Cord Startup Blueprint

Cut Your Anxiety

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Problem/Opportunity Statement

301 million people across the globe have a diagnosable anxiety disorder (16). In the United States:
- 40 million people total have an anxiety disorder (17)
- Anxiety rates in young adults doubled from 7.97% in 2008 to 14.66% in 2018 (3)
- In 2023, 49.9% of 18-24 year olds reported symptoms of anxiety or depression (6)
- 31.9% of people 13-18 have an anxiety disorder in the United States (17)

Mental health across the globe is worsening and people aren't getting help: Only 27.6% of people in need will receive treatment for an anxiety disorder (16) and a 2007 ADAA Survey reports 36% of people with social anxiety experience symptoms for ten or more years before seeking help (17). Barriers to accessing treatment include lack of awareness that what a person is experiencing is a treatable health condition, lack of investment in mental health services, lack of trained health care providers, and social stigma (16). Cost can also be a significant barrier to entry with single sessions ranging from $88 - $160 with insurance, or $120 - $350 without (37).

Even when people do seek help, they often can't find it:
- The average person must visit 3 therapists before finding the right fit (35)
- 60% of psychologists have no openings for new patients (33)
- 40% of psychologists have a waitlist of 10 or more patients (33)
- Wait times for intake appointments can be as high as 12 weeks (36)
- Wait times for regular counseling sessions can be as high as 22 weeks (36)

This is partially due to the high barrier of entry required to become a licensed therapist:
- A conservative estimate for average debt someone takes on to become a psychologist is $160,000 while the average salary for a psychologist is $85,330 (34).
- Psychologists must pass the EPPP, which costs $680 per sitting (33)
- Aspiring therapists must complete between 1500 - 6000 supervised hours depending on the state they wish to become licensed in (44)
- Graduate students often work 60 hours per week while writing their PhD dissertation (33)

The COVID-19 pandemic, ongoing conflict between Israel and Palestine, the Russo-Ukrainian conflict hitting its second year, waves of anti-LGBTQ+ legislation across the United States, and a worsening global climate have all contributed to planet Earth becoming a much more frightening place to live in recent years.

All of this has an undeniable effect on the global economy. Each year 12 billion working days are lost due to anxiety and depression according to the WHO (41), and Deloitte reports poor mental health will cost the world $6 trillion per year by 2030 in lost productivity (26). This lost productivity currently costs the global economy $2.5 trillion per year, of which $1 trillion is attributable to anxiety and depression (26). Action must be taken.

People need help.

Users, Customers, Industries

Cord will target mobile platforms like iOS and Android with possible web-based deployment. The app is meant to enhance traditional mental health treatment, not replace it.

Stakeholder	Active/Passive
Patients	Active
Therapists	Active
Insurance Companies	Passive
Family Members/Loved Ones	Passive
Employers	Passive
Regulations	Passive
Humanity/Society	Passive

The "Patients" stakeholder group consists of anyone with an anxiety disorder. Within this group, marketing efforts will initially focus on the United States. More information on initial user demographics and strategy can be found in Go to Market Approach. The "Family Members/Loved Ones" stakeholder group refers to people with a close relationship to someone within the "Patients" group.

Cord exists entirely within the Healthcare Sector. The problem Cord seeks to solve is one of mental health, regulations to be considered include HIPAA and other patients' rights acts, and active stakeholders consist of patients and providers. The only technological thing about Cord is its proposed solution.

More information about the solution can be found in Requirements, Solution, and Technology Building Blocks. More detailed information about specific markets Cord is entering and market potential can be found in Market Opportunity.

Requirements

Requirement	Stakeholder Group(s)	Priority
The system shall remain compliant with all relevant regulations and user privacy laws	Regulations	Must
The system shall comfort users in distress	Patients	Must
The system shall provide options for users to share data with their therapist	Patients, Therapists	Must
The system shall keep the identities of users anonymous by default	Patients	Must
The system shall provide insight on patients to their therapists	Therapists	Should
The system shall give options to connect users that are not in treatment to therapists	Patients, Therapists	Must
The system shall notify selected emergency contacts in the event of a crisis	Patients, Therapists, Loved Ones	Nice to Have
The system shall provide a secure channel for telehealth sessions between patients and their therapists	Patients, Therapists	Must
The system shall provide therapists with resources on handling caseloads and managing their practice	Therapists	Nice to Have
The system shall facilitate seamless transfer of patient data between therapists in the event of a change in provider	Patients, Therapists	Nice to Have
The system shall provide and assist users with achieving goals	Patients	Must
The system shall function on Android and iOS	All	Must
The system shall be compatible with all modern web-browsers (Chrome, Firefox, Safari, Edge, Opera)	All	Must

Product/Market Fit

27.6% of people with an anxiety disorder will receive the help they need (16). Globally, this means 225.75 million people with anxiety will not receive treatment (16) and 28.96 million people with anxiety in the United States will not receive treatment (17).

People in the United States generally trust and respect medical professionals (45). However, therapists do not trust apps meant to improve mental health for two main reasons:
- "Research into the effectiveness of mental health apps is lacking, and the majority have no evidence of efficacy" (15)
- Therapists are not involved in the creation of apps meant to improve mental health (15)

With this in mind, involving therapists in the creation of Cord provides two main benefits:
- Cord will be more effective than other anxiety management apps because of direct subject expert input
- Therapists are more likely to trust Cord, meaning they will be more likely to recommend and/or integrate the app into their practice

Additionally, psychologists are not usually trained on how to run a business (33). This provides potential for an opportunity to consult therapists on running/managing their own practice later down the line.

People are optimistic about the capability and integration of technology into mental health treatment. Research conducted by the team found:
- 97.7% of participants believe technology could be used to enhance traditional therapy
- 81.8% of participants believe technology should be used to enhance traditional therapy
- 29.5% of participants believe technology could replace traditional therapy

Research conducted by the team only further shows the need for Cord, and that there is a gap in mental health treatment that isn't being adequately addressed:
- 50% of participants report taking time off for their mental health
- 25% of participants report poor mental health affects their ability to sustain an income
- 24.3% of respondents had to wait a month or longer for an initial counseling session
- 42.4% of respondents report barriers preventing them from accessing treatment
- 11.4% of respondents believe technology should replace traditional therapy

More information about validation and methodology can be found under Validation Exercise.

Market Opportunity

As discussed earlier, poor mental health costs the global economy $2.5 trillion USD per year in lost productivity and this yearly cost is expected to rise to $6 trillion USD by 2030 according to Deloitte (26). Of this $2.5 trillion in lost productivity, $1 trillion is attributable to anxiety and depression (26).

Users, Customers, Industries

Cord will initially limit scope to the United States and expansion efforts will first target nations with large English speaking populations. More information can be found in Go To Market Approach. 101.28 million people total have an anxiety disorder in the United States, United Kingdom, Canada, Australia, New Zealand, and India.

Country	Number of People with Anxiety Disorder
United States	40,000,000[17]
Canada	5,000,000*[18]
United Kingdom	8,000,000[19]
Australia	3,400,000[21]
New Zealand	383,912**[51]
Mexico	58,190,372**[31]
Brazil	12,552,502**[32]
China	47,840,000[27]
India	44,900,000[28]
Russia	26,144,429**[29]
Worldwide	301,000,000[16]
* = Number includes more than just anxiety disorders (mood, substance abuse, etc)	** = Not an exact number (Based off a calculation of a percentage and a total number within an age group)

In the United States, this number can be broken down even further:

Anxiety Disorder	Number of People (United States)
Generalized Anxiety Disorder	6,800,000[17]
Panic Disorder	6,000,000[17]
Social Anxiety Disorder	15,000,000[17]
Other Anxiety Disorder	12,200,000

Total Addressable Market (TAM)

The mobile mental health market is estimated at $6.2 billion and has a Compound Annual Growth Rate (CAGR) of 15.2% during the forecast period of 2024-2030 (25). This means the market is expected to reach $17.5 billion by 2030 (25).

One of the most popular traditional treatment methods for anxiety is the use of pharmaceutical drugs. In contrast to the rapidly growing mobile mental health market, the anxiety pharmaceuticals market sits at $8.71 billion in 2024 with a CAGR of only 0.51% in the forecast period of 2024-2028 (24). In the United States, this market is even smaller: $3.21 billion in 2024 and a CAGR of 0.92% in the forecast period of 2024-2028 (22).

Serviceable Available Market (SAM)

36.9% of revenue in the mobile mental health market comes from the United States (25). This reduces the market size to:

$$6200000000 \cdot 0.369 = 2290000000$$
$$\$2.29 \text{ billion}$$

This is the total size of the mobile mental health market in the United States. However, Cord will be targeting the 40 million people (17) with an anxiety disorder in the U.S. Wellness apps have an ARPU of $46/year (38).

$$40000000 \cdot 46 = 1840000000$$
$$\$1.84 \text{ billion}$$

The serviceable available market for mental health apps focused on anxiety is $1.84 billion.

Serviceable Obtainable Market (SOM)

Defining a Formula

40 million people in the United States have an anxiety disorder (17). From this group, some percentage will be open to integrating a mobile app like Cord into their anxiety treatment. The percentage of people open to trying mental health apps will be a variable referred to as p_{open}.

Users are very unlikely to pay the same yearly cost for Cord that they would for traditional therapy. A reasonable pricepoint for Cord will be some percentage of the yearly cost for therapy. The ARPU for wellness apps is $46/year (38) and this will be divided by the average yearly cost for therapy. This average yearly cost of therapy will be a variable referred to as a_{yearly}.

There is also a pricepoint that would make therapy accessible to the largest portion of people with anxiety. This variable will be referred to as $t_{affordable}$.

These variables can be used to create a formula for estimating Cord's share of market:

$$SOM_{Cord} = 40,000,000 \cdot p_{open}(\frac{46}{a_{yearly}} \cdot t_{affordable})$$

Variable Definitions

Variable Name	Definition
p_{open}	Percentage of population with anxiety open to trying mental health apps
a_{yearly}	Average yearly price for effective mental health treatment
$t_{affordable}$	Affordable yearly price for effective mental health treatment
SOM_{Cord}	Cord's Share of Market

Conservative Estimate

In research conducted to validate Cord (more information found in <u>Validation Exercise</u>), it was found that 11.4% of participants believe technology should replace traditional therapy. Extrapolating this finding: This percentage is taken to be p_{open}.

$$P_{open} = 0.114$$

The highest estimate for the cost of a single therapy session with insurance is $160 (37). At 2 sessions a month, this results in a yearly cost of $3,840 for mental health treatment.

$$a_{yearly} = 3{,}840$$

The same value for $t_{affordable}$ as the last estimate will be used:

$$t_{affordable} = 240$$

Plugging these values into the SOM formula:

$$SOM_{Cord} = 40000000 \cdot 0.114(\frac{46}{3840} \cdot 240) = 13110000$$

This estimates Cord's Share of Market at: $13.1 million

Moderate Estimate

The same value for p_{open} as the last estimate will be used:

$$P_{open} = 0.114$$

The lowest estimate for a single therapy session without insurance is $120 (37). At 2 sessions a month, the yearly cost for therapy is $2,880.

$$a_{yearly} = 2{,}880$$

The same value for $t_{affordable}$ as the last estimate will be used:

$$t_{affordable} = 240$$

Plugging these values into the SOM formula:

$$SOM_{Cord} = 40000000 \cdot 0.114(\frac{46}{2880} \cdot 240) = 17480000$$

This estimates Cord's Share of Market at: $17.5 million

Optimistic Estimate

The validation exercise conducted revealed 81.8% of participants believe technology should be used to enhance traditional therapeutic techniques. Taking this result as p_{open}:

$$P_{open} = 0.818$$

Using the same value for a_{yearly} as the last estimate:

$$a_{yearly} = 2{,}880$$

In the validation exercise, 72.8% of respondents reported an affordable price per therapy session of at least $25. At 2 sessions a month, this results in an affordable yearly cost of $600. Taking this as value of $t_{affordable}$:

$$t_{affordable} = 600$$

Plugging these values into the SOM formula:

$$SOM_{Cord} = 40000000 \cdot 0.818(\frac{46}{2880} \cdot 600) = 313566666$$

This estimates Cord's Share of Market at: $313.57 million

Realistic Estimate

Based on calculations above, the most realistic projection of Cord's share of market estimation is between $13.1 million - $17.5 million.

Solution

To solve the problem presented in Problem/Opportunity Statement, the team will build a therapist-like chatbot to help users manage their anxiety. There are a number of competitors tackling a similar problem with a similar chatbot based solution (more information can be found in Competitive Analysis), so a chatbot is not enough of a unique value proposition to differentiate itself from competitors.

In addition to the chatbot, Cord will also feature smart-goal setting based on conversations with the chatbot, the ability for patients to connect and share data with their therapist, and other features to be announced. The number of core features will remain low so development can remain focused on quality over quantity of features.

These features and development philosophy are still not enough on their own. The competitive analysis mentioned earlier revealed that most competitors are lacking in one or more of the following categories: UI/UX, Functionality, Accessibility. Competitors either had rough user interfaces, the functionality of chatbots themselves was underwhelming, functionality was completely locked behind a paywall with no free trial, or some combination of the three. What will set Cord apart from the competition is exceptional UI/UX, exceptional therapeutic capability of the chatbot, and free access of the chatbot to all users. To generate revenue, the premium feature of the application will be to share patient data, analytics, and insights to their therapist. This is an initial Figma mockup of the mobile user interface:
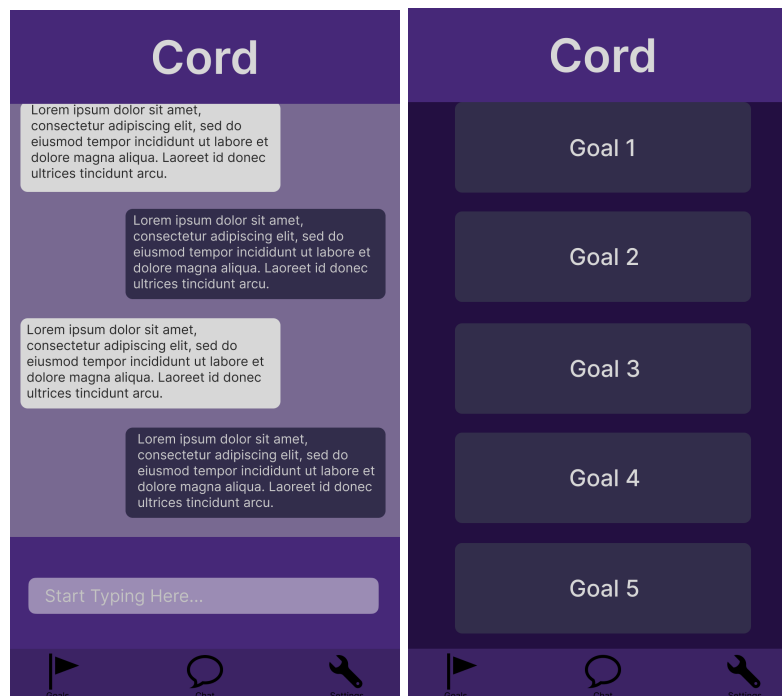

There is no way for the user to add goals manually within the goals screen; This is intentional. As much functionality as possible will be contained within the chatbot itself.

Technology Building Blocks

The scope of this section will be limited to the chatbot and the user interface allowing users to interact with the chatbot. More information on the full scope of the platform and the development plan can be found in Platform Roadmap.

There are many ways to build a chatbot. The most basic approach is to integrate ChatGPT into a mobile app using FlutterFlow. This approach has an advantage of being relatively quick to prototype, with the disadvantage of limited customizability and control over the model. The most complex is to build a custom chatbot completely from scratch. This has an advantage of being completely customizable with the downside of a high skill barrier, high cost, and long development time.

The application itself will use a client-server architecture, with independent frontend and backend components. The server will be hosted on the cloud through a provider like AWS. An instance of the chatbot will be hosted on the backend server. Additionally, a database is required to enable storing user data for authorization and analysis.
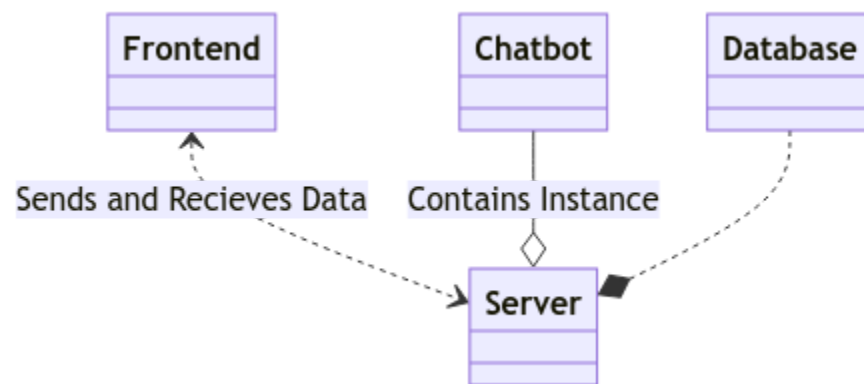

So far, there are three major building blocks: The frontend, server, and chatbot. The frontend user interface and backend server are likely to be hosted on different domains to maintain respective subsystem boundaries. Because of this, communication between the two subsystems will require utilization of the CORS protocol.

For basic functionality, the frontend user interface must provide an interface for interacting with the chatbot and the ability to authenticate users (more information on system requirements can be found in Requirements). To authenticate users, the following logic will execute whenever a user opens the application:
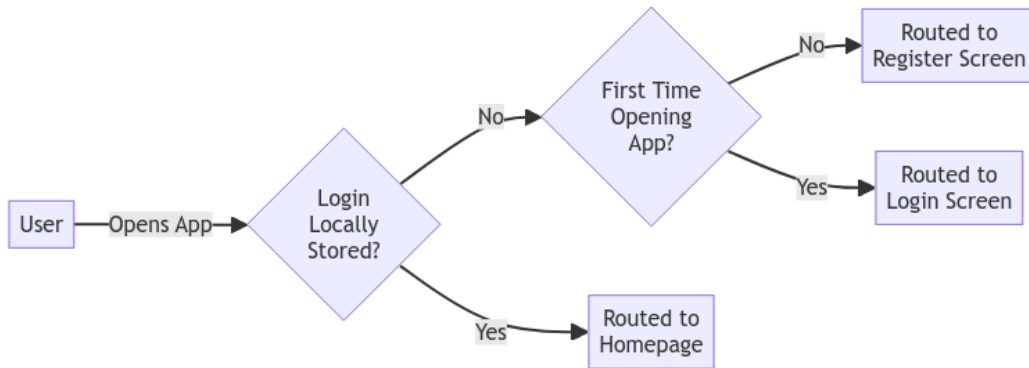
To authenticate a user with a preexisting account, this is what will happen to authenticate them:
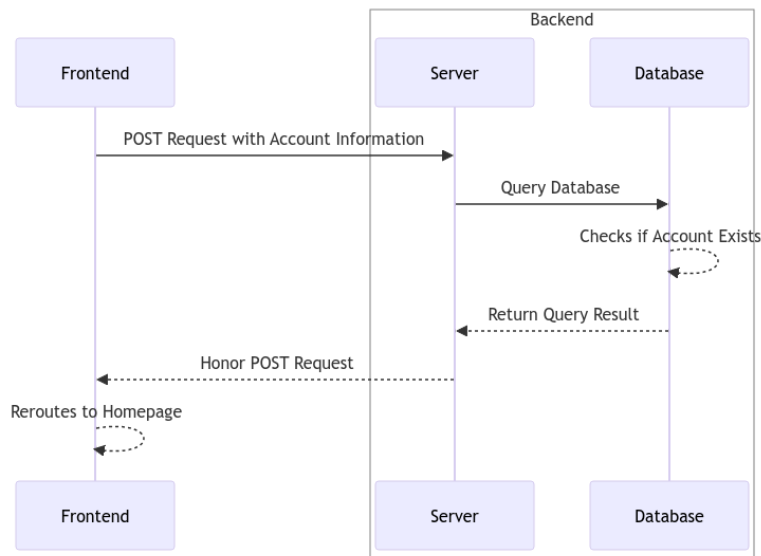
A similar sequence of events will happen to register a new account. An extra step of adding the account information to the database is required to create a new account. The most basic action a user will be able to take is interacting with the chatbot. This is how that will happen:
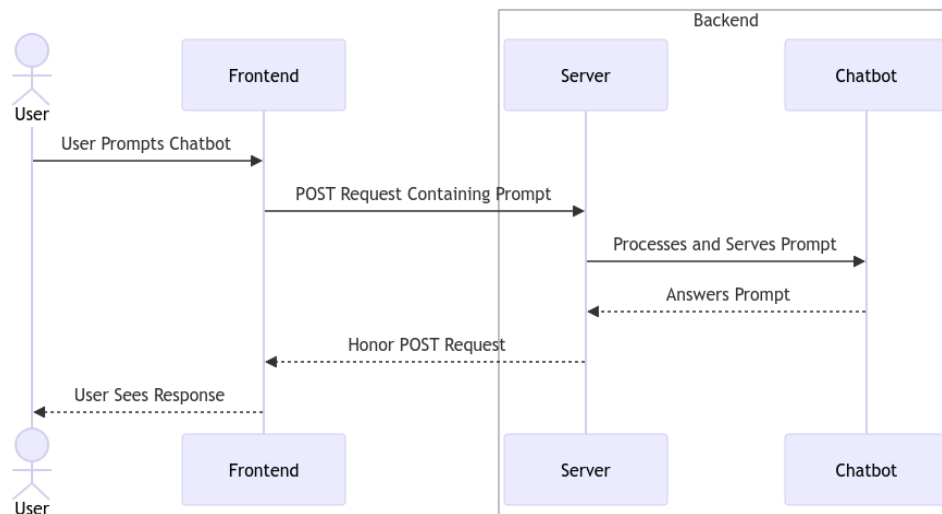
Go To Market Approach

In 2019, Rowan University received bad publicity from the New York Times following three student suicides in two months (46). This caused the university to increase the number of therapists available on-campus for students.
- International Accreditation of Counseling Services (IACS) recommends a counseling staff to student ratio of between 1:1000 and 1:1500 (47)
- National Association of School Psychologists (NASP) recommends a ratio of 1:500 (48)

States and educational institutions almost universally fail to meet this recommendation:
- Only Utah meets the NASP recommended psychologist-student ratio at 1:473 (48)
- 22 states have counselor-student ratios higher than the IACS recommendation of 1:1500 (48)
- National Survey of Counseling Center Directors reports average counselor-student ratio at educational institutions of 1:1600 (47)
- 8 states have psychologist-student ratios larger than 1:2500 (48)
- Alabama, Mississippi, and New Mexico have psychologist-student ratios equal to or higher than 1:7500 (48)

This very high average of counselors to students has consequences:
- Psychologists and counselors have increased caseloads and quality of treatment may decrease
- Students have longer wait times to see a mental health professional
- Increased legal liability on educational institutes and counseling centers

In recent years, both the complexity and frequency of litigation involving student mental health has been increasing (47). This costs educational institutions resources that could be used to expand student care.

With this and earlier anxiety statistics in mind, students will be the first targeted audience in a business-to-consumer (B2C) market approach. This initial go-to-market approach will have several phases, ultimately leading to a business-to-business (B2B) strategy in which insurance companies are the primary customers.

Phase 1

Time Expected (Cumulative): 1 year

Cord is primarily meant as a tool for patients and therapists, so it naturally follows that one of these two stakeholder groups should be the primary focus of the first marketing phase. Products and services in this domain require a degree of credibility in order to be looked at as legitimate options for integration into treatment. One of the best ways to build credibility in the mind of a consumer is for someone else to recommend a product. In Cord's case, this recommendation is most likely to come from a friend, family member, or therapist.

Therapists will be more cautious when recommending products to patients, so targeting mental health professionals will likely result in slower growth. Based on the information above and statistics found in Problem/Opportunity Statement, university students are an underserved demographic in mental health treatment. With all of this in mind, university students will be targeted in the first phase of marketing.

26% of college students are lonely (63). 40% of internet users between the age of 18 - 22 report social media addiction (12). Internet addiction has been correlated with social anxiety (5). Young people spend a lot of time online, and people who spend more time online are more socially anxious on average. People with social anxiety will engage in less social activity as a result of the disorder. People who engage in less social activity will not have as many connections, and may have a weaker support network.

University students between the ages of 18 - 22 with social anxiety who spend lots of time online are the demographic targeted in this first marketing phase. To reach these users, ad campaigns will be conducted on: Instagram, Discord, Reddit, YouTube, and Twitch. The primary goal of this phase is to establish a sizeable userbase, and receive real user feedback.

Phase 2

Time Expected (Cumulative): 2 - 3 years

Marketing efforts from Phase 1 will continue and expand to target people from 18 - 30 years old with social anxiety who spend lots of time online. In this phase, we will also target university counseling centers, therapists, and online therapy platforms like BetterHelp to either partner with these entities, or acquire them as customers. The primary goal of this phase is to establish partnerships with more established entities.

Phase 3

Time Expected (Cumulative): 4 - 6 years

Marketing efforts from Phase 2 will continue, but shift to the B2B2C approach targeting entities described in the previous phase, and away from individual end-users. The goal of this phase is to decrease reliance on B2C marketing and move toward exclusively B2B2C marketing.

Phase 4

Time Expected (Cumulative): 6 - 10 years

B2C marketing efforts will halt completely in the United States, focusing entirely on the B2B2C approach described in Phase 2. In this phase, international expansion will begin and phases 1 - 3 will be repeated in new markets.

Platform Roadmap

Milestone	Key Features	Expected Completion
Planning	Project planning, team formation, roadmap development, and validation	May 2024
Knowledge Gathering	Training team on AI/ML concepts required to complete the project	August 2024
Proof of Concept	Barebones Chatbot: Emotional recognition of text input by user	Sept 2024
Prototype	Basic UI, comforts users in emotional distress	Dec 2024
Minimum Viable Product	Streamlined UI, actively helps users take steps to reduce anxiety, delivers goals to users	February 2025
Alpha	Improvements based on initial user feedback, chatbot becomes tailored to individual user over time, patient-therapist connection	May 2025
Beta	Professional UI, chatbot becomes more therapist-like, option to share insights on a given user to their therapist (with consent)	August 2025
Soft Launch	Improvements based on user and stakeholder feedback	Nov 2025

A number of competitors already exist for Cord (More details can be found in Competitive Analysis). However, Cord has relatively few direct competitors; Part of the reason for this is that building a chatbot has a high barrier to entry in the form of technical knowledge required.

Risks/Challenges and Mitigation Plan

Stoplight Risk Matrix

Probability/Impact	Very Low	Low	Minor	Major	Severe
1.0					
0.75					Unintended Consequences
0.5		Team Skill Gap	Competitors Acquire Market Share	Privacy Law Violation	
0.25				Hardware Limitations	Data Unavailability
0.1					Not Technically Feasible

Label	Risk Explanation	Mitigation Plan
Not Technically Feasible	Developing a chatbot for the treatment of anxiety is not technically possible	Thorough research into AI chatbot development
Team Skill Gap	Development team does not have necessary skill set	More time spent developing, team expansion, skill development
Competitors Acquire Market Share	Competitors acquire significant market share before Cord reaches MVP stage	Project prioritization
Unintended Consequences	The chatbot exhibits unintended behavior while in use by end users that has a negative effect on mental health	Extremely thorough training and testing
Hardware Limitations	The team doesn't have hardware capable enough to train a chatbot	Purchase more capable hardware OR Rent more capable hardware OR accept trade-offs when training

Data Unavailability	There is an unsatisfactory amount of relevant available data (free or paid) for the team to train the chatbot on	???
Privacy Law Violation	Some parts of Cord violate patients' rights laws (HIPAA, Patient's Bill of Rights, etc.)	Legal research

Competitive Analysis

Elomia Health

The company is headquartered in Ukraine. Elomia Health has generated less than $1 million in total revenue, has grown 33% from 2022-2023, received $25,000 in funding from the Ukrainian Startup Fund, and received 15,000 web visits in March 2024 (62).

The artificial intelligence that works like a therapist. This chatbot engages users in freeflow conversation and acts as the user's therapist. When first entering the app, the user is prompted to enter what they are struggling with, whether they have tried therapy, and demographic information. The app makes money via subscription and has several options: $98.99 yearly, $48.99 for a 3 month subscription, and $28.99 for a 1 month subscription.

Purchasing a subscription plan allows access to premium features like mood changes based on chat history, and certain exercises. The app works to improve a user's mental health by offering a therapist-like chatbot, insights to the user, and activities. The app offers a free-trial session with the chatbot. After testing it, the chatbot seems capable: It remembered details about me, adapted to my personality and preferences in dealing with problems, and brainstormed solutions based on real therapeutic techniques.

There were two components of Elomia I disliked: As a free user, I was consistently prompted to purchase a subscription plan to the point it felt intrusive. When first signing up, when trying to access something locked behind the subscription, there was a banner above the chatbot when interacting, and when the free-trial ended I was prompted to subscribe again. As a user, this made me much less likely to purchase a paid plan even if the product was capable simply because it felt intrusive. The other thing I disliked was the user interface: The bot was represented by a 3D model of a person, and something about the UI just seemed rough around the edges.

After using and testing, this app gives the impression that it's still under development, but shows a lot of potential, and the underlying chatbot seems powerful. The biggest takeaway I gained after using this app is that monetization should be unobtrusive, but still easy to find, and that the user Interface should be polished.

FACING IT: Social Anxiety

Set goals, learn relaxation techniques, guided meditations and exercises, and feature an AI coach. Incorporates ACT, CBT, DBT, and exposure therapy. Developed with world leading psychologists. App was last updated over a year ago. The chatbot is represented by a Bitmoji like avatar. UI is minimalistic, but effective. The app offers various exercises for self-improvement, and a self-help coaching chatbot. I attempted to test the chatbot to determine its capabilities, but every prompted received this response:

> I am sorry, but I can't help you with this question. I was instructed to answer only safe questions.

Prompts ranged from, "Hi" to "I'm feeling anxious, can you help?" to "What's 10 + 10?" All prompts received the same response. No indication that I could find in-app defines what a safe question is. It's possible the developers have abandoned the app and the chatbot has stopped working, or that I need to purchase a subscription to test the capabilities of the chatbot. The company has received roughly $45,656 in funding.

Nuna

Nuna offers semi-guided conversations to users. The app has a very distinct, and polished style. After creating an account, the user is prompted to subscribe and has the option to view insights, start a guided course, make a journal entry, or start chatting with the self-help chatbot.

Woebot Health

The app has an impressive UI. Woebot can only be accessed through a healthcare provider, institution, or employer, so I could not test the app as a regular user. Their website advertises itself toward mental health professionals, advertising HIPAA compliance, concerning language detection, IRB review for clinical studies conducted by the developers, DHAF Safety Rating, Mozilla Privacy Rating, and being SOC Type 2 examined. Providers are also able to access population insights to better assist their clients, and population specific chatbots for adults, adolescents, adults over the age of 65, and for maternal health. A change in direction is needed to differentiate Cord from the competition

Wysa

The app has a polished UI and provides an option to sign up through a provider. When first signing up the user is prompted to enter demographic information and answer questions on how they have been doing over the past two weeks. The chatbot uses this information to gain insight into the user. The app starts to develop a plan of action for the user by asking them how long they have every day to dedicate toward self-care. The chatbot checks in with the user daily at a time set by the user.

After interacting, the chatbot seems somewhat barebones, especially in comparison to Elomia. This chatbot is more focused on generic self-help techniques rather than providing tailored advice to the user. The conversation is freeflow in the sense that the user can prompt the chatbot freely, but the chatbot is limited in functionality. This discouraged me from exploring the app for more than a few minutes.

The app also provides the option to buy a live chat session with a qualified personal coach. The user can pay monthly or quarterly: 12 sessions billed quarterly at $144.99 and 4 sessions billed monthly at $79.99. As a user, I'm not compelled toward purchasing a subscription since I wasn't

impressed with the free features of the app. I gained two takeaways from testing this app: UI is important, but functionality is equally as important. Free features should be high quality to incentivise users to purchase a premium plan.

Wysa has a B2B model targeting employers, individuals, and insurers with usage contracts for the main solution. They also seem to market to young people even though the app is claimed not to be marketed toward those under 18.

Youper

A chatbot launched by a mental health professional. On opening the app, it begins by asserting credibility in the form of claiming it was proven effective by researchers at Stanford, being featured by large news outlets, information about CBT, and asking the user questions.

There are a lot of static screens to click through and read before the user is actually allowed into the app. This is relatively unengaging as a user. It took almost 10 minutes of clicking through screens before I could actually get into the app.

The design of the app has a nice style, but clicking through so many screens presents a negative user experience before I've even started properly using the app. The app offers a chatbot for check-ins, screening tests for different mental health conditions, and insights. A non-premium account provides very limited functionality to the user. As a user, I don't want to commit to a subscription even if it has a free trial before I really know what the app does.

As a user, my entire experience using Youper was frustrating. The app was clearly trying to demonstrate its credibility to a new user but this failed for me for a couple reasons. After the third or fourth screen, I found myself just tapping through to try and get to the actual app as quickly as I could. I don't want an app to tell me how effective it is, I want to use it and decide for myself. I left with two takeaways. The first is that streamlined UX is important. The second is that non-premium modes of an application should provide a reasonable sampling of features.

Indirect Competitors

Ada

Ada is a symptom checker available on the App Store and Google Play. The app's primary function is to provide screening assessments for physical and mental conditions. In an assessment, users are asked to provide the biggest symptom they've been dealing with and are asked questions about related symptoms for 5 - 10 minutes.

Mindspa

Mindspa is a self-therapy app that aims to help users with a variety of mental health concerns. The chatbot offers guided conversations, providing the user multiple choice answers to its questions. On downloading the app, users are first prompted to create an account. On logging in, I was presented with a home feed with articles on how to deal with certain situations, the

option to write a diary entry, start self-help tasks, or purchase various self-help courses. The app seems somewhat ineffective as a therapeutic tool.

Conclusion

In relation to Cord, there are a few main takeaways gathered from analyzing the competition:
- There are a lot of mental health chatbots.
- Elomia was by far the most useful mental health chatbot, and the one that I would be most likely to purchase a paid plan for.
- The chatbot itself will not be the main value-creator of Cord, but rather the feature that draws in the most users.
- The chatbot should be effective on its own to encourage subscription.
- UI/UX is very important to get right.
- There should be as few screens as possible
- Monetization should be visible but unobtrusive
- App should be functional to non-premium users to encourage purchasing a paid plan

Research studies to validate chatbots aren't a unique strategy — blog posts are common, peer reviewed evaluation studies are common. I'm reflecting on my own experience in therapy. It started with my therapist giving me helpful tools for immediate anxiety management, a few early trauma sessions, and now interpersonal relationships. Most of the healing happens after an emotional connection has been established. Chatbots can't monitor conversations at the meta-level. Therapy should be comfortable, but shouldn't slide into routine. Hard emotional work gets done in therapy.

Validation Exercise

To validate product-market fit, generate requirements, and gather insight, a validation exercise was performed in which interviewed participants were asked a series of questions, and anonymous participants filled out a survey.

Participant Type	Number of Participants
In-Person Interview	3
Anonymous Survey	41
Total	44

Methodology

Participants were informed about the purpose and use of their data with the disclaimer below:

DISCLAIMER: The purpose of this app is to help patients and therapists in the treatment of anxiety. This app may be monetized. Some of these questions may be sensitive in nature, so answer in as much or as little detail as you feel comfortable and skip any questions you are uncomfortable answering. All data collected is completely anonymous and will not be shared with any third parties. This data will be used to validate research, assumptions, and help build a better final app.

A link to the survey containing the full list of questions can be found here:

https://forms.gle/zXBgdjvxnrYkK7LE7

Interviewed participants were asked a sampling of questions found in the form to make a 5-10 minute long interview, and were encouraged to skip any questions they felt uncomfortable answering. Demographic information was not collected from interviewed participants. Anonymous participants had 10 short questions, and 13 optional free-response questions.

Results

Responses from individuals will not be shared to protect anonymity and confidentiality.

Demographics

Age Group	Portion of Respondents
18 - 25	45.5% (n=20)
26 - 30	2.3% (n=1)
31 - 35	6.8% (n=3)
36 - 40	6.8% (n=3)
41 - 50	18.2% (n=8)
50 - 65	9.1% (n=4)
65+	4.5% (n=2)
Declined to Answer	0.0% (n=0)
Did not Collect	6.8% (n=3)

Gender	Portion of Respondents
Male	31.8% (n=14)
Female	61.4% (n=27)
Non-Binary	0% (n=0)
Declined to Answer	0% (n=0)
Did not Collect	6.8% (n=3)

Almost half of participants were between the ages of 18 - 25 and almost two-thirds of respondents self-identified as female. This has the potential of introducing sampling bias and means results may not be indicative of the entire population.

Key Findings

How Familiar Are You With Mental Health Conditions and Treatment

Answer Choice	Portion of Respondents (n=41)
1	2.4% (n=1)
2	0.00% (n=0)
3	2.4% (n=1)
4	2.4% (n=1)
5	9.8% (n=4)
6	12.2% (n=5)
7	26.8% (n=11)
8	22.0% (n=9)
9	4.9% (n=2)
10	17.1% (n=7)

Participants were asked to self-rate their own knowledge on mental health conditions and their treatment on a scale of 1 - 10, with 1 meaning the participant had no knowledge on mental health treatment, and 10 meaning the participant's career was in mental health.

83% of participants rated their own knowledge of mental health conditions and treatment at or above a 6 and 44% of participants rated their knowledge at 8 or above.

Affordable Price Per Therapy Session

Response	Portion of Respondents (n=44)
Free	11.4% (n=5)
$10 - $20	11.4% (n=5)
$25 - $40	27.3% (n=12)
$45 - $75	20.5% (n=9)
$100 - $149	18.2% (n=8)
>= $150	6.8% (n=3)
Determined by Condition/Vague Answer	4.5% (n=2)

Could Technology Replace Traditional Therapeutic Techniques?

Answer Choice	Portion of Respondents (n=44)
Yes	29.5% (n=13)
No	70.5% (n=31)

Almost a third of participants believe that technology could replace traditional therapy. This was a surprisingly high result.

Should Technology Replace Traditional Therapeutic Techniques?

Answer Choice	Portion of Respondents (n=44)
Yes	11.4% (n=5)
No	88.6% (n=39)

Could Technology be Used to Augment/Enhance Traditional Therapeutic Techniques?

Answer Choice	Portion of Respondents (n=44)
Yes	97.7% (n=43)
No	2.3% (n=1)

Nearly all participants believe that technology could enhance mental health treatment. This was the expected result.

Should Technology be Used to Augment/Enhance Traditional Therapeutic Techniques?

Answer Choice	Portion of Respondents (n=44)
Yes	81.8% (n=36)
No	18.2% (n=5)

Similarly to the last question, this result was expected. It is slightly concerning that almost 20% of participants believe technology should stay out of mental health treatment.

Ever Taken a Mental Health Day?

Response	Portion of Respondents (n=34)
Yes	50.0% (n=17)
No	44.1% (n=15)

Unsure	2.9% (n=1)
Irrelevant Answer	2.9% (n=1)

Exactly half of respondents reported taking a mental health day.

Do You Know of Someone Taking Time Off From Work Due to Poor Mental Health?

Response	Portion of Respondents (n=30)
Yes	63.3% (n=19)
No	36.7% (n=11)

Are There Social Barriers That Would Prevent You From Seeking Mental Health Treatment?

Response	Portion of Respondents (n=33)
Yes	42.4% (n=14)
No	54.5% (n=18)

Wait Time for an Initial Therapy Session

Response	Portion of Respondents (n=33)
< 1 Week	9.1% (n=3)
1-2 weeks	30.3% (n=10)
1 month	6.1% (n=2)
2-5 months	15.2% (n=5)
6 months	3.0% (n=1)
Never Attended Therapy	30.3% (n=10)
Unsure/Vague Answer	6.1% (n=2)

24.3% of respondents had to wait a month or longer for an initial counseling session.

Does Your Mental Health Affect Your Ability to Sustain an Income?

Response	Portion of Respondents (n=32)
Yes	25.0% (n=8)
No	75.0% (n=24)

Exactly one-fourth of participants reports that their mental health is affecting their ability to sustain an income. This confirms that poor mental health affects the economy, removing otherwise able-bodied people from the workforce temporarily or permanently.

Friend/Loved One With a Mental Health Condition?

Response	Portion of Respondents (n=30)
Yes	83.3% (n=25)
No	16.7% (n=5)

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