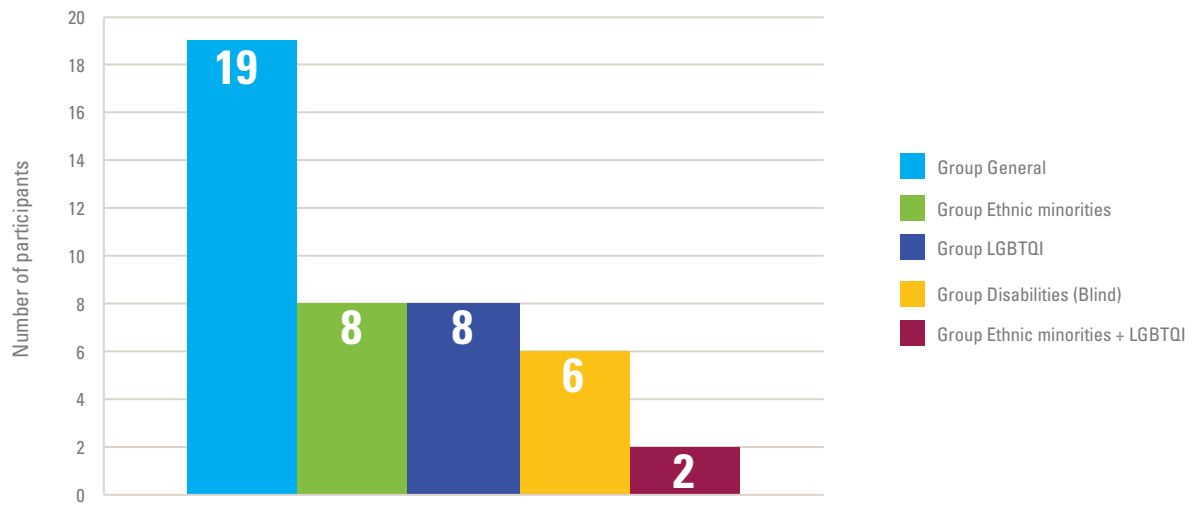
Participant gender - disaggregated by age (n=43)



Participant age - disaggregated by group (n=43)



Participant group (n=43)



Appendix 2.4: Organizational Affiliations for Stakeholder KIIs

1	Teen Club
2	Lovecare Station
3	Stand by You
4	RSA Thai
5	Guan Teen
6	Ooca and Wall of Sharing
7	Pribta and Tangerine
8	Buddy Square
9	National Health Security Office
10	Office of the Permanent Secretary, Ministry of Public Health

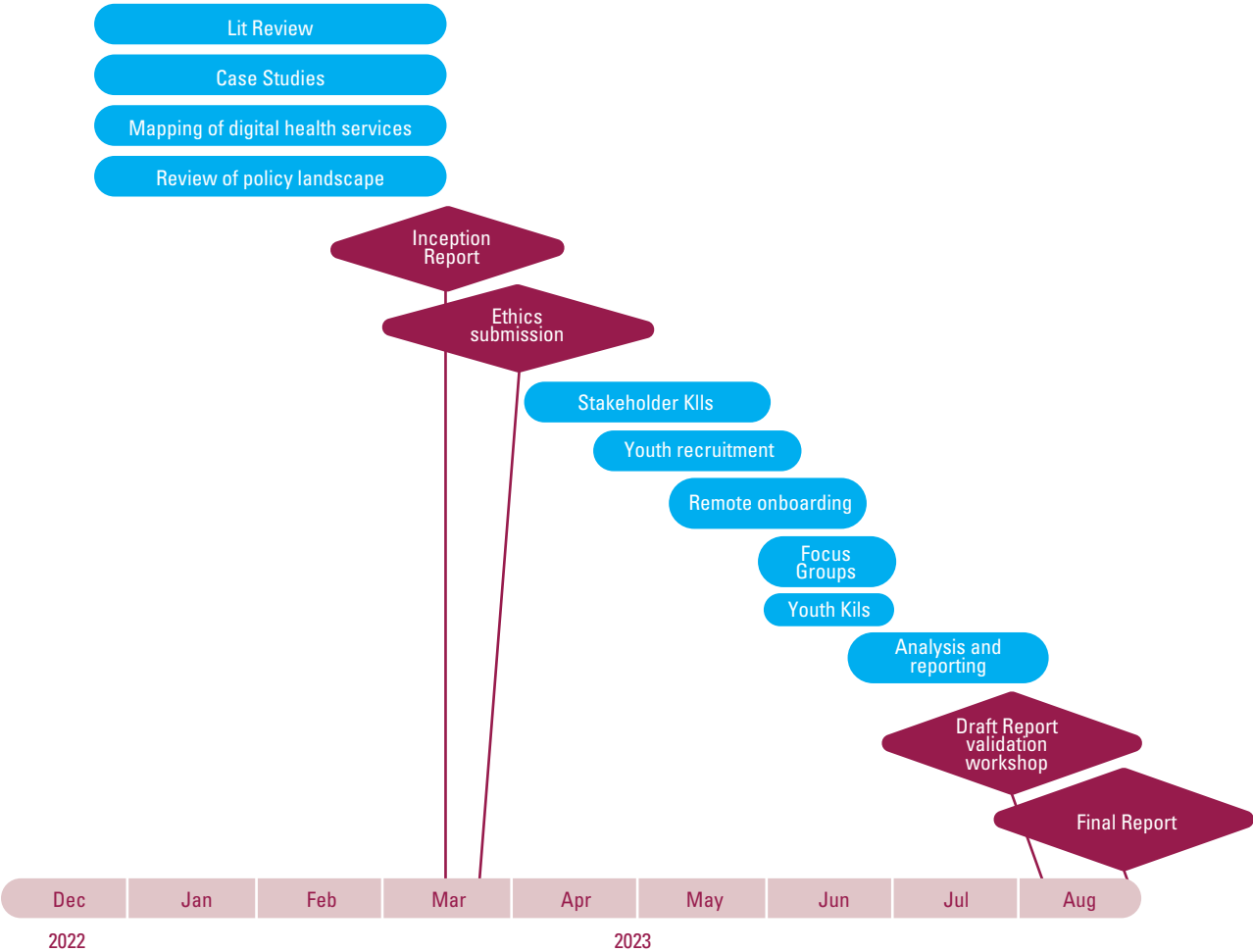
Appendix 2.5: Overview of Digital Health Services that Participated in KIIs

Overview	Launch Date	Data
<p>Teen Club is a digital service to promote health literacy among adolescents, including comprehensive sexuality education and services. It aims to be a one stop service for all teenage health problems. Regular information is sent to those who add Teen Club as a Line “friend”, and users may choose to access further content through features such as a health self-assessment, checking health coverage and entitlement and period tracking. More detailed health information is available through infographics and video content, and users can interact with a chatbot on specific health topics.</p>	February 2022	<p>Approximately 50,000 users access the overall service.</p> <p>In the first six months since its launch in 2023, 3,900 users have used the chatbot service.</p>
<p>Lovecare Station is Thailand’s first website dedicated to youth sex education. The highlight of the service is that youth can request an anonymous consultation with a counsellor. The service originally focused on HIV/AIDS prevention, HIV testing, and counselling, but has expanded to cover sexual health more broadly, as well as mental health. The service also has a Facebook page and a Line channel.</p>	2007	Approximately 150,000 page views on average per month.
<p>Stand By You engages teenagers with knowledge about HIV/AIDS and STIs, offers a tool for self-assessment of personal risk level, and provides free HIV self-testing kits and online consultation to those at risk. Consultation is managed by a team of medical personnel from Siriraj Hospital. Stand By You uses a website as a landing page, and manages direct user communication through Line.</p>	August 2022	Since launch, around 5,000 people have been provided with HIV self-testing kits and 200 have been enrolled to access treatment.
<p>RSA Thai is a web-based service providing information on safe abortion and signposting to local services. It is run by a collaborative network of medics, nurses, social workers, psychologists, and public health professionals from both the public and private sectors, providing users with guidance on Thailand’s abortion policy and laws, a tool to calculate the duration of a pregnancy, and provides a connection to network hospitals in many provinces where eligible women can access safe abortion services.</p>	May 2018	500,000-700,000 page views on average per month and 240,000 users per month. Their goal is to increase new users by 40% per year.
<p>Guan Teen provides communities of high school students (mostly in Bangkok) with sexual health content and a web board chat room. The intervention is school-based: students are introduced to the service by a teacher, and teachers are notified if any students require follow up after a private self-assessment.</p>	Initial 2019 launch affected by COVID-19 –relaunched in 2022	Currently there are 20 schools in Bangkok using the service. In 2022 there were 6,900 users. The schools are responsible for tracking follow-up.

Overview	Launch Date	Data
<p>Ooca and Wall of Sharing use a mobile phone application to provide mental health counselling through video call consultations with a psychologist or psychiatrist conveniently and anonymously anytime, anywhere. Ooca focuses on all age groups, while Wall of Sharing focuses on underprivileged young people, particularly university/college students.</p>	<p>Ooca launched in 2017.</p> <p>Wall of Sharing launched in 2019.</p>	<p>Ooca has around 1,000 users per month. The number of users for Wall of Sharing depends on the volume of donations – usually 800-1,000 users per year.</p>
<p>Pribta and Tangerine are facility-based clinics in Bangkok, run by the Institute of HIV Research and Innovation (IHRI), an NGO. To support their clients, they offer digital services through the Line platform. The Pribta clinic focuses on sexual health and provides services related to prevention and treatment of HIV/AIDS and STIs. The Pribta Line channel provides a fee-based telemedicine service, as well as a tool for booking clinic appointments and ordering home delivery of PrEP and health products such as HIV self-testing kits. The Tangerine clinic provides counselling for sex reassignment surgery and hormone level measurement, and links to the Pribta clinic for services related to HIV/AIDS and STIs. The Tangerine Line channel enables users to access information and to make an appointment.</p>	<p>Tangerine launched in November 2015.</p> <p>Pribta launched in December 2020.</p>	<p>Both Pribta and Tangerine have, on average, 900-1,000 clients per month.</p>
<p>Buddy Square is a Line service aiming to engage young people aged 15-24 with free information and testing for HIV and syphilis. Buddy Square provides information about STIs, as well as the opportunity to complete a personal risk assessment which generates a unique personal risk code, and signposting to local hospital and clinic partners where young people can use their code to share the results of their risk assessment and access testing.</p>	<p>February 2022</p>	<p>Around 9,000 followers in Line. Currently unable to monitor active users of the digital service due to staff shortages, and the distribution of tests is managed by hospital/clinic partners so Buddy Square does not have this data.</p>

Appendix 3: Study Timeline

The diagram below shows the high-level timeline over which the various elements of the study were implemented:



Appendix 4: Ethical Approval

unicef  | for every child

Research Ethics Approval

18 April 2023

Abi Gleek
International Consultant
UNICEF Thailand
19 Phra Athit Rd,
Chana Songkhram,
Phra Nakton
10200 Bangkok Thailand

RE: Ethics Review Board findings for: *Study on Digital Health Services for Young People in Thailand* (HML IRB Review #715THAI23)

Dear Abi Gleek,

Protocols for the protection of human subjects in the above study were assessed through a research ethics review by HML Institutional Review Board (IRB) on 04 – 18 April 2023. This study's human subjects' protection protocols, as stated in the materials submitted, received **ethics review approval**.

You and your project staff remain responsible for ensuring compliance with HML IRB's determinations. Those responsibilities include, but are not limited to:

- ensuring prompt reporting to HML IRB of proposed changes in this study's design, risks, consent, or other human protection protocols and providing copies of any revised materials;
- conducting the research activity in accordance with the terms of the IRB approval until any proposed changes have been reviewed and approved by the IRB, except when necessary to mitigate hazards to subjects;
- promptly reporting any unanticipated problems involving risks to subjects or others in the course of this study;
- notifying HML IRB when your study is completed.

HML IRB is authorized by the United States Department of Health and Human Services, Office of Human Research Protections (IRB #1211, IORG #850, FWA #1102).

Sincerely,



D. Michael Anderson, Ph.D., MPH
Chair & Human Subjects Protections Director, HML IRB

cc: Sirirath Chunnasart, Penelope Lantz, JD

Health Media Lab, Inc.
1101 Connecticut Avenue, NW Suite 450
Washington, DC 20036 USA
+1.202.246.8504
unicef@hmlirb.com www.hmlirb.com

Appendix 5: Thailand Digital Health Service Mapping Analysis Framework

	Services	Description	Nature	Digital Health Classification (Classification of Digital Health Interventions, WHO)	Thematic focus	Promoting organization	Date of launch	Device accessibility	Risks to access	Inclusiveness	Confidentiality	Average number of monthly users	User demographics (e.g. age, socio-economic status, student status, health status)	Number of trained staff working to respond to the needs of young people	Interoperability with other platforms / services	Sustainability model
1	Teen Club	A service to promote health literacy among adolescents, including comprehensive sexuality education and services. Regular information is sent to those who add Teen Club as a Line “friend”, and users may choose to access further content. This includes health self-assessments, ability to check health coverage and entitlement and locations where they can get health services, information on health (provided via infographics, video, ebook, e-learnings, etc), period tracking features, and information via specialized service hotlines and chatbot. It is a one-stop service for all teenage problems.	Service hosted on the Line platform. Primarily static content, but exploring addition of counselling	1. Targeted client communication. 2. Personal health tracking. 3. On-demand information services to clients. 4. Counselling. 5. Referral coordination.	Adolescent health.	Department of Health, MoPH.	Feb 2022.	Computer, tablet, smartphone.	No.	Teenagers/ adolescents.	Private chat room (chat bot).	Unknown monthly users, currently has 62,169 users (28 Apr 23).	Teenagers and Adolescents, all gender.	No data.	Links to call hotlines 1663, 1300, 1323, 1579, and 1330. Links to other web-sites (Family Line, RSA Thai, Love-care Station).	The MoPH successfully secured the commitment from five other ministries (Ministry of Education, MSDHS, Ministry of Labour, Ministry of Higher Education and Sciences and Ministry of Interior), with the aim to reach 3 million adolescents in the country through Teen Club.
2	Lovecare Station	An internet-based health-promotion and counselling platform available to Thai youth. Its objective is to increase access to services and provide targeted information and assistance to improve the health of young people aged 10-24 years.	Website, Line, Facebook.	1.Targeted client communication. 2. On-demand information services to clients. 3. Counselling. 4. Referral coordination.	Adolescent sexual health, STIs, pregnancy, birth control, bullying, relationships, mental health.	Path2Health Foundation (NGO).	Feb 2016.	Computer, tablet, smartphone.	Potential privacy risk (user has to register using an email address or Facebook account).	Teenagers/ adolescents.	Private chat room (volunteers).	Overall has a strong reach with over 1 million active users per year, and 8,458 followers in Line app (28 Apr 23).	Adolescents, all gender 82.1% Female, 17.9% Male >25 yr 19%, 20-24 yr 26.3%, 15-19 yr 31%, 10-14 yr 0.8%, <10 yr 2.5%, Unknown 20.3% (March 22-March 23).	No data.	No.	Currently relies on UNICEF funding to sustain the service, but integration into the NHSO remains the vision for a sustainable future.

	Services	Description	Nature	Digital Health Classification (Classification of Digital Health Interventions, WHO)	Thematic focus	Promoting organization	Date of launch	Device accessibility	Risks to access	Inclusiveness	Confidentiality	Average number of monthly users	User demographics (sex, age, socio-economic status, student status, health status)	Number of trained staff working to respond to the needs of young people	Interoperability with other platforms / services	Sustainability model
3	Buddy Plus	A service for people living with HIV/AIDS and people affected by HIV/AIDS to share and exchange experiences to develop and strengthen the community, reduce fear, create social awareness to reduce new infections, and to improve quality of life for people living with HIV.	Website, Line, Facebook.	1. Client to client communication.	HIV, STIs, and LGBTQI+ community.	Love Foundation (NGO).	July 2020.	Computer, tablet, smartphone.	No (if users don't use their real picture and name in their profile).	People living with HIV/AIDS and people affected by HIV/AIDS, LGBTQI+ support group/ community, mainly focusing on support and discussion of experiences for people living with HIV, STIs, and PrEP.	Common chat space so members can see everything in the chat and can comment.	629 members (28 Apr 2023).	People who are LGBTQI+, HIV+ or those affected by HIV/AIDS.	No data.	No data.	The Buddy Plus Line group is provided for free by Love Foundation NGO at no operational cost.
4	Pribta	Location-based service (Bangkok) with online services providing examination, prevention, and treatment of sexual health, HIV and STDs.	Facebook, Twitter, Line.	1. Targeted client communication. 2. On-demand information services to clients. 3. Healthcare provider decision support. 4. Laboratory and diagnostics imaging management	HIV and STIs.	IHRI (NGO).	March 2020.	Computer, tablet, smartphone.	Privacy risks (user has to provide their name, ID card, phone number, and gender to access the services).	All genders and ages for sexual health issues.	Location-based services after appointment online.	No data.	All genders and ages.	No data.	No.	The clinic earns income from services which is used in business operations.
5	Tangerine	ocation-based service (Bangkok) with online services providing counselling for sex reassignment surgery, hormone level measurement, examination, and prevention and treatment of HIV/STDs.	Facebook, Twitter, Line.	1.Targeted client communication. 2. On-demand information services to clients. 3. Healthcare provider decision support. 4. Laboratory and diagnostics imaging management.	Sex reassignment surgery, hormone level measurement, HIV and STIs.	IHRI (NGO).	March 2020.	Computer, tablet, smartphone.	Privacy risks (user has to provide their name, ID card, phone number, and gender to access the services).	Transgender people.	Location-based services after appointment online.	No data.	Transgender people, all ages.	No data.	No.	The clinic earns income from services which is used in business operations.

	Services	Description	Nature	Digital Health Classification (Classification of Digital Health Interventions, WHO)	Thematic focus	Promoting organization	Date of launch	Device accessibility	Risks to access	Inclusiveness	Confidentiality	Average number of monthly users	User demographics (sex, age, socio-economic status, student status, health status)	Number of trained staff working to respond to the needs of young people	Interoperability with other platforms / services	Sustainability model
6	Guan Teen	Service providing online communities of high school students, mostly in Bangkok, with content about sexual health, and a web board chat room.	Website.	1. Targeted client communication. 2. Client to client communication. 3. On-demand information services to clients.	Adolescent development, sexual health and HIV/AIDS prevention.	Bangkok Metropolitan Administration (BMA).	2021.	Computer, tablet, smartphone.	Privacy risks (user has to provide school name and student ID to access the services).	Adolescents.	Web board, chat room.	No data.	High school-age teenagers, all genders.	No data.	No.	Receives funding from the Division of STD Prevention, Centers for Disease Control and Prevention (CDC), and MoPH.
7	Stand by You	Provided through the LINE application, the service includes risk assessment by self-evaluation, free HIV self-testing, knowledge about HIV/AIDS and sexually transmitted diseases, and online consultation under a team of medical personnel from Siriraj Hospital.	Website, Line.	1. Targeted client communication. 2. On-demand information services to clients. 3. Healthcare provider decision support. 4. Telemedicine. 5. Referral coordination.	HIV/AIDS and STIs counselling service, HIV and STI risk assessment, HIV self-testing via home delivery, with follow up after testing.	Siriraj Hospital.	August 2022.	Computer, tablet, smartphone.	Privacy risks (user has to provide age, gender at birth, gender of sex partner, and address to receive the HIV self-test).	Adolescent sexual health.	Private chat with counsellor.	5,611 users in Line app.	Adolescents, all genders.	No data.	No.	Receives funding from Division of AIDS and STIs, Department of Disease Control, MoPH, and the MoPH-TUC Coordinating Unit.
8	Dekdee (https://www.dek-d.com/)	A popular online community and social networking platform in Thailand that caters specifically to teenagers. The website provides a variety of features and services designed to appeal to young people, including forums, web boards, blogs, writer communities, games, and educational resources, particularly on the university entrance examination. Teenagers can use the site to connect with peers, make friends, share interests, and participate in discussions on a wide range of topics. It also offers resources on issues relevant to teenagers, such as health, education, and relationships.	Website, mobile application.	1. Targeted client communication. 2. Client to client communication. 3. On-demand information services to clients.	Education, particularly resources for the university entrance examination, and novel/ story writer communities.	Amarin Printing and Publishing Public Company Limited.	31 December 1999.	Computer, tablet, smartphone.	No.	Teenagers (high school and university age).	Users can log-in using email, phone number, or via Facebook, Google, and Twitter accounts, but also use the website without log-in.	8M users and followers including website and social media e.g. Facebook, Twitter (reported 18 Oct 22: https://www.thestorythailand.com/18/10/2022/79769/)	Teenagers (high school and university age).	No data.	No.	Amarin Printing and Publishing Public Company Limited invested 204 million THB to buy 51% of shares to develop and modernize the business.

	Services	Description	Nature	Digital Health Classification (Classification of Digital Health Interventions, WHO)	Thematic focus	Promoting organization	Date of launch	Device accessibility	Risks to access	Inclusiveness	Confidentiality	Average number of monthly users	User demographics (sex, age, socio-economic status, student status, health status)	Number of trained staff working to respond to the needs of young people	Interoperability with other platforms / services	Sustainability model
9	Little Sis Care (https://www.littlesis-care.com/)	This service provides sexual health and hygiene information for women and men, presented in easy-to-understand formats, e.g. illustrations, to reach people of all genders and ages.	Website, Facebook, Twitter, YouTube, Instagram, Blockdit.	1. Targeted client communication. 2. On-demand information services to clients. 3. Referral coordination.	Sex-positive content.	Created and promoted by a family medicine doctor at Ramathibodi Hospital.	August 2019.	Computer, tablet, smartphone.	No.	Inclusive of all genders.	Unidirectional communication with no need to log in, except if the user wants to access a consult with the doctor either via VDO call or personal meeting for an additional charge.	247k followers on Facebook (29 Apr 23).	Women and men of all age groups.	No data, but one person is mentioned as an admin (a family medicine doctor).	Provides links or phone numbers of many sexual health clinics located in different regions of the country (location-based services).	No data.
10	RSA Thai (https://rsathai.org/)	A volunteer network for safe abortion established by the Department of Health, MoPH. It is a collaborative network of medical staff, nurses, social workers, psychologists, and public health professionals from both the public and private sectors for safe medical termination of pregnancy according to Royal College of Obstetricians and Gynaecologists guidelines, and WHO guidelines for pregnant women who are not ready for pregnancy due to physical and mental health problems. This service also provides information about Thailand's abortion policy, laws, network activities, FAQs, calculation of the duration of pregnancy, and a list of network hospitals in many provinces.	Website, Facebook, Twitter, TikTok, YouTube.	1. Targeted client communication. 2. On-demand information services to clients. 3. Referral coordination.	Referral system for safe abortion.	Department of Health, MoPH.	2014.	Computer, tablet, smartphone.	No.	Pregnant women who have physical and mental health issues.	Private chat room (link to Lovecare Station), Hotline (link to 1663).	No data.	Women of reproductive age.	183 medical volunteers, 720 multidisciplinary volunteers.	Love-care Station, 1663.	Funded by the ThaiHealth Promotion Foundation.

	Services	Description	Nature	Digital Health Classification (Classification of Digital Health Interventions, WHO)	Thematic focus	Promoting organization	Date of launch	Device accessibility	Risks to access	Inclusiveness	Confidentiality	Average number of monthly users	User demographics (sex, age, socio-economic status, student status, health status)	Number of trained staff working to respond to the needs of young people	Interoperability with other platforms / services	Sustainability model
11	Family Line	This service was created mainly as a Line official account (@linefamily) to provide user notifications, consultations on various family issues, and to connect users to experts/agencies.	Line.	1. Targeted client communication. 2. Client to client communication. 3. On-demand information services to clients. 4. Referral coordination.	Family content, both positive and negative, including information on family law.	Department of Women's Affairs and Family Development, MSDHS.	2021.	Computer, tablet, smartphone.	Privacy risks (user has to provide date of birth, ID card, address, line ID, phone number, and email address to access services).	Single mothers, pregnant teenagers, those affected by domestic violence or sexual harassment.	Private chat room (volunteers).	11,149 Line followers (29 Apr 2023).	Everyone.	No data.	Teen Club, 1323, 1300.	Funded by the MSDHS.
12	Talk To Peach	A mobile phone application providing counselling on more than 20 topics related to sex and reproductive health. The client can choose an expert, either a doctor or a sexologist, to speak with anonymously.	Mobile application.	1. Client financial transactions. 2. Telemedicine.	All gender and transgender sexual health.	Start-up business.	2022.	Smartphone.	No.	Sexual health, hormones (menopause, hormones for transgender health and transition), reproductive health, and STIs.	Private chat room and anonymous VDO call with a doctor or sexologist.	No data.	Ages 17 and above, all genders.	7 doctors, 5 sexologists.	No.	Service fee starts at 490 THB and increases with time spent.
13	Ooca	A well-known mobile phone application providing online consultations for mental health problems. Users can talk to a psychologist or psychiatrist conveniently and anonymously anytime, anywhere.	Mobile application.	1. Client financial transactions. 2. Telemedicine.	Mental health.	Start-up business.	2017.	Smartphone.	Privacy risks (user has to provide credit card details, date of birth, phone number, and gender to access the services).	Mental health support for everyone.	Private chat room and VDO call anonymously with a psychologist or psychiatrist.	More than 130,000 users (28 Apr 2023).	Everyone.	More than 100 psychologists and psychiatrists.	No.	The service fee starts at 450 THB per 30 mins for psychologists and 1,000 THB per 30 mins for psychiatrists. Ooca also provides services for contract organizations, with more than 40 organizations/companies using their services. They plan to start an e-prescription service and expand to other countries in Asia.

	Services	Description	Nature	Digital Health Classification (Classification of Digital Health Interventions, WHO)	Thematic focus	Promoting organization	Date of launch	Device accessibility	Risks to access	Inclusiveness	Confidentiality	Average number of monthly users	User demographics (sex, age, socio-economic status, student status, health status)	Number of trained staff working to respond to the needs of young people	Interoperability with other platforms / services	Sustainability model
14	Sati	A mobile phone application providing online mental health consultations. Users can talk to listeners who are non-professional but who have received training or hold certification related to mental health counselling. This service is anonymous and free of charge.	Mobile application.	1. Client to client communication.	Mental health.	Start-up business.	2021.	Smartphone.	No.	Mental health support for everyone.	Private chat room, audio-only and anonymously, with certificated or trained listeners.	11,524 users (28 Apr 2023).	Everyone.	361 listener volunteers.	No.	The service is free based on a donation from anyone who wants to support the app, and the company receives grants from many organizations. The developers plan to use AI to tailor user demands, introduce a "Mindful Forum" (web boards), and expand to other countries in Southeast Asia.
15	Alljit	A mobile phone application providing online mental health consultations. Users can talk to psychologists and psychiatrists privately, as well as access podcasts about mental health issues, forums, and 24-hour chat rooms. This service is anonymous and free of charge.	Mobile application.	1. Client to client communication. 2. Telemedicine.	Mental health.	Start-up business.	May 2021.	Smartphone.	No.	Issues about mental health, focusing on stress, burn-out and relationship.	Private chat room (chat and share experiences with others in the community, and with a professional).	No data.	Everyone.	No data.	The app provides a Google map indicating hospitals in the area of the user.	No data.

	Services	Description	Nature	Digital Health Classification (Classification of Digital Health Interventions, WHO)	Thematic focus	Promoting organization	Date of launch	Device accessibility	Risks to access	Inclusiveness	Confidentiality	Average number of monthly users	User demographics (sex, age, socio-economic status, student status, health status)	Number of trained staff working to respond to the needs of young people	Interoperability with other platforms / services	Sustainability model
16	Wall of Sharing	Wall of Sharing's target group is university students (over 18 years old) who can receive free mental health counselling services with psychiatrists and psychologists via video calls in the Ooca application.	Mobile application.	1. Client financial transactions. 2. Telemedicine.	Student (age 18 and over) mental health	Ooca company and universities.	2019.	Smartphone.	Privacy risks (users have to provide date of birth, phone number, and gender for using the app, as well as parental contact details). People who want to donate to support the app have to provide credit card or bank account details.	Youth mental health.	Have to give personal information e.g. student ID, address, parental contact.	Currently 3,159 students have received services.	University students aged 18+ (currently only 3 partner universities).	More than 25 volunteers.	Ooca.	It is a donation-based and volunteer-based service. It costs 100,000 THB per university included in the project, or 470 THB for 1 session, 2,350 THB for 5 sessions, and 4,700 THB for 10 sessions, or a monthly donation. Students in the partner university can use the Ooca application for free.
17	Mor Prom	An application launched by the MoPH to allow residents to access vaccination services, including vaccine reservation and laboratory results, and verifies the COVID-19 Digital Health Pass issued by the Thai Government within the Thailand vicinity. It also serves as a point of contact for the MoPH for vaccination-related information and is currently being developed as a point of contact for getting healthcare services according to the NHSO's services e.g. hospital appointments, HPV testing for women, and telemedicine.	Mobile application and Line.	1. Targeted client communication. 2. Untargeted client communication. 3. Personal health tracking. 4. Client identification and registration. 5. Client health records. 6. Healthcare provider decision support. 7. Telemedicine. 8. Healthcare provider communication. 9. Referral coordination. 10. Facility management. 11. Location mapping.	Point of contact for COVID-19 vaccine and healthcare services.	MoPH.	December 2021.	Smartphone.	Privacy risks (user has to provide ID card, other ID, phone number, name, date of birth, gender, prefix, address, face scanning); Security risks (has experienced several incidences of cyber attack/ theft of user data); Dependence risks (user dependence with this service for COVID-19 vaccine certification).	Personal vaccine management and certificate, hospital/ doctor appointments, health status history.	Password and face ID log-in.	20.3 million users for application, and 10 million users for Line official (Jan 2022).	All Thai citizens.	No data.	Links to national data collected by the NHSO.	This service is funded by the MoPH and is intended to be the point of contact for all healthcare services and telemedicine in Thailand as per the MoPH's Digital Health Strategy (2021-2025), workstream 4.

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18	Xpress Counseling	This online service run by the Thai Red Cross Research Centre (Anonymous Clinic) provides a point of contact for free PrEP, PEP, and HIV testing. Users can also find a list of laboratory testing operation hours, make an appointment, receive online counselling via phone call, buy an HIV self-test, and receive laboratory results online (via email or SMS).	Line.	1. Targeted client communication. 2. Personal health tracking. 3. Client financial transactions. 4. Client identification and registration. 5. Client health records. 6. Healthcare provider decision support. 7. Telemedicine. 8. Referral coordination.	Point of contact for HIV/AIDS and STIs testing and counselling.	Thai Red Cross AIDS Research Centre (Anonymous Clinic).	No data.	Smartphone.	No.	HIV/AIDS and STI services for everyone.	Location-based services after appointment online.	16,958 followers (28 Apr 2023).	Everyone.	No data.	No.	The clinic earns income from services which are then used to fund the business operations.
19	Doctor Anywhere	This app is a well-known telemedicine service in Thailand. It is also registered in many other countries in Southeast Asia. It offers a video call service with a doctor for both physical health and mental health needs, provides a pharmacy delivery service, and offers a dietitian and nutrition consultation service. There is a service fee starting at 350 THB per time. For mental health, users can choose to consult with psychologists (1,000 THB per session) or psychiatrists (1,500 THB per session). It also offers health check-ups, an at-home service for COVID-19 RT-PCR testing, and AXA health insurance that the user can buy online.	Mobile application.	1. Client financial transactions. 2. Telemedicine.	Physical health and mental health issues.	Doctor Anywhere (a private Thai company).	Launched in Thailand in 2020.	Smartphone.	Privacy risks (user has to provide their credit card details to access services).	Both physical and mental health issues.	Private VDO call with doctor.	No data.	Everyone.	No number was indicated but the app provides a long list of doctors and nutrition specialists.	No.	The clinic earns income from services which are then used to fund business operations.
20	Here to Heal	Mental health counselling online services with psychologists every day from 10am to 10pm.	Line.	1. Telemedicine.	Mental health.	Faculty of Psychology, Chulalongkorn University.	2020-2023.	Smartphone.	No.	Mental health support for everyone.	Private chat room with psychologist.	No data.	Everyone.	No data.	No.	Funded by Thai Health Promotion Foundation (the service ended on 1 Jan 2023).

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21	Joy of Mind	Mental health counselling services with psychologists.	Website, Line, Facebook.	1. Targeted client communication. 2. Referral coordination. 3. Telemedicine.	Mental health.	Start-up business.	2020.	Computer, tablet, smartphone.	No.	Mental health issues in the workplace and adolescent mental health.	Location-based services after appointment online.	No data.	Adolescents and adults.	No data.	No.	The clinic earns income from services which are then used to fund business operations.
22	1323	24-hour hotline and chatbot services provided by psychologists.	Hotline, chatbot in Line app.	1. Targeted client communication. 2. Telemedicine. 3. Referral coordination.	All age ranges, mental health.	Department of Mental Health.	No data.	Phone, smartphone.	No.	Mental health support for everyone.	Private call.	In 2022, about 6,000-7,000 people per month, including 500-600 young people aged 11-19 years old per month.	No data.	50 Psychologists.	NHSO.	As of 2023, hotline 1323 is integrated with the NHSO service, so that Thai citizens can access the same service as going to see a psychologist at the hospital.
23	1387	24-hour hotline offering a counselling service to help with any problems related to children from birth to 18 years old.	Hotline.	1. Targeted client communication. 2. Counselling. 3. Referral coordination.	0-18 years, any problem.	Childline Thailand Foundation (NGO).	No data.	Phone, smartphone.	No.	All problems related to children.	Private call.	Around 150,000 calls per year.	No data.	No data.	Many organizations working on child issues.	No data.
24	1300	24-hour hotline providing help and advice for anyone facing social problems, particularly domestic and family violence.	Hotline, chatbot in Line app.	1. Targeted client communication. 2. Telemedicine. 3. Referral coordination.	Social problems, particularly domestic and family violence.	MSDHS.	2015.	Phone, smartphone.	No.	Anyone who needs help/ advice about social problems.	Private call.	10,000-12,000 calls per month.	No data.	No data.	MS-DHS.	Funded by the MSDHS.
25	1663	A hotline available from 8 am-11 pm and chat via Facebook providing counselling about HIV/AIDS prevention and unwanted pregnancy.	Hotline, Facebook messenger.	1. Targeted client communication. 2. Counselling. 3. Referral coordination.	Adolescent sexual health and unwanted pregnancy.	AIDS Access Foundation (NGO).	2012.	Phone, smartphone.	No.	Anyone who needs help/ advice about HIV/AIDS prevention and unwanted pregnancy.	Private call.	Around 100 calls per day in 2020-2021 (increased during COVID-19 pandemic).	No data.	No data.	No.	Cooperation with and funding from the Thai Red Cross, Department of Disease Control, MoPH, and 11 AIDS NGOs.

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NEW SERVICES UNDER DEVELOPMENT																
26	Step-by-Step	<p>Step-by-Step is an evidence-based digital support programme for people experiencing stress and symptoms of depression. The programme was initially developed to support Syrian refugees in Lebanon by the World Health Organization (WHO) with the National Mental Health Programme (NMHP) at the Ministry of Public Health Lebanon and other partners.</p> <p>Since the programme utilizes relatable storylines to engage users, it requires cultural and contextual adaptation for implementation. WHO is currently supporting the Department of Mental Health to adapt Step-by-Step for the Thai context.</p>	Hybrid app for iOS, Android and web browsers.	1. Targeted client communication.	Mental health.	No data.	No data.	No data.	No data.	No data.	No data.	No data.	No data.	No data.	No data.	No data.
27	Digital Mental Health Intervention for Young People	WHO is also supporting the Department of Mental Health with the development of a digital mental health intervention specifically targeting young people. It is centred on youth-friendly e-learning accessible on a browser, with topics such as creative problem solving, decision making and mental health. The platform is being tested through an experimental approach, and the future vision includes development of a mobile app and scaling roll-out across Thailand and the South-East Asia region.	Web browser, with plans for a mobile app in future.	1. Targeted client communication.	Mental health.	No data.	No data.	No data.	No data.	No data.	No data.	No data.	No data.	No data.	No data.	No data.



CONTACT US

UNICEF Thailand

19 Phra Atit Road
Pranakorn, Bangkok 10200
Thailand

Telephone: +66 2 356 9499
Fax: +66 2 281 6032
Email: thailandao@unicef.org