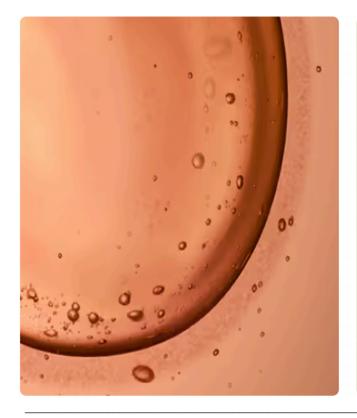
Clinical Case Study: Couple's preconception preparation with Doveras achieves healthy pregnancy and live birth outcome

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Abstract

A 32-year-old Caucasian female and her 33-year-old Caucasian male partner are seeking to proactively optimize egg health and sperm health during the preconception period to improve time to pregnancy and chances of a healthy pregnancy. They signed up for the Doveras digital health platform ("Doveras platform") for personalized preconception guidance in November 2022 with the intention of trying to conceive in approximately 6-9 months. The couple engaged for 40 weeks with the Doveras platform, including completing personalized weekly recommendations, using digital education resources, and opting into consults with the Doveras care team. They conceived on their first cycle of timing sexual intercourse which resulted in a full-term live birth with no reported complications.



RESULTS FROM DOVERAS CLINICAL CASE

- Conceived in first timed cycle after lifestyle and ovulation tracking guidance from Doveras
- → 248 minutes (over 4 hours) spent on the Doveras platform over 40 weeks
- Sought out 4 clinical care touch points on- and off-Doveras platform
- Engaged male partner across multiple touch points
- Improved preconception experience that left users supported, empowered, and in control

Introduction

Every major public health body and medical society emphasizes the importance of the preconception window because of its positive impacts on a number of reproductive endpoints, including egg and sperm quality, chances of conception, maternal health outcomes, and child health outcomes. According to the American College of Obstetricians and Gynecology, for example, "the goal of pre-pregnancy care is to reduce the risk of adverse health effects by optimizing health and addressing modifiable risk factors." [1]

And yet, 86% of American women are not receiving this recommended preconception care or education from their family physician or OB-GYN. [2] This leaves a large population of people trying to conceive without trustworthy education and without necessary risk screening during this critical period. In the absence of this clinical touchpoint, women are instead turning to social media and the Internet for guidance, but misinformation and "natural fertility remedies" advertised with false or exaggerated claims make navigating pre-pregnancy with confidence challenging. In addition to this information gap, a gender gap is also experienced during the preconception window. Two in three women report that their spouse or partner is overlooked in discussions and decision-making about family building. [3]

The Doveras digital health platform offers a trusted, clinically-sound preconception intervention for both individuals and couples that emphasizes male and female fertility equally. The intervention includes lifestyle, behavioral, and educational interventions, alongside touchpoints with a care team, to prepare couples for a healthy pregnancy. The case presented here describes how a female and male couple attempting to conceive naturally engaged with the Doveras' platform.

Case Presentation

The 32-year-old Caucasian female and her 33-year-old male partner were proactively preparing for pregnancy using the Doveras platform for 40 weeks before they planned to start trying to conceive. The couple reported that they had seen friends struggle to get pregnant and desired to naturally enhance fertility in order to achieve a healthy pregnancy through sexual intercourse. They reported that they do not have fertility benefits covered through an employer.

Both users had no prior pregnancies and no prior significant medical history or current health conditions that might impact fertility or reproductive outcomes (Table 1). The female partner reports an AMH level of 1.56 and endorsed her plan to have her (hormonal/copper) IUD removed before starting to try to conceive. She notes a history of a regular period when not on birth control.



"We always knew we wanted to have kids and wanted to start trying in August of 2023. But in advance of that we heard about Doveras and worked through the Pre-Pregnancy Clean Up to improve our chances of having a healthy baby." - FEMALE PARTNER

"I knew my wife was only one piece of the puzzle and I wanted to make sure I was doing my part and controlling what I can control. There is so much research out there so to have that distilled down for me and personalized was really helpful and made everything really easy." - MALE PARTNER

Table 1. Previous Health History of Couple Seeking Preconception Care from Doveras

FEMALE USER	MALE USER	
32 years old 6'0" 170 lbs IUD type — hormonal AMH self-reported as 1.56 No smoking history reported	33 years old 6'3" 196 lbs No reproductive issues reported No previous sperm analysis reported No smoking history reported	
Biggest challenge reported: "What doctors should I be talking to now?" "When (and how) to go off birth control" "When (and how) to start cycle tracking" "Confidence that I'm doing everything I can within my control" "How to support my partner" "When to make which lifestyle changes to support our timeline"	Biggest challenge reported: "How to support my partner" "When to make which lifestyle changes to support our timeline" "What doctors should I be talking to now?"	

Intervention & Outcomes

The intervention combined weekly personalized, data-driven digital programming to naturally improve the couple's fertility along with consultations with the Doveras care team and clinical staff. Access to Doveras' self-paced education modules was also available. The couple engaged consistently with all of these aspects over 40 weeks of active usership (Figure 1) and spent a total of 248 minutes (over 4 hours) engaging with the Doveras platform and care services (Table 2).



Figure 1. User Journey Over 40 Weeks of Platform Engagement

Table 2. Couple's Combined Engagement by Time with the Doveras Platform

	DIGITAL ENGAGEMENT		CARE TEAM ESCALATION TOUCH POINTS	
DOVERAS PLATFORM FEATURE	Personalized weekly programming & logging	Evergreen educational content	Lifestyle consult	Nurse consult
TIME SPENT	74 mins	99 mins	45 mins	30 mins

In November 2022, the couple purchased access to the Doveras platform. They took an initial baseline assessment and were given personalized lifestyle recommendations to support preconception and pregnancy health. Both the male and female partner attended an onboarding consultation with the Doveras care team in November 2022 to review their personalized lifestyle recommendations. The female user reported she started taking a prenatal vitamin and her other recommended supplements, including Omega-3 and CoQ10. Both asked questions about their specific recommendations and practical advice

on how to implement these changes in their daily life. The users continued to engage with the program weekly and log behavior change.

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"We have been deliberate about making lifestyle changes for 3-6 months ahead of starting in earnest, from both taking prenatals to reducing our caffeine and alcohol intake, to balancing our respective diets. We are excited for the next few months of trying now that we are well informed!

We are currently about to start month 1 of ovulation tracking. I really appreciate the opportunity to ask questions to Nurse Molly. She was able to give me great advice and helpful information where I needed it, as well as instill some confidence in me by reaffirming some of the information I was unsure about."

- FEMALE PARTNER

In April 2023, the female user removed her IUD. In July, she started tracking her cycle with the Oura ring and an ovulation predictor kit to proactively identify her fertile window and identify any potential issues. She booked a "Troubleshooting Ovulation Tracking & Timing" consultation with a fertility nurse in August 2023 through the Doveras platform. She reported difficulties using her ovulation tracker and low confidence that she was interpreting the results correctly. The nurse discussed how to test and interpret results of her ovulation predictor kit properly in order to pinpoint her fertile window. They also reviewed when she should time their sexual intercourse within her fertile window to

optimize the chance of natural conception. In this session, the female user also expressed concerns about premature menopause/diminished ovarian reserve because of her AMH levels. In response, the fertility nurse was able to provide education and reassurance about the relationship between AMH and fecundity. Further, the nurse discussed how the patient's preconception visit to her OBGYN (initiated as a result of Doveras' recommendation, per patient report) may help provide necessary clinical documentation to access infertility benefits through the patient's insurance if the female user decided to seek care from an infertility specialist in the coming months.

In August, the couple logged that they had timed sexual intercourse for the first time in the Doveras platform. In early September, a pregnancy was logged.

Reported Outcomes

The couple started timing sexual intercourse in August 2023 and conceived in this first cycle mid August. They had a full term (40 weeks 1 day), vaginal delivery on May 7. The child was a healthy birth weight and size of 8 lbs, 8 ounces, and 21 inches. No adverse maternal health outcomes were reported.

The couple gave the Doveras platform a 10 out of 10 NPS score.



"I loved how the Pre-Pregnancy Clean Up gives you the research boiled down into very simple terms but also a checklist of things you can do that aren't a big deal, but have such an important impact that it's worth the minor inconvenience of the change. I was really excited that both of us could do that and have that impact on our family together. It felt like we were in this together just like we are in other areas of our life."

- FEMALE PARTNER

"It was really easy to jump in and get into the easy to consume content to **understand what I'm already doing**right and what are the small changes we can make to our daily lives. Whether it's just adding one ingredient to
my breakfast or mixing in more exercise, the help identifying these highest impact levers and then support sticking
to them through this program helped us **feel confident we did everything we could for our future child.**"

- MALE PARTNER

Discussion

The case presented here demonstrates the value of digitally accessible, affordable preconception care. The Doveras platform was able to give the couple personalized lifestyle guidance via its proprietary technology to proactively prepare for a healthy pregnancy together. The couple was also able to escalate to more human and clinical touchpoints as needed to complement their unique journey: they asked lifestyle implementation questions and sought out support to ensure they were tracking ovulation and timing sexual intercourse optimal for their fertile window. Access to the Doveras

platform appeared to give them both clinically-valid preconception health guidance and emotional benefits of improved confidence as they sought to conceive for the first time.

Consent

Written informed consent was obtained from the users for the publication of this case study, including any identifiable data or images that might reveal the user's identity.

References

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