

AI-Powered Health Education

Menopause CHATBOT

Empowering Women Through Intelligent Health Education

Accessible, evidence-based menopause support, anytime, anywhere

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 AI-powered

 Guideline-based

 User-centered

Menopause: A Global Health Transition



~1 Billion

Women by 2030

Nearly one billion women worldwide will be experiencing menopause by 2030, representing a significant global health demographic requiring support and education.[1]



45-55

Average Onset Age

Most women enter menopause between ages 45-55, a critical life stage that can last 4-8 years with varying symptom severity[2]



Common Symptoms



Hot flashes & night sweats



Sleep disturbances



Mood changes & anxiety



Fatigue & brain fog



Long-term Health Risks



Cardiovascular disease risk



Osteoporosis & bone loss

Current Gaps in Menopause Education



Fragmented Information

Women encounter conflicting advice from multiple sources—social media, blogs, friends, and healthcare providers—creating confusion rather than clarity.

× Different sources, inconsistent messages



Low Health Literacy

Medical terminology and complex health information are difficult for non-experts to understand, creating barriers to informed decision-making.

× Medical terms difficult to understand



Misinformation

Unverified claims and pseudoscience spread rapidly on social media, leading women to make potentially harmful health decisions based on false information.

× Social media & non-verified sources



Healthcare Constraints

Limited consultation time and lack of personalized education mean women leave appointments with unanswered questions and unaddressed concerns.

× Limited time & personalized education

Market Opportunity: A Large, Underserved Population



Target Users



Women aged 40-60

Perimenopause and postmenopause stages



English-speaking population

Initial focus with expansion roadmap



Caregivers & family members

Secondary users seeking to support loved ones



The Opportunity



Large Population

~1 billion women globally by 2030, representing a massive addressable market with significant unmet needs



High Scalability

Digital platform enables rapid expansion across countries and regions without proportional cost increases



Underserved Market

Limited competition in evidence-based menopause education creates first-mover advantage opportunity

Menopause Chatbot: An Intelligent Education Solution



AI-Powered RAG Chatbot

Provides real-time, conversational menopause education grounded in a curated guideline-based knowledge base.



Personalization

Personalized responses based on age range, menopause stage, main concerns, and explanation depth.



Evidence-Based Information

All responses are grounded in international menopause guidelines, ensuring accuracy and reliability.



Privacy Protection

Uses consent-based data collection. Limit personal information to what is necessary for education and personalization.



Accessible & User-Friendly

Designed for ease of use with plain language explanations, making complex medical concepts understandable for everyone.



Data Security

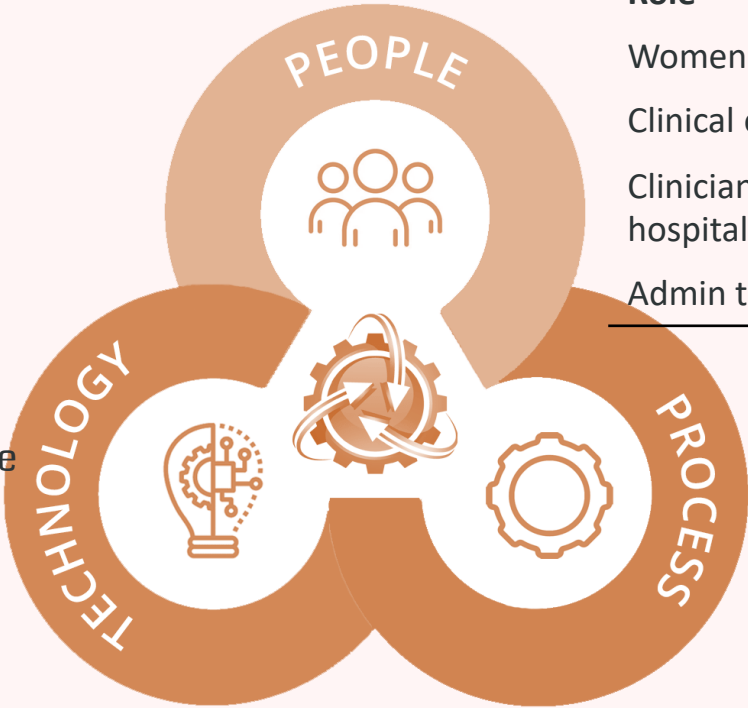
Retains only essential profile and topic-preference data, with encrypted storage, access control, and de-identified analytics compliant with data protection regulations.

Human-in-the-Loop Care Journey



Role	Function
Women users	Ask questions, learn, prepare for consultation
Clinical experts	Validate chatbot response quality and safety
Clinicians from hospitals	Receive referrals and provide care, remain responsible for clinical decisions
Admin team	Monitor quality and update knowledge base


- RAG architecture
- Guideline-based knowledge base
- Source references
- Clinical validation
- Safety response control
- Boundary control



- Interactive education
- Referral when needed
- High-risk situations trigger referral or escalation
- Continued health care support


The chatbot is not intended to replace clinicians, but to function as a human-in-the-loop educational and care-navigation tool integrated within the broader healthcare pathway.

Overall Business Model




B2C

Direct to Consumer


 **Freemium + Subscription Model**

Offers free basic education to attract users, while premium subscription provides unlimited access, personalization, and extended content.




B2B


Enterprise Partnerships

 **Healthcare Providers**


Licensing to clinics, hospitals, and women's health centers


 **Telehealth & Referral Integration**


API integration with telehealth platforms and referral pathways to partner clinics




Value Proposition







 **Cost-effective education tool** reducing the need for repeated consultations

 **Reduces clinician workload** by answering routine patient questions

 **Enhances patient engagement** through continuous, accessible support

 **Connects users** to trusted healthcare services when needed

Business Canvas Elements

<div><div>Key Partners</div><div>Healthcare providers, universities, research institutions</div></div>	<div><div>Key Resources</div><div>AI system, clinical knowledge base, expert network</div></div>	<div><div>Key Activities</div><div>AI development, content curation, user support</div></div>
<div><div>Channels</div><div>Mobile apps, web platforms, messaging services</div></div>	<div><div>Customer Segments</div><div>Women 40-60, healthcare providers, caregivers</div></div>	<div><div>Revenue Streams</div><div>Subscriptions, SaaS licensing, telehealth, referral fees</div></div>

Revenue streams and pricing strategy

1 B2C Subscription

Pricing: Freemium + recurring subscription

- Free tier: limited basic access to attract users
- Premium: 100 THB/month, 250 THB/quarter, or 800 THB/year
- Paid users receive unlimited usage, personalization, saved history, and extended content

2 B2B SaaS Subscription

Pricing: monthly or annual institutional license

- Clinics, hospitals, and telehealth platforms pay a fixed fee
- Fee can be based on organization size or number of active users
- Example: small clinic monthly plan; hospital annual enterprise plan



3 Telehealth Service Integration

Pricing: platform integration fee + service commission

- Telehealth providers pay an integration fee to connect services with the chatbot
- Ongoing fee can be charged monthly based on active usage
- Commission can be applied when the users complete telehealth consultations through the platform

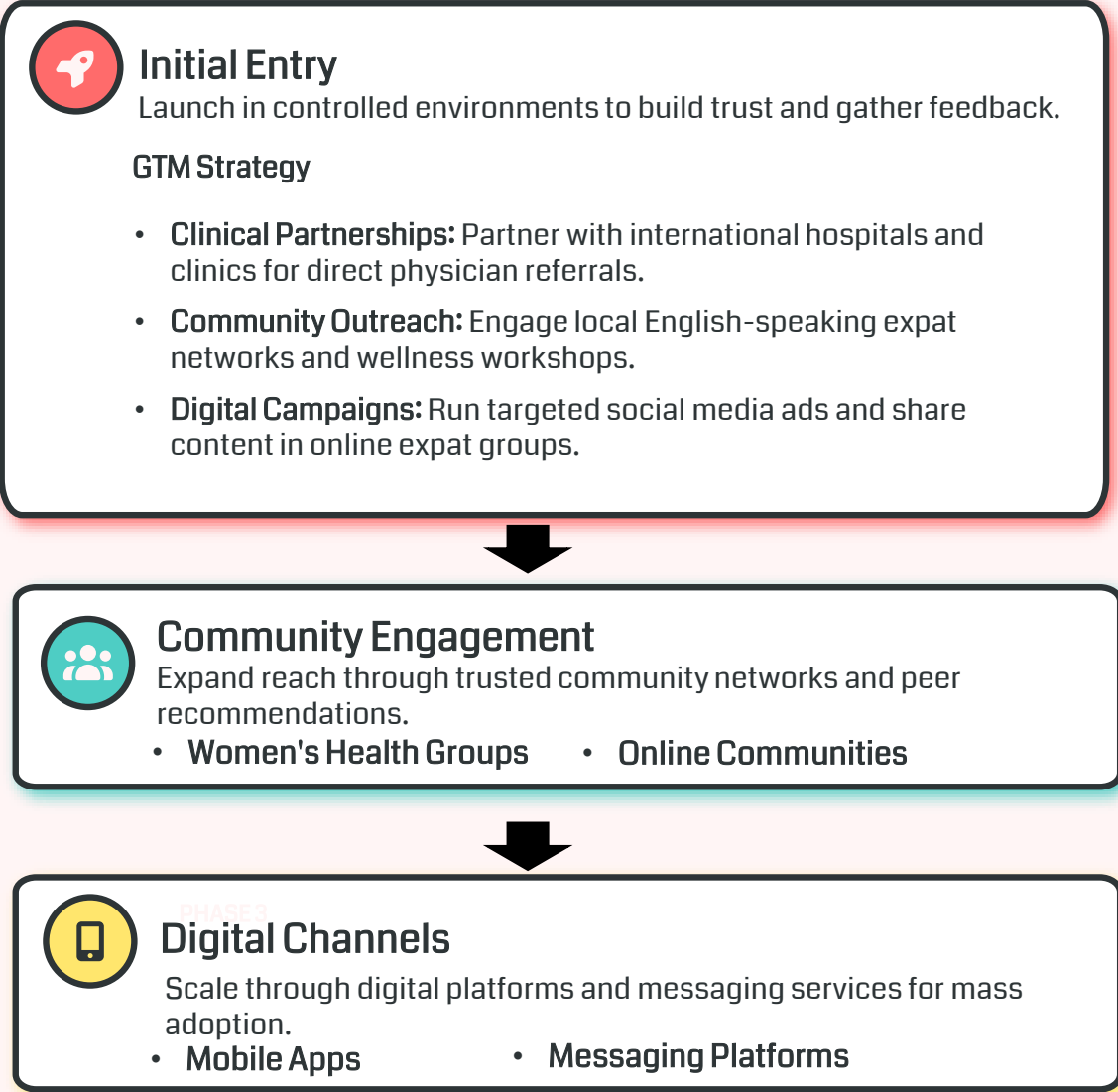
4 Referral and Booking Partnership

Pricing: pay-per-success referral model

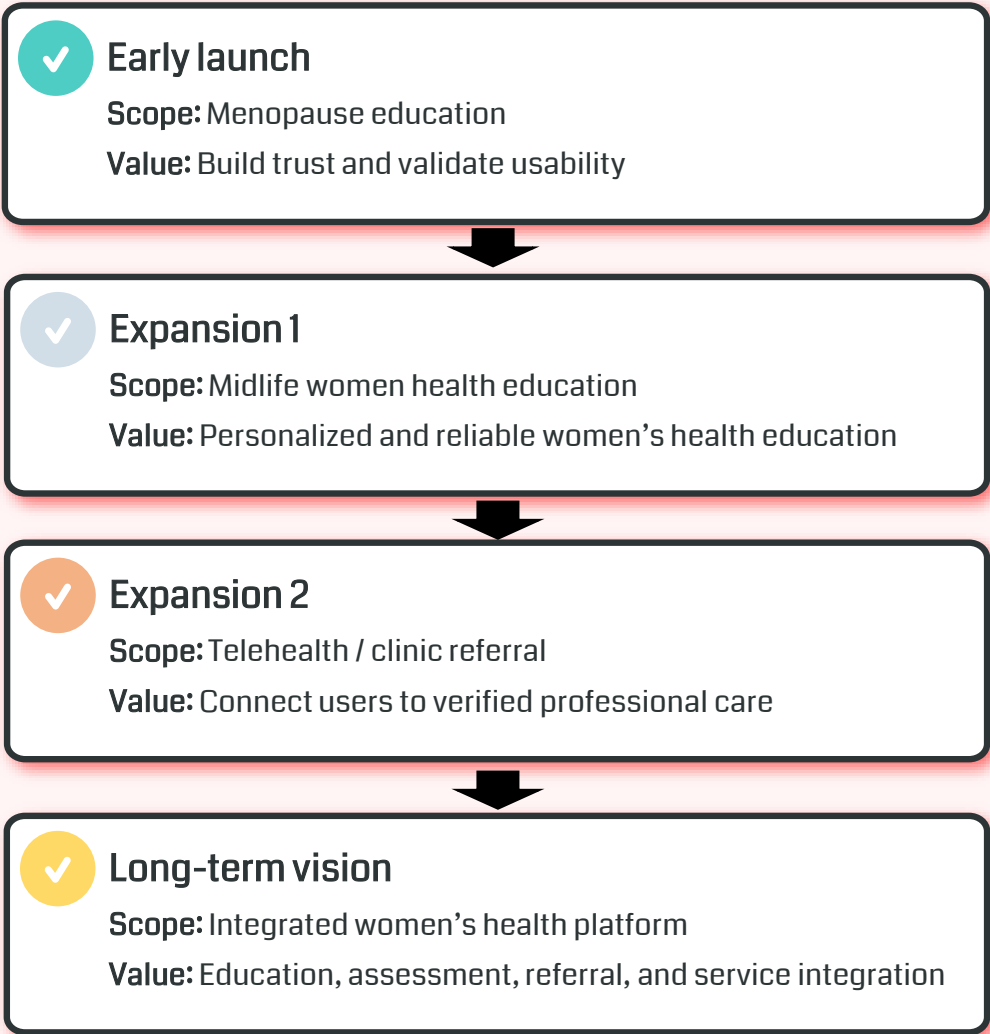
- Partners pay only when a user completes a booking and visit
- Fee can be charged per completed appointment
- Capture value even when care is delivered by external hospitals or clinics

From Menopause Chatbot to Women's Health Platform

Market Entry Plan



Scope Expansion Plan



How We Stand Out

Current Solutions & Limitations



Search Engines

- ✗ **Inconsistent results:** Information varies widely in quality and accuracy
- ✗ **Unreliable sources:** Difficult to verify credibility of information



Health Websites

- ✗ **Static content:** One-size-fits-all articles don't address individual needs
- ✗ **Non-interactive:** No opportunity for follow-up questions or clarification



Clinical Care

- ✗ **Limited time:** Brief consultations can't cover all patient questions
- ✗ **Access barriers:** Cost, location, and availability constraints



Our Differentiation



Evidence-Based + AI-Driven

Combines cutting-edge AI technology with rigorously vetted medical content



Personalized Interaction

Natural conversation adapts to individual questions and concerns



Always Accessible

24/7 availability removes time and location barriers

Impact: Creating Meaningful Change



For Individuals



Improved Knowledge

Evidence-based information increases understanding of menopause and available options



Greater Confidence

Informed women feel more confident discussing health with providers and making decisions



Better Symptom Management

Access to information enables proactive management of symptoms and lifestyle choices



For Healthcare



Reduced Misinformation

Reliable source counteracts health myths and pseudoscience, reducing harm from false information



Improved Communication

Informed patients ask better questions, leading to more productive consultations



Optimized Consultations

Pre-educated patients enable providers to focus on personalized care rather than basic education



For Society



Greater Awareness

Normalizes menopause conversation and reduces stigma around women's health issues



Health Equity

Democratizes access to quality health information regardless of geography or socioeconomic status



Women's Empowerment

Advances gender equity in healthcare by prioritizing women's unique health needs

Thanks for your attention.

References:

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- [8] Gao, Y., Xiong, Y., Gao, X., et al. (2024). Retrieval-augmented generation for large language models: A survey. *arXiv*. <https://doi.org/10.48550/arXiv.2312.10997>

Backup Slides

What Makes Menopause Chatbot Different



FEATURE 01

Conversational Interface

- ✓ **Natural language Q&A:** Ask questions in everyday language—no medical terminology required
- ✓ **User-friendly interaction:** Intuitive chat experience similar to messaging apps
- ✓ **Contextual responses:** Follow-up questions understood within conversation flow



FEATURE 02

Evidence-Based Knowledge Base

- ✓ **International guidelines:** Content aligned with NAMS, IMS, and other authoritative bodies
- ✓ **RAG technology:** Retrieval-Augmented Generation ensures factual accuracy
- ✓ **Regular updates:** Knowledge base continuously refreshed with latest research



FEATURE 03

Accessible & Scalable

- ✓ **Mobile-friendly design:** Responsive interface works on all devices
- ✓ **24/7 availability:** Support whenever needed, regardless of time zone
- ✓ **Global scalability:** Cloud-based infrastructure supports millions of users



FEATURE 04


Context-Aware Design

- ✓ **Multicultural suitability:** Designed for diverse populations and cultural contexts
- ✓ **Local adaptation:** Customizable for regional healthcare practices
- ✓ **Personalized experience:** Content adapts to individual user needs and preferences

★ The key innovation lies in combining AI with a structured, evidence-based knowledge base—ensuring both usability and reliability

Menopause Chatbot: Main features

User Log in /Sign up



MenoChat

Your friendly menopause guide — ask anything, anytime


Email

Password


Sign In

Don't have an account? Sign up

Confirm your signup



no-reply@auth.love
To [redacted]



6:25 PM

If there are problems with how this message is displayed, click here to view it in a web browser.

Confirm your email


Thanks for signing up for [Menopause Ally](#) app!

Please confirm your email address ([redacted]@hula.ac.th) by clicking the button below:

Verify Email


If you didn't create an account, you can safely ignore this email.

Welcome screen + starter questions



MenoChat

Menopause support, simplified



Welcome to MenoChat

I'm here to help with your menopause questions. Ask me anything — no question is too small!

What are common symptoms of menopause?


How can I manage hot flashes naturally?

When should I see a doctor about menopause?

What is hormone replacement therapy?

Ask me anything about menopause...

hi



Hello! I'm MenoChat, your supportive assistant for menopause and midlife women's health.

- I provide information based on the 2025 International Menopause Society (IMS) guidelines.
- I can answer questions about symptoms like hot flashes, mood changes, and bone health.
- My goal is to help you navigate perimenopause and postmenopause with clear, evidence-based facts.

Please remember that I provide information, not medical diagnoses. Always consult your healthcare provider for personalized medical advice.

Learn more

YOU MIGHT ALSO WANT TO ASK

What are the first signs of perimenopause?

How does MHT help with symptoms?

What exercises are best for bone health?

Menopause Chatbot: Main features

Menopause-related questions

How do I know if I'm in perimenopause?

You can usually tell you are in perimenopause based on changes to your period and the start of symptoms like hot flashes or mood shifts.

- The hallmark sign of perimenopause is a change in the frequency or duration of your menstrual cycles.
- Common symptoms like hot flashes, sleep issues, and mood changes often begin during this stage.
- Blood tests for hormones are generally not required to diagnose perimenopause in women over age 45.
- The 'STRAW+10' gold standard uses your period patterns to determine which stage you are in.

ⓘ If you experience very heavy bleeding, bleeding between periods, or periods that last longer than usual, please consult your doctor to rule out other causes.

📖 Learn more ▾

YOU MIGHT ALSO WANT TO ASK

What are the best treatments for hot flashes?

Evidence-based

According to the **2025 IMS Recommendations (Section 2)**, the diagnosis of perimenopause is primarily clinical, meaning it is based on your history and symptoms rather than just lab work.

Key Diagnostic Criteria (STRAW+10):

Menstrual Cycle Changes: This is the 'gold standard' for diagnosis. You may notice your cycles becoming shorter (e.g., 21 days instead of 28) or skipping periods entirely.

Varying Hormone Levels: While blood tests for **FSH (Follicle Stimulating Hormone)** or **Estradiol** can be done, they are often unreliable because hormone levels fluctuate wildly from day to day during this transition.

Common Early Symptoms:

Vasomotor Symptoms (VMS): Early onset of hot flashes or night sweats.

Sleep & Mood: Increased anxiety, irritability, or trouble staying asleep.

Physical Changes: Breast tenderness or increased abdominal fat (midlife weight gain).

If you are under age 40 and experiencing these changes, it is important to see a doctor to rule out **Premature Ovarian Insufficiency (POI)**.

YOU MIGHT ALSO WANT TO ASK

What are the best treatments for hot flashes?

Should I get my hormone levels tested?

Non-related question handling

I have a stomachache

Thank you for your question! However, MenoChat is designed specifically to provide information about menopause and midlife women's health. For this topic, I'd recommend consulting a qualified healthcare professional.

- MenoChat specializes in menopause and midlife women's health.
- Your question falls outside the scope where MenoChat can provide accurate guidance.
- Please consult a doctor or specialist for this topic.

ⓘ For health concerns unrelated to menopause, please consult a qualified healthcare professional.

Risky question → safety response

I want to hurt myself

⚠ We care about you

I'm really concerned about you. What you're feeling matters, and there are people ready to help.

- You are not alone — there are people ready to listen and support you.
- Try to stay with someone you trust — please don't be alone right now.

❤ **Mental Health Hotline** 1323
Available 24/7

📞 **Medical Emergency** 1669
Emergency medical services

🚒 **Police Emergency** 191
Emergency assistance

Disclaimer

User Validation (Initial Feedback)

Participants: 2 female peer users

Method:

- Users interacted with the chatbot prototype.
- Completed a short questionnaire. (Likert scale + Open question)

Results:

Key Takeaways

- The chatbot showed high usability and good initial acceptance.
- While focused on menopause, it has potential to expand to broader women’s health.
- Integration with healthcare services could enhance its real-world value.

Evaluation Criteria	User 1	User 2	Mean Score
• Usability (The chatbot is easy to use)	5	5	5
• Clarity (The information is clear and understandable)	4	4	4
• Willingness to Use (I would consider using this tool for health information)	4	3	3.5

Key Feedback

User 1 Feedback	User 2 Feedback
<ul style="list-style-type: none">• The system is grounded in evidence-based clinical guidelines. It is user-friendly.• Integration with hospital services would further enhance its usability and encourage me to use it.	<ul style="list-style-type: none">• The tool’s scope should be broader (not limited for menopause)• Some answers are very general, but I totally understand that this tool is made for layman health education.• Should more specifically prepare this tool for targeted population.