

# HALF-YEAR REPORT

2023

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# KEY



# RESULTS

<b>Papua New Guinea app version launched</b>		<b>Nepali App version launched</b>	
<b>770+ trained via 23 trainings</b>	<b>24,000+ app downloads in 2023</b>	<b>Perinatal Mental Health module launched</b>	<b>2023 - half year status</b>
<b>375,000 reached by end 2022</b>	<b>14 app modules available in 2022</b>	<b>4 global versions + 35 language versions</b>	

In the first half of 2023, the Safe Delivery App was downloaded 24,337 times. Of the new users, 20,755 are estimated to be healthcare workers in low and middle-income countries. A total of 23 trainings were conducted, capacitating over 770 healthcare workers. This includes three trainings of trainers (ToT) who can further cascade training to other healthcare workers. In addition, several new app versions and modules have been launched.

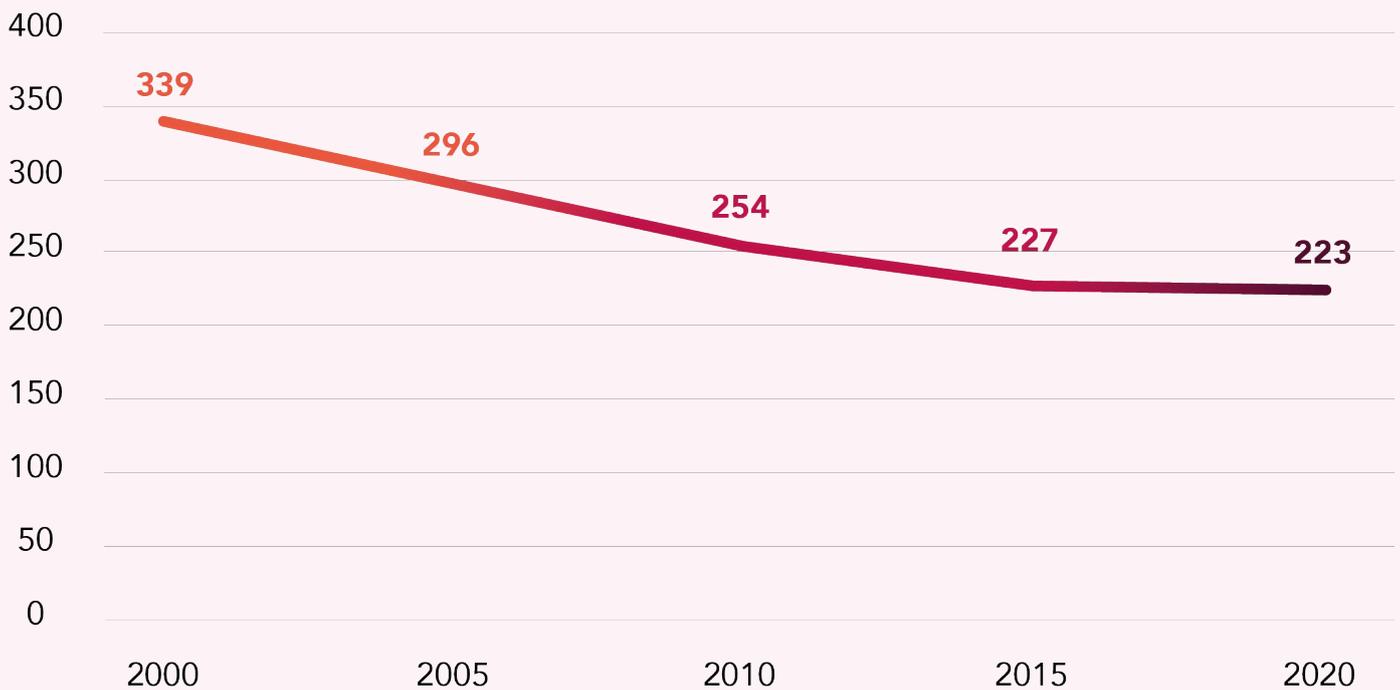
# Intro

The first half of 2023 has been motivated by an increased desire to roll out the Safe Delivery+ programme, produce more content, and increase trainings in order to ensure safer births for more women and their newborns around the world.

The increased motivation is caused by the newest **'Trends in maternal mortality 2000-2023' report**, published in February 2023 by WHO, UNICEF, UNFPA, World Bank Group and UNDESA, which shows stagnation of previously improving maternal mortality figures. In some countries, we have even seen increases. **In 2020 alone, about 287,000 women died during or following pregnancy and childbirth** (WHO, 2023).

The conclusion is clear; **we must significantly accelerate progress to meet global targets for reducing maternal deaths, or else risk the lives of over 1 million more women by 2030.**

**Fig. 1: Maternal deaths per 100,000 live births**



**SDG 3.1:** By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births.

Most importantly, we need to advance our efforts in the world's poor and fragile countries and regions where maternal deaths continue to be largely concentrated.

Sub-Saharan Africa  
accounts for

**70%**

of global maternal deaths,  
followed by Central and  
Southern Asia which  
accounts for almost

**17%**



Building upon the report, Maternity Foundation and UNFPA Nordic Office co-hosted a **high-level roundtable discussion** on March 7th 2023 on how to accelerate progress on reducing maternal deaths. The key message of the meeting was that **it is time to advance our collective efforts to fight maternal mortality. There is no time to loose.** This is not only to the benefit of women worldwide but also their families and communities.

Now is the time to improve the quality of maternal healthcare. The majority of all maternal deaths can be prevented if the women receive quality care from a skilled healthcare professional, but currently, the world is facing a global shortage of 900,000 midwives.

Our patron, HRH Crown Princess Mary participated in the meeting together with key partners and stakeholders from organisations including Novo Nordisk Foundation, Grieg Foundation, International Confederation of Midwives, Laerdal Global Health, Danish Ministry of Foreign Affairs, Ferring Pharmaceuticals and the UNFPA Country Representative in Mali.



**Photo:** HRH Crown Princess Mary participating in a high-level roundtable discussion, co-hosted by Maternity Foundation and UNFPA Nordic Office. HRH Crown Princess Mary has been the patron of Maternity Foundation since 2010.

## External relations and engagement

During the first half of 2023, Maternity Foundation was invited to present and participate in several key global fora. Among them, Maternity Foundation participated in the **World Economic Forum** in Davos in January and continues to play an active part in the Forum's EDISON Alliance and Women's Health Initiative. Maternity Foundation was also invited to the **South By Southwest / SXSW conference** in Austin, US in March 2023 to speak about women's health and tech4good. Here, CEO Anna Frellsen had a 1:1 conversation on stage with Denmark's Tech Ambassador Marie Engtoft Larsen on how tech can help improve maternal health.

Maternity Foundation also attended at the **International Maternal Newborn Health Conference** in South Africa in May, the **International Forum on Quality and Safety in Healthcare** in Copenhagen in May, and the **33rd ICM Triennial Congress** in Bali in June.

These fora are all important avenues through which we can create awareness about the importance of investing in maternal health among key stakeholders, an agenda which is becoming increasingly important in light of the new data on maternal mortality showing that progress on reducing maternal deaths has stalled.



**Photo:** During the International Maternal Newborn Health Conference, Maternity Foundation stood side by side with United Nations Population Fund (UNFPA), World Health Organization, UNICEF, and International Confederation of Midwives (ICM) and over 20 global partners to reaffirm our commitment in improving access to skilled midwives to ensure universal and equitable access to comprehensive maternal and newborn healthcare services. Maternity Foundation will do so by continuing to scale up its Safe Delivery+ Programme across the world.

**Photo:** Similarly, Maternity Foundation renewed its commitment to support and collaborate with ICM's Member Midwives' Associations, signing a new agreement on stage at the International Confederation of Midwives (ICM) in Bali together with Bill & Melinda Gates Foundation, Direct Relief, United Nations Population Fund (UNFPA), World Health Organization.



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## The Alliance to Improve Midwifery Education (AIME)

Maternity Foundation is part of the Alliance to Improve Midwifery Education (AIME) together with United Nations Population Fund (UNFPA), International Confederation of Midwives (ICM), World Health Organization, UNICEF, Liverpool School of Tropical Medicine, Jhpiego, Laerdal Global Health, Burnet Institute, and World Continuing Education Alliance. The alliance is supported by the Johnson and Johnson Foundation.

Earlier this year, Maternity Foundation participated in a AIME workshop in Bangkok where educators from 19 countries from the Asia-Pacific region were introduced to new educational resources and programmes to enhance the quality of midwifery teaching for improved sexual reproductive, maternal, newborn, and child-adolescent health services. The training is a significant step towards improving the quality of midwifery education and reducing maternal and neonatal mortality rates in the Asia-Pacific region.

AIME is a global alliance specialized in training, educating and professionalizing midwives as well as developing tools and knowledge products in order to improve sexual-, reproductive-, maternal-, newborn-, child-, and adolescent health.

## Visit by HRH Crown Princess Mary, Patron of Maternity Foundation

On February 28th, 2023, Maternity Foundation, along with the All India Institute of Medical Sciences (AIIMS), welcomed Her Royal Highness Crown Princess Mary of Denmark (patron of Maternity Foundation) to the AIIMS hospital in New Delhi. During the visit, HRH Crown Princess Mary learned how India's quality improvement initiatives have been key in reducing the national maternal mortality rate over the past 20 years, and how the government is working with partners, including Maternity Foundation, to build a stronger health worker cadre for improved health outcomes for mothers and their newborns countrywide.

The Indian government partnered with Maternity Foundation in 2017 to scale up the use of the organisation's Safe Delivery App and the accompanying training and learning programme. Today, Maternity Foundation supports several states and is formally integrated into national-level initiatives focused on quality improvements, for practising healthcare workers, as well as those studying to become nurses or midwives. The Safe Delivery App is available in 8 languages in India (English, Hindi, Bengali, Gujarati, Marathi, Odia, Telegu, Assamese), through which we have reached over 150,000 healthcare professionals to date.

**HRH Crown Princess Mary participated in a skills-based-training session as well as in discussions with Maternity Foundation and other key partners** including the Indian Nursing Council, MSD for Mothers, IPE Global, Novo Nordisk Foundation, UNICEF, UNFPA, and various other stakeholders.

HRH Crown Princess Mary's visit to the AIIMS hospital is part of a larger visit by Danish Government representatives to India, focusing on, among other things, collaboration on green investments and partnerships.



**Photo:** HRH Crown Princess Mary visits a new mother at the AIIMS hospital in New Delhi. During the visit, HRH Crown Princess Mary learned about how the Indian government is working with partners, including Maternity Foundation to build a stronger health worker cadre for improved health outcomes for mothers and their new-borns countrywide.

## Mother's Day campaign

This May, we proudly **doubled last year's sales of our 'Moderkage'** ('Mother Cake'), which was sold in all Emmerys bakeries throughout the greater Copenhagen area and in Aarhus in celebration of Mother's Day. Half of the sales go directly to Maternity Foundation's work and the associated Mother's Day campaign (which includes posters displayed throughout the greater Copenhagen area and Aarhus), raises awareness among the Danes about the fight against maternal mortality.

Special thanks to Foss, who chose to support the campaign this year by buying 550 Mother Cakes for its employees in Hillerød! We also delivered 50 cakes for the maternity ward at Hvidovre Hospital.



# Safe Delivery+ programme

Our Safe Delivery + programme comprises of a **digital training and learning environment** which aims to provide healthcare workers in low-resource and fragile settings the opportunity for continued growth and learning, alongside access to protocols and guidelines in order to support a safer birth experience for women.

Our **skill-based-trainings** are also becoming increasingly popular with healthcare workers showing a growing interest and demand. **The Safe Delivery App** is an integrated component of these trainings, providing a comprehensive and user-friendly tool for healthcare workers.

**In the first half of 2023, we have continued to develop and strengthen our App and the extended training programme by:**



**Developing and releasing new App content and versions.** Development of content on new clinical topics, informed by requests from end users, partners, and general trends in the sector, continued to be a priority.



**Conducting multiple trainings across the world** including trainings in Jordan, Iraq, Eswatini, Ethiopia, Democratic Republic of Congo, and India.



**Investing in partner engagement** at both country and regional level. Engaging with new and old partners strengthens, contextualises, and diversifies our content and scope.



**Exploring AI options to improve the Safe Delivery App.** This includes exploring possibilities to integrate an AI-enabled chatbot into the Safe Delivery App and AI-adaptive learning algorithm to optimise the user experience and learning.



## Clinical content and trainings

The first half of 2023 was a very productive one at Maternity Foundation, both in terms of publishing 2022's hard work and continuing to develop new content for the Safe Delivery App. Moreover, a number of skills-trainings were delivered, spanning eight different countries.

Following the development of the **Perinatal Mental Health module** throughout 2022, it was successfully released on the 13th February 2023. Maternal mental health during pregnancy and after childbirth remains a significant global issue. This module will capacitate healthcare workers to respond to these needs, improving maternal and child health outcomes and fostering a more accepting environment in the healthcare setting (WHO, 2022).

The clinical team continue to work on developing the **Modern Contraception, Safe Abortion, Antenatal Care, Gestational Diabetes** and **Postnatal Care Modules** to be released later this year.

Several new versions of the App have already been released this year, following extensive collaboration and development over the past year. They include the **wider Ukrainian version** on the 24th March 2023, and the **Papua New Guinean version** on the 30th March 2023. These versions of the App have been adapted to the context and national guidelines of their respective countries, as well as being translated into the new languages. The publication date of the wider Ukrainian app marks just over a year since the invasion of Ukraine, which triggered a humanitarian crisis and heavily impacted healthcare provision in the country. The App should therefore provide a valuable resource to midwives and other health professionals who continue to respond to maternal and new-born health needs, which do not cease when a war breaks out. Additionally, a **Nepali version with five new SDA modules** (Hypertension, Normal Labour and Birth, Active Management of Third Stage of Labour, Post Partum Haemorrhage and Neonatal Resuscitation) was launched on 5th May 2023.

**Five New E-Learning modules for the Indian Nursing Council (INC)** for Aastarika Platform were also launched in May of 2023, meaning that the following **six Modules are now available in English and Hindi**: Post-partum haemorrhage; Hypertension/Pregnancy Induced Hypertension; Care of normal new-born & New-born Resuscitation; Care of sick new-born (low birth weight, KMC etc); Infection Prevention; and Normal Labor and Birth.

Furthermore, a test version of the full **Spanish version** was completed and shared with UNPFA in **Latin America for pilot-testing later this year. The translation and audio recording of the new French and Arabic modules** of the App (Antenatal Care, Modern Contraceptives and Perinatal Mental Health) was also completed, and the production of the accompanying videos has started.

# Overview of Safe Delivery App Modules and new additions



**Covid-19**



**Infection Prevention**



**Maternal Sepsis**



**Manual Removal of Placenta**



**Post Partum Haemorrhage**



**Post-Abortion Care**



**Hypertension**



**Prolonged Labour**



**Active Management of Third Stage Labour**



**Low Birth Weight**



**Normal Labour & Birth**



**Newborn Management**



**Neonatal Resuscitation**



**(Female Genital Mutilation)**



**Perinatal Mental Health**



**Modern Contraception**



**Safe Abortion**



**Antenatal Care**



**Postnatal Care**



**Gestational Diabetes**

## Country and Regional engagement



### Ethiopia

The first half of this year has been important for partner mapping, collaboration and strengthening partnerships in Ethiopia with partners including the Institute for Healthcare Improvement (IHI) and Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), which pose exciting new directions for future collaboration. Meanwhile, discussions with the Gates Foundation Ethiopia, Laerdal Global Health and the Federal Ministry of Health have been held to strengthen existing partnerships.

Alongside these discussions Maternity Foundation has been putting theory into practice, **following plans to integrate the Safe Delivery App in universities to support and standardise midwifery education.** With the help of the Federal Ministry of Health and Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), we have initiated **training of trainers (ToT)** for fifty educators and health professionals from different universities and teaching hospitals via two rounds of training. The trained participants will then be able to cascade this training on to midwifery students and junior midwives.

We have also **delivered trainings and catchment-based clinical mentorship at the in-service level** as part of a longstanding project at UNICEF to improve maternal and new-born services in the Somali and Afar regions of Ethiopia. A total of five multiple-day separate training programmes were conducted, for both mentors and mentees. Training topics included standard 'Helping Mothers Survive' (HMS) and 'Helping Babies Breathe' (HBB), as well as familiarising mentors with the Safe Delivery App. **In the second quarter of 2023, clinical catchment-based mentorship** was conducted in thirty-five health centers of Afar (10) and Somali (25) regions. A total of 120 health professionals are now mentoring onsite in the Afar and Somali regions through the UNICEF project.



## India

Activities in India in 2023 are also off to a great start with **both pre-service and in-service physical and remote trainings** well underway. As a part of our pre-service outreach, we conducted an **orientation session** for students and delegates from different nursing colleges in Bhartiya Vidhya Peeth in Pune, during the 'International Conference on Emerging Competencies in Maternal and Neonatal Care: The Nursing Perspective' 2023, held on the 11th and 12th January.

We have also conducted activities to capacitate practicing midwives in both the public and private sectors in India. In agreement with the Government of Uttarakhand, we conducted the second batch of **five-day skill-based training of trainers** for medical officers and gynaecologists with support from the Government of Uttarakhand and National Health Mission (NHM), Uttarakhand. A total of eighteen participants were trained in the second batch.

Furthermore, in April 2023, a total of 80 participants attended a **Safe Delivery App Orientation Event** at Baba Sahab Ambedkar Hospital in Rohini, and in May a further 40 participants were oriented to the Safe Delivery App at Ram Manohar Lohiya Hospital in New Delhi. Additionally, 20 participants attended **a skill-based training at All India Institute of Medical Sciences (AIIMS), New Delhi in May.**

In January, we officially announced a new collaboration with **World Diabetes Foundation** and the start of a joint project that will **support ongoing efforts by the Government of India to strengthen the provision of antenatal and gestational diabetes care for pregnant women and new mothers** in targeted areas in Jharkand State. The project will make use of the Safe Delivery App, and new clinical content on antenatal care (ANC) and gestational diabetes (GDM) will be developed in both English and Hindi. In addition, the project will conduct training of 1500+ healthcare workers and students, and the ANC and GDM modules will be institutionalised into the curriculum for nurses by 2024.



Creating new versions of the App enables its use during skills-training sessions, a critical part of the Safe Delivery+ Programme. In 2022, the **Arabic version** of the App was released, allowing **new training sessions to be conducted in the Middle East and North African (MENA) region**. In early March this year, a Maternity Foundation midwife travelled to Jordan as part of a two-year project with Novo Nordisk Foundation to capacitate healthcare workers in the MENA region. A training session was conducted with doctors from Iraq, Syria and Jordan on post-partum haemorrhage (PPH), active management of third stage labour (AMTSL), and neonatal resuscitation (NR). These trained doctors have since gone on to cascade their training in their respective countries. In Jordan, three group trainings took place in the second quarter of 2023, and 41 healthcare workers and 2 UNFPA staff members were trained as a result.



In **Iraq**, the Danish Red Cross and Iraq Red Crescent Society hosted a **Train the Trainer session** as part of the Novo Nordisk Foundation project on the 18th - 20th June with 34 healthcare professionals participating (gynecologists, midwives and nurses), from at least 12 Iraqi governorates, including 4 from the Palestinian Red Crescent Society.



In **Eswatini** on the 20th of March, a remote **three-day knowledge-based refresher training session** was held with thirty master trainer healthcare providers on integrating the app into practice, AMTSL, PPH and NR. After the training provided by Maternity Foundation, follow-up partnership discussions were held on exploring potential opportunities to scale up the reach of the Safe Delivery App in Eswatini. As a way forward, it was agreed to undertake follow-up data collection and delivery of summary results that serve the purpose of informing the Ministry of Health, donors, and partners on the effect of the use of the App.



In the **Democratic Republic of Congo**, a project with the Ministry of Health and IMA World Health (NGO), led to a **four-day in-person, knowledge and skills-based clinical training for five senior-level healthcare professionals in the Democratic Republic of Congo**.

The training included theoretical discussion alongside hands-on skill demonstration and practice on the topics of normal birth, manual removal of placenta, bimanual uterine compression, aortic compression, and non-pneumatic anti-shock garment application and removal. The participants have since gone on to cascade their learning and provide introductory training in-country to 14 additional healthcare workers to date.



In **Niger**, Maternity Foundation launched a **one-year project with the Danish Red Cross to introduce the Safe Delivery App to in-service health workers** and capture learning on the use of the app in midwifery education in Niger.

Two French-speaking trainers received a remote refresher Training of Trainers (ToT) session on key topics, including Infection prevention, Prevention and management of PPH, Essential Newborn care, Neonatal Resuscitation, and Prolonged Labour. This will enable them to train more healthcare workers in Niger through in-country clinical training.

## IT and tech

Throughout the first half of this year, we have been exploring AI options to improve the Safe Delivery App. This includes exploring possibilities to integrate an AI-enabled chatbot into the Safe Delivery App and AI-adaptive learning algorithm to optimise the user experience and learning.

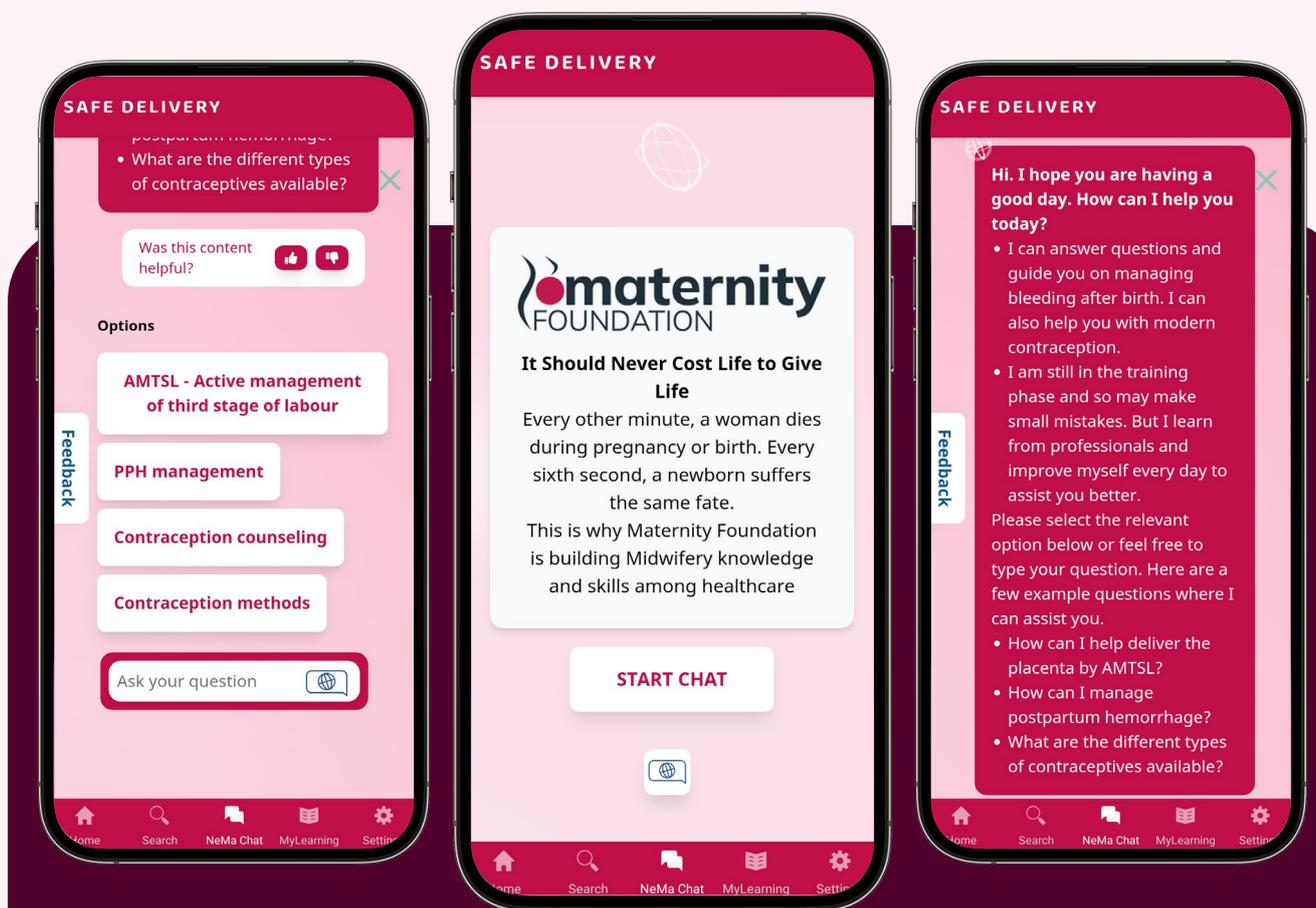
### AI-integration

In a partnership with Neuvo Inc. we are in the process of integrating an AI-enabled chatbot into the Safe Delivery App, the **NeMa Smartbot (picture below)**. The purpose of the pilot is to test and verify the technical feasibility of integrating an AI-enabled chatbot into the Safe Delivery App with the aim of enhancing the knowledge, skills, and confidence of healthcare workers in low- and middle-income settings. In addition, we aim to demonstrate how data analytics will enhance the understanding of user needs as well as possible gaps in knowledge or material.

In May of this year we gained **approval for pilot testing of the NeMa Smart chatbot** in the Safe Delivery App from **NHM Punjab in India** to go ahead. This pilot testing phase is planned for a period of 3 Months.

### AI-adaptive learning

Finally, the first half of this year saw the **collaboration of Maternity Foundation with researchers and professors at the IT University of Copenhagen and Aalborg University**, in order to initiate an AI-adaptive learning algorithm that will increase users' engagement with the MyLearning function.



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Last, but not least, thank you to all the midwives and healthcare workers who work passionately, skilfully and tirelessly to ensure safer childbirths for women and new-borns - everyday, everywhere.

