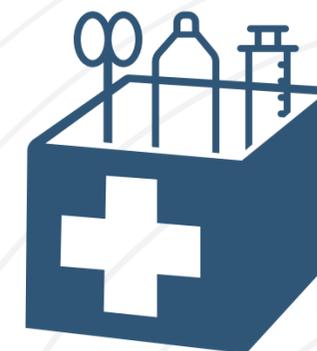
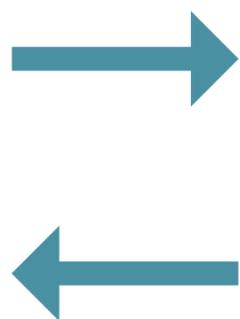


December 2022 | **Academy X<sup>i</sup>**



# PROJECT SCOPE

Develop a customer-facing online platform that will address user problems; and allow patients, GPs and medical equipment companies to easily interface with the MediGo Sleep Clinics, which are centred around Sleep Apnea.

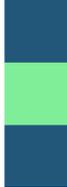


# PROBLEM STATEMENT

People who experience, or have been diagnosed with, sleep apnea feel worried, overwhelmed and confused about how to manage their condition. Patients want a trusted, reliable, and supportive service that provides researched advice and guidance on managing their healthcare in a holistic manner.



# RESEARCH



# RESEARCH METHODS

What the research comprised of



Secondary Research



Competitor analysis



Interviews



Survey





- **1 in 7 adults worldwide are living with sleep apnea**
- **An estimated 80% of people with sleep apnea remain undiagnosed**
- **On average, the cost of a sleep study in Australia is approximately \$500**

- **Over 1 billion individuals worldwide experience some form of sleep apnea**
- **Around 133,000 patients received a Medicare diagnostic sleep study in 2019. This represents a rate of 6.7 per 1,000 Australians aged 18 and over**
- **CPAP is the most common treatment for sleep apnea**



# COMPETITOR MARKET



A global company dedicated to giving patients a healthier happier life and continues to provide digital solutions



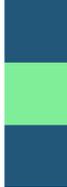
Respiratory and Sleep Medical Practice in Western Victoria, providing care to patients with respiratory and sleep disorders



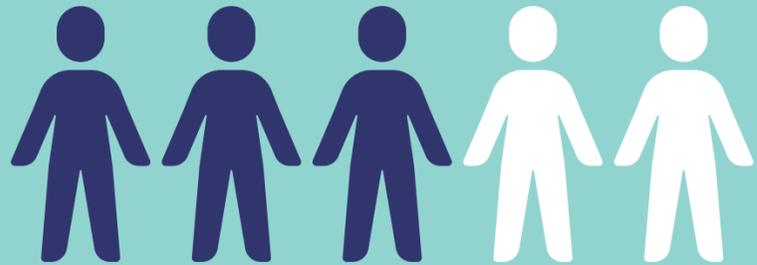
A personalized patient-centric treatment clinic dedicated to helping you sleep easier and avoid sleep-related health concerns



# INTERVIEWS



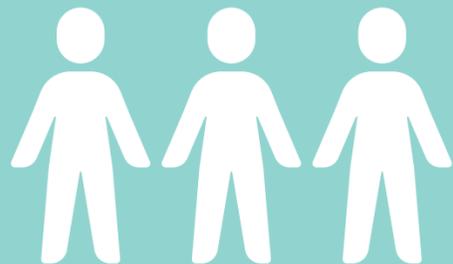
## We reached out to ...



**5** patients - 3 males & 2 females

**3** x 30 - 45 years old

**2** x 50 - 65 years old



**3** female doctors



# INTERVIEW INSIGHTS



**Patients are often unaware they have a sleep issue**

"Generally, it's hardly ever the case that someone comes in purely with the sleep complaint." - Doctor



**Patients may be worried about the stigma associated with/being labelled as having a disorder**

"I just think when they start using sleep disorder, you know, that sounds bad." - Patient



**Patients do not understand the seriousness of untreated sleep apnea**

"The sleep apnea problem is invisible, so something else takes priority and the sleep study is not done for the next two, three years." - Doctor



**Patients may face barriers beyond their control when seeking treatment**

"As it's not treated as a chronic condition there isn't much funding to access care." - Doctor



**Awareness and education may lead to early intervention**

"Important to self-educate yourself to keep motivated and interested in what you're doing." - Patient



**Personal and continuous patient care may result in increased treatment compliance**

"GP can offer a bit more connection like, do the test." - Patient



# INTERVIEW OBSERVATIONS



Patients experience some nervousness/anxiety when undertaking the sleep study



Support in the 1st month of starting treatment may result in higher compliance rates



Patient demographic/socio-economic status influences treatment outcomes



Patients may trial a number of non-evidence based treatments before seeking professional help



Patients may feel relieved upon receiving their diagnosis, followed by worry about cost of treatment



Patients generally present with many health issues which tend to take precedence over poor sleep



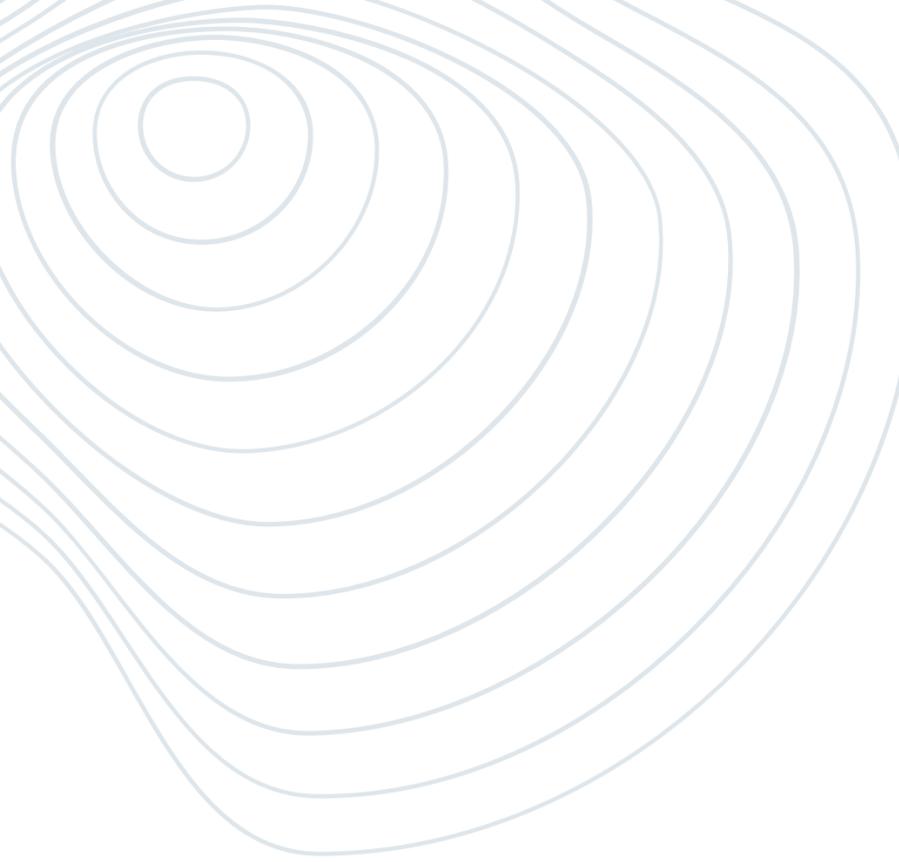
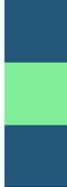
Partners are usually the motivating factor behind patients seeking professional help



The cost of treatment and side effects from using the machine may result in non-compliance



# SURVEYS



# DEMOGRAPHIC

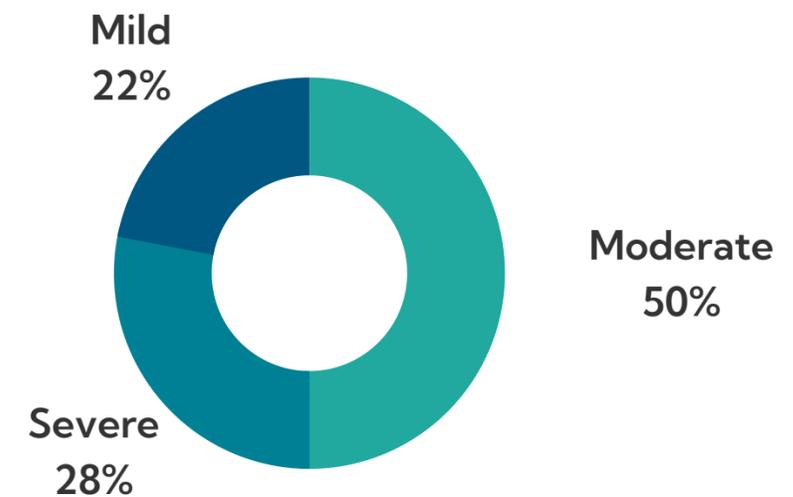
**Gender: Female 62% – Male 38%**

**Average Age: 25–65**

**Employment Status: 72% Employed full-time**

**Marital Status: 86% in a relationship**

## Apnea Hypopnea Index (AHI)



The survey comprises a maximum of 28 questions. 21 responses collected as of the 27th of November.



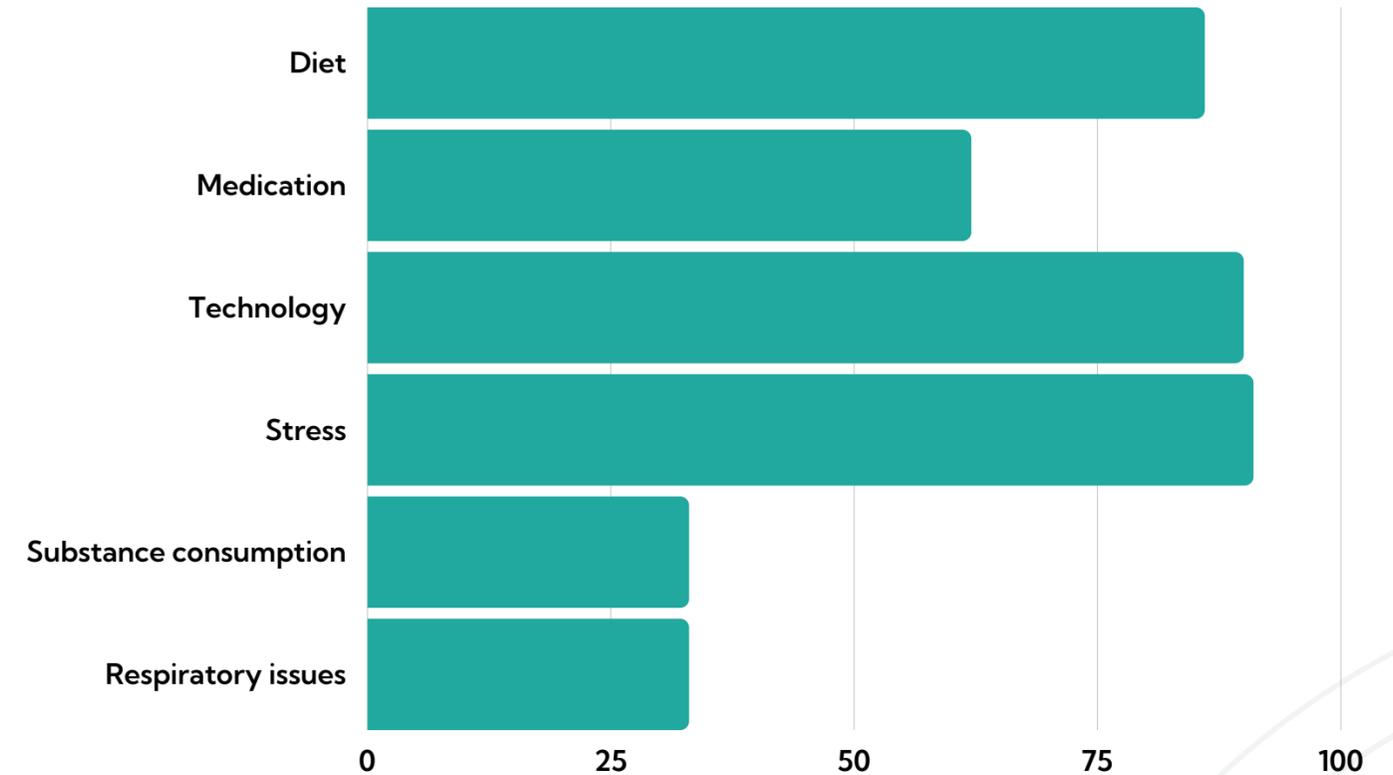
# AWARENESS

Didn't seek help  
47%



Spoke to the doctor  
53%

Around 53% of patients would speak to a doctor and 47% wouldn't.



Patients rule out sleep apnea entirely saying other factors affect their sleep. 25% believe that substance consumption and respiratory issues solely cause lack of sleep.

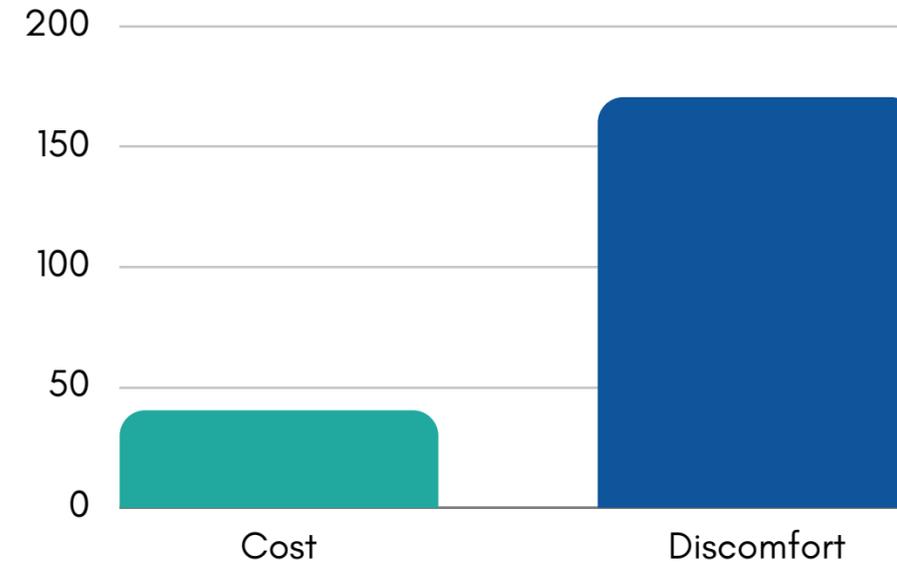


# PAIN POINTS

28%



Satisfied with the information provided about sleep apnea



# TREATMENT

72%



Undergoing treatment

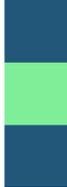
50%



Satisfied with the treatment



# PIVOT





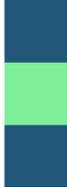
**GP's highlighted that patients require ongoing assistance to stay compliant with their sleep apnea diagnosis.**



**Allied Health Professionals are not as involved with a patient's sleep apnea journey. Once alternative recommendations are made, it's up to the patient to stay disciplined.**



**There are gaps in-between consultations with the GP, sleep test and Sleep Physician causing patients to be non-compliant. One factor being the wait periods between consults.**





# PERSONAS AND CUSTOMER JOURNEY





## PAUL THOMAS

AGE | 44

**EDUCATION** | Heavy Vehicle Knowledge Test & Competency Based Assessment (HVCBA) - TAFE NSW

**OCCUPATION** | Truck Driver (Full-time)

**BIO** | Paul is married with 2 kids. He has been driving commercially for Transporter Inc. for the past 20 years. For as long as he can remember, Paul has suffered with fatigue no matter how much sleep he gets. His wife has also been complaining more frequently about his snoring.

Paul attributed his chronic fatigue to getting older, being on the road all day, lack of movement and poor diet. He's tried taking supplements and changing his diet to boost his energy; as well as various aids for his snoring, with little to no effect.

### SOCIAL NETWORKS



### SCENARIO

Following a GP consultation scheduled by his wife, Paul was referred for a sleep study. The results revealed that he had obstructive sleep apnea. While Paul was relieved to finally get to the bottom of his exhaustion, he was worried about losing his job and commercial driving license. On the recommendation of his sleep physician, Paul has decided to commence CPAP therapy, and is in the process of choosing a CPAP machine.

"I work hard to provide for my family, which sometimes means missing out on things. Lately it feels like I'm there but I'm not ... I'm just so tired of being tired."

### GOALS & NEEDS

- 8 hours of uninterrupted sleep
- Feel more alert during the day
- Spend more time with his family after work
- Improve relationship with his family, particularly his wife
- Improve general lifestyle e.g. exercise more, healthier diet
- Keep his commercial driving license
- Improve safety on the road for himself and others while he is driving
- Affordable financing plan to commence and continue treatment

### PERSONALITY



### FRUSTRATIONS

- Feels overwhelmed by all the information, but lack of guidance, in choosing the right CPAP machine and accessories
- Does not know if the machine will work - he's been known to be impatient, and wants to see results in as little as 4 weeks
- Finding it challenging to lose weight
- CPAP machines aren't cheap
- Lack of financing options
- Worried about the impact sleeping with the machine will have on his relationship with his wife

### MOTIVATIONS



# COMPLIANT

	DIAGNOSIS	TREATMENT				MANAGEMENT
	AWARENESS	CONSIDERATION	COMPARISON	DECISION	TRIAL	LEASE/PURCHASE
DOING	<ul style="list-style-type: none"> <li>Attends GP appointment and completes sleep apnea questionnaire</li> <li>Goes for sleep study at lab</li> <li>Receives results</li> </ul>	<ul style="list-style-type: none"> <li>Online research on sleep apnea machines</li> </ul>	<ul style="list-style-type: none"> <li>Compares products and services</li> <li>Compares pricing options: purchase vs leasing</li> </ul>	<ul style="list-style-type: none"> <li>Chooses a supplier</li> <li>Creates account</li> <li>Books trial</li> </ul>	<ul style="list-style-type: none"> <li>Attends appointment</li> <li>Discusses which machine to start with</li> <li>Gets fitted for the mask</li> </ul>	<ul style="list-style-type: none"> <li>Decides to lease a CPAP machine</li> <li>Pays initial fee online and sets up monthly payment schedule</li> <li>Has machine and other consumables delivered</li> </ul>
TOUCH POINT	<ul style="list-style-type: none"> <li>GP</li> <li>Sleep Physician</li> </ul>	<ul style="list-style-type: none"> <li>Service provider websites</li> <li>First contact: chat, call or email</li> </ul>	<ul style="list-style-type: none"> <li>Service provider websites</li> <li>Additional information e.g. flyers, booklet</li> </ul>	<ul style="list-style-type: none"> <li>Service provider website</li> <li>Patient portal</li> </ul>	<ul style="list-style-type: none"> <li>Sleep Coach</li> </ul>	<ul style="list-style-type: none"> <li>Patient portal</li> <li>CPAP machine, accessories and instruction manual</li> </ul>
THINKING	<ul style="list-style-type: none"> <li>"I'm glad that I know what's wrong with me now, and that there's a way to treat it, but I haven't told my boss yet and wonder how much this will cost."</li> </ul>	<ul style="list-style-type: none"> <li>"I'm going to get the help that I need to treat my sleep apnea."</li> </ul>	<ul style="list-style-type: none"> <li>"There's just too much! I need help navigating this information."</li> </ul>	<ul style="list-style-type: none"> <li>"This looks like the best option for me."</li> </ul>	<ul style="list-style-type: none"> <li>"How am I going to sleep with this? How am I going to hold my wife at night?"</li> </ul>	<ul style="list-style-type: none"> <li>"They made it look so easy during the trial, but this actually looks very complicated to set-up. I need some technical support."</li> </ul>
FEELING	<p>RELIEVED &amp; ANXIOUS</p> 	<p>MOTIVATED</p> 	<p>OVERWHELMED</p> 	<p>POSITIVE</p> 	<p>EXCITED &amp; UNSURE</p> 	<p>FRUSTRATED</p> 
PAIN POINTS	<ul style="list-style-type: none"> <li>Wait times between GP consultation, sleep study, diagnosis and start of treatment</li> </ul>	<ul style="list-style-type: none"> <li>Waiting to be contacted</li> <li>Limited physical locations that patients can visit and speak directly with someone</li> </ul>	<ul style="list-style-type: none"> <li>Too much information to digest</li> <li>No idea which machine is best or what accessories are needed</li> </ul>	<ul style="list-style-type: none"> <li>Unsure what is covered by Medicare / private health insurance in order to commence a trial</li> </ul>	<ul style="list-style-type: none"> <li>It takes a while to get used to sleeping with the mask/machine and see the positive outcomes from the machine therapy</li> </ul>	<ul style="list-style-type: none"> <li>Overwhelmed by having to set up the equipment</li> </ul>
OPPORTUNITIES	<ul style="list-style-type: none"> <li>Provide patients an opportunity to self-educate themselves with trusted sources of information to gain awareness</li> </ul>	<ul style="list-style-type: none"> <li>Provide patients with option to have a video call with staff on site</li> </ul>	<ul style="list-style-type: none"> <li>Clearly educate patients about the options available to them regarding sleep apnea machines and related consumables</li> </ul>	<ul style="list-style-type: none"> <li>Offer multiple trial packages with / without a contract to provide patients financial relief and flexibility to test out various machines</li> </ul>	<ul style="list-style-type: none"> <li>24/7 call centre that patients can reach out to for help (or call back service if no-one is available)</li> <li>Connect patients with sleep apnea community where others may provide advice based on their experience</li> </ul>	<ul style="list-style-type: none"> <li>Guide patients through the set-up process (tutorials, 'live' tech support), and provide on-going support during the 1st month of treatment</li> <li>Connect patients with sleep apnea community where others may provide support and motivation</li> </ul>



## KAREN SUTHERLAND

AGE | 48

EDUCATION | Bachelor of Education (Secondary)

OCCUPATION | Teacher (Full-time)

BIO | Karen is married and works full-time as a high school teacher. She’s been teaching at a public school for over 25 years. Karen is extremely passionate about her job, but faces the challenge of finding motivation, and is often tired and rundown towards the end of the day.

Karen’s husband often mentions that she is a heavy snorer. She blames her snoring on the long-hours she works and enthusiasm required to motivate her students. Karen does not take alternative supplements or medication as she feels that feeling tired after a long day and snoring is normal.

### SOCIAL NETWORKS



### SCENARIO

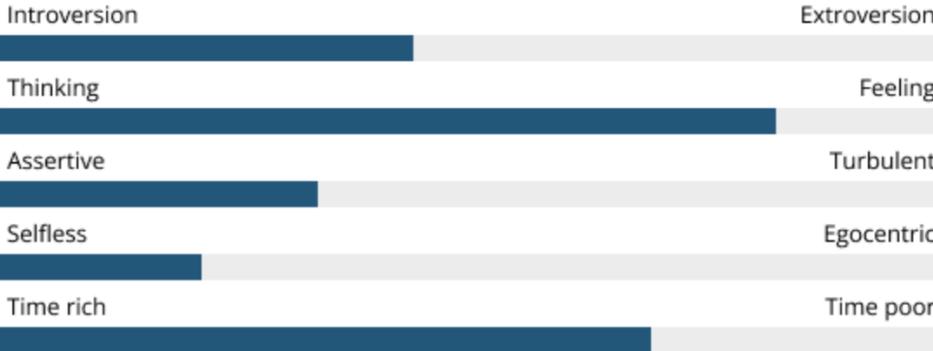
After waking up during the middle of the night, severely perspired and breathless, Karen’s husband encourages her to visit her GP. The GP consultation resulted in a referral for a sleep study and ultimately a consultation with a sleep physician. Karen’s diagnosis resulted in moderate sleep apnea where she was recommended treatment options such as a CPAP machine. Karen is fearful of the cost of the machine, the thought of having to use a machine every night for the rest of her life and lack of information provided by the specialist. Due to this, she decides to not go ahead with treatment.

“I am a passionate, career driven high school teacher who finds joy in enriching students lives. However, I start my day tired, exhausted and struggle to find energy throughout the day.”

### GOALS & NEEDS

- Get uninterrupted sleep
- Feel energised and motivated when she wakes up
- Sustain her energy levels throughout the day
- Improve her energy levels to excel in her career
- Stop snoring to allow her husband to have a good night’s sleep
- Alternative options to treatment
- More transparency and information availability

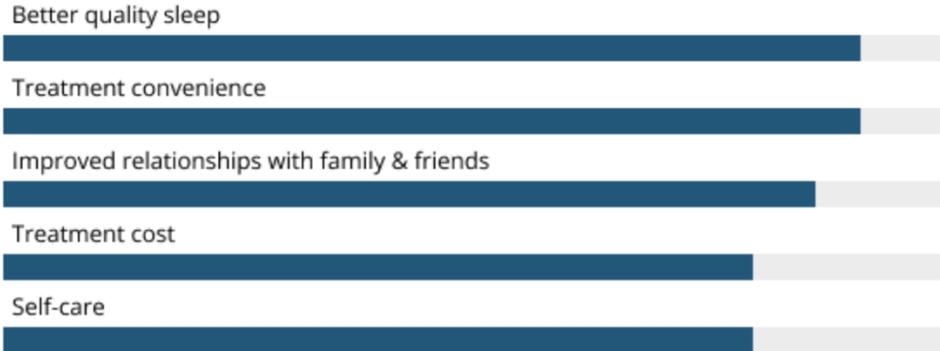
### PERSONALITY



### FRUSTRATIONS

- Not confident to pursue treatment due to the lack of information provided by the specialists
- The cost of ongoing consultations with the GP and specialists
- Price of CPAP machines and accessories required for ongoing functionality
- Pressure from specialits to pursue specific treatment options such as weight loss, splint, medication
- Lack of financing options
- Sceptical about the treatments

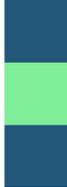
### MOTIVATIONS



# NON COMPLIANT

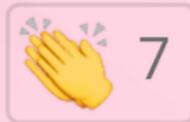
	PRE-VISIT	DIAGNOSIS				MANAGEMENT
	AWARENESS	RESEARCH	SCHEDULING	CONSIDERATIONS	TRIAL	DECISION
DOING	<ul style="list-style-type: none"> <li>• Karen's husband has been telling her that she snores quite heavily and it's getting worse</li> <li>• She wakes up in the middle of the night breathless and perspired</li> </ul>	<ul style="list-style-type: none"> <li>• Self research</li> <li>• Search for natural treatments options</li> <li>• Ask family and friends who had similiar symptoms</li> </ul>	<ul style="list-style-type: none"> <li>• Making an appointment with GP</li> <li>• Complete the Sleep apnea test with the sleep clinic</li> <li>• Receive a diagnosis and referral to see to a Sleep Physician</li> </ul>	<ul style="list-style-type: none"> <li>• Online research on sleep apnea machines while looking for alternatives treatments</li> <li>• Considering a month's free trial</li> </ul>	<ul style="list-style-type: none"> <li>• Attends trial appointment in-store</li> <li>• Discusses which machine would be the most suitable for her</li> <li>• Gets fitted for the mask</li> </ul>	<ul style="list-style-type: none"> <li>• After the trial period, she decides not to purchase or rent the machine</li> <li>• Decides to try other treatment as the machine was uncomfortable and she did not notice any improvement during the trial</li> </ul>
TOUCH POINT	<ul style="list-style-type: none"> <li>• Husband</li> </ul>	<ul style="list-style-type: none"> <li>• Google search</li> <li>• Peer reviewed articles and sites</li> </ul>	<ul style="list-style-type: none"> <li>• Call the clinic to book an appointment</li> <li>• Sleep clinic website to find further information</li> </ul>	<ul style="list-style-type: none"> <li>• Service provider website</li> <li>• Create an account with the service provider</li> <li>• Select the mask size and accessories required for treatment</li> </ul>	<ul style="list-style-type: none"> <li>• Physical store</li> <li>• Service provider website</li> <li>• Patient portal</li> <li>• Sleep Coach</li> </ul>	<ul style="list-style-type: none"> <li>• Close the account</li> </ul>
THINKING	<ul style="list-style-type: none"> <li>• "That has never happened to me before. I need to listen to my husband and book an appointment with my GP to get it checked out"</li> </ul>	<ul style="list-style-type: none"> <li>• "There's a lot of information available online. It's not as clear and straightforward as I thought it would be"</li> </ul>	<ul style="list-style-type: none"> <li>• "There's so many people I need to see and the wait times between appointments are long. I'm unsure if I'm following the right steps"</li> </ul>	<ul style="list-style-type: none"> <li>• "I don't know how I feel about having limited options. I'd like to have alternative options"</li> </ul>	<ul style="list-style-type: none"> <li>• "I felt supported during the trial. The Sleep Coach gave me relevant information to consider."</li> </ul>	<ul style="list-style-type: none"> <li>• "I don't think I can sleep with a CPAP machine every night. It's very uncomfortable and I can't be close to my husband."</li> </ul>
FEELING	<p>SCARED &amp; OVERWHELMED</p> 	<p>CONFUSED &amp; UNSURE</p> 	<p>FRUSTRATED</p> 	<p>OVERWHELMED</p> 	<p>POSITIVE</p> 	<p>FRUSTRATED</p> 
PAIN POINTS	<ul style="list-style-type: none"> <li>• Not much awareness on sleep apnea due to not being considered a chronic condition</li> </ul>	<ul style="list-style-type: none"> <li>• A lot of theories and conflicting information which can cause confusion</li> </ul>	<ul style="list-style-type: none"> <li>• Booking an appointment with the GP and limited availability of telehealth appointments</li> <li>• The wait times at the clinic</li> </ul>	<ul style="list-style-type: none"> <li>• Specialists provide a general overview of treatment options and alternatives which can be overwhelming</li> <li>• Finding information without help can be daunting</li> </ul>	<ul style="list-style-type: none"> <li>• Afordability of the CPAP trial might be too expensive for some, especially those with families, limited income, pre-existing disabilities</li> </ul>	<ul style="list-style-type: none"> <li>• No follow-up after the trial leading to patients falling off the radar and not being compliant to treatment</li> </ul>
OPPORTUNITIES	<ul style="list-style-type: none"> <li>• Creating more awareness and resources via social media platforms to help with early intervention</li> </ul>	<ul style="list-style-type: none"> <li>• Having a sleep apnea helpline or simialr service to help patients with information as a starting point of their sleep apnea journey</li> </ul>	<ul style="list-style-type: none"> <li>• Alternative appointments such as telehealth can be considered.</li> <li>• Reduce wait time by optimizing scheduling process</li> </ul>	<ul style="list-style-type: none"> <li>• Having someone to check-in during appointments with specialists or a consultant to assist with options. Help with the next steps of the diagnosis journey</li> </ul>	<ul style="list-style-type: none"> <li>• Highlight the significance and importance of treatment from the start of the diagnosis journey</li> <li>• Have a Sleep Coach check-in with those that don't wish to take on treatment, to provide on-going support in other ways</li> </ul>	

# IDEATION

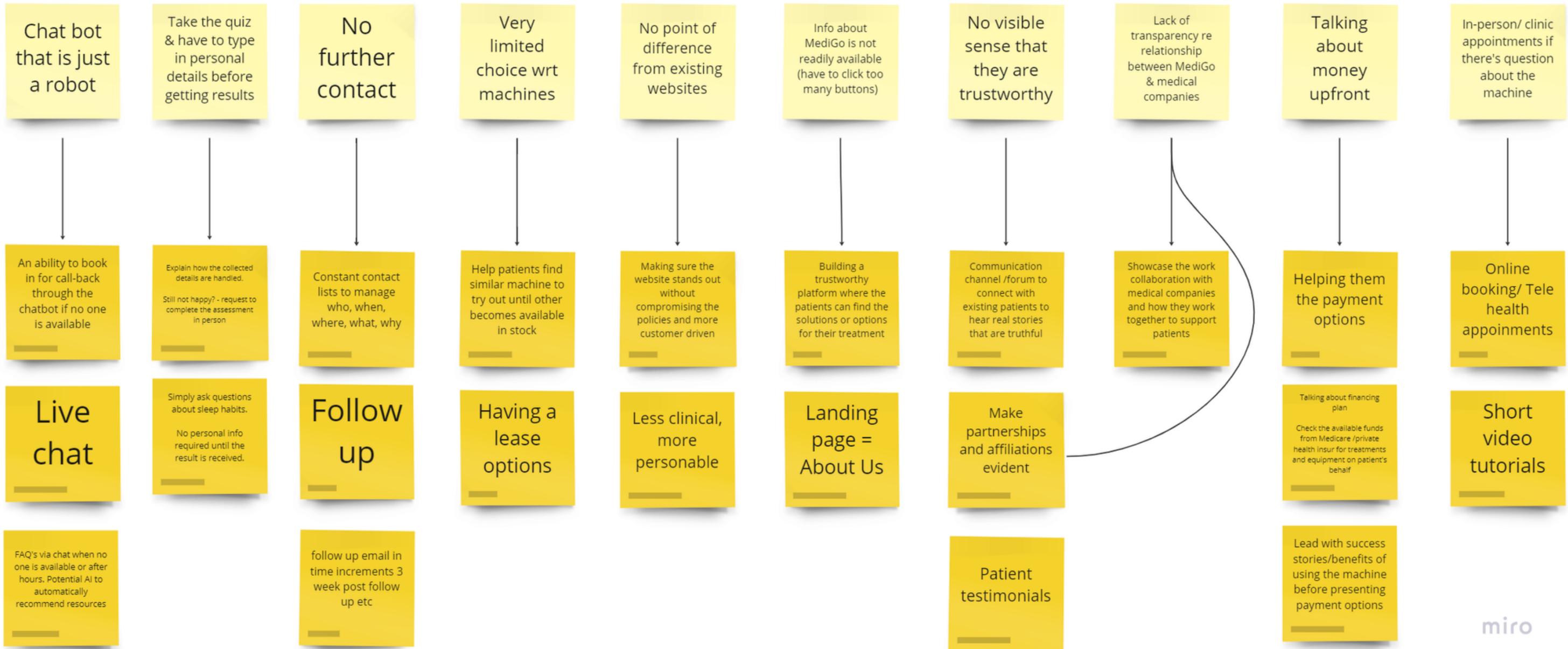


# HOW MIGHT WE

How might we ensure sleep apnea patients feel confident they have all the information they need pre and post-treatment through the utilisation of supportive services?



# WORST POSSIBLE IDEA

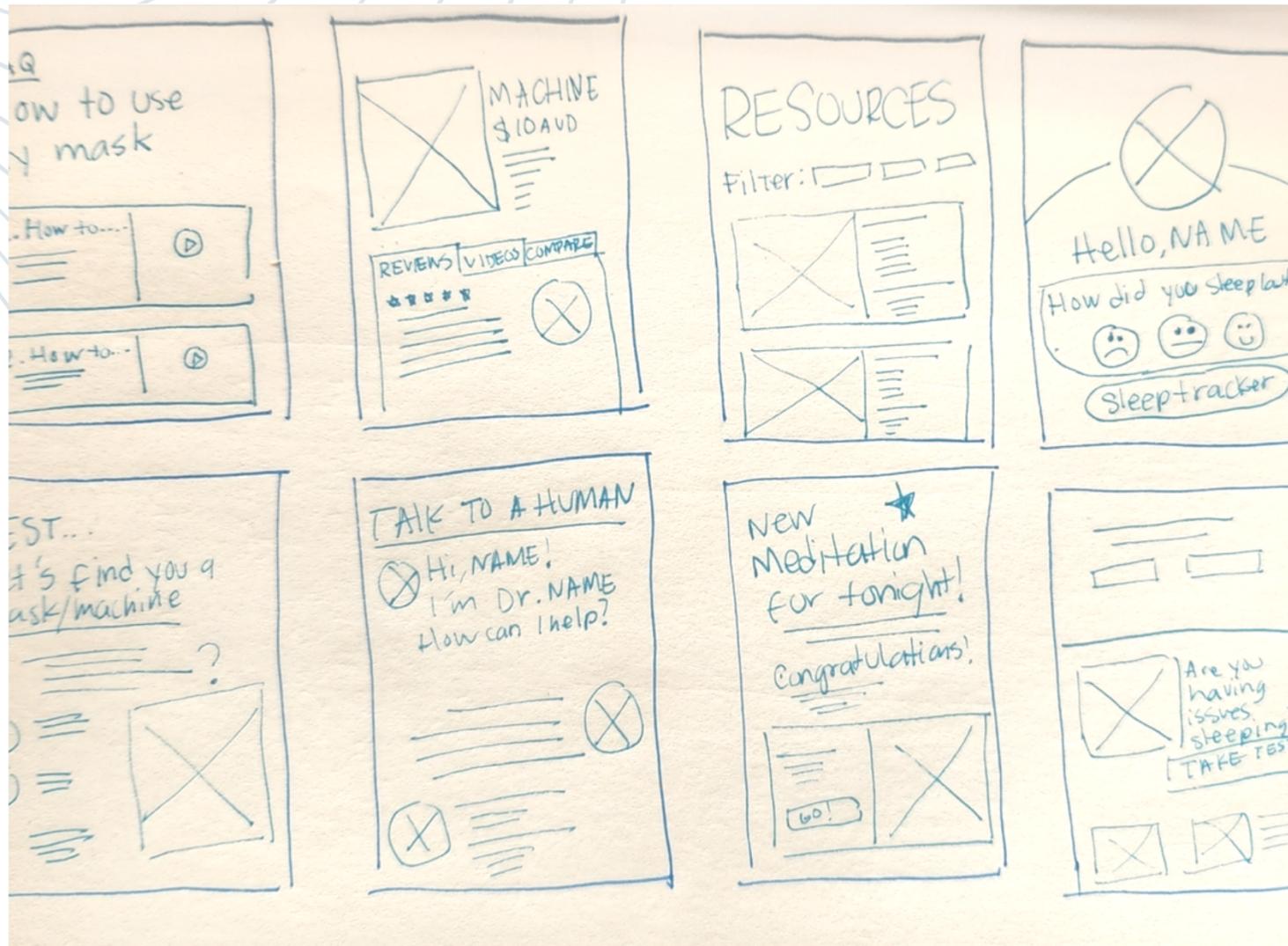


miro



# CRAZY 8S

# STORY BOARD



Scenario: Feel energetic during the day

Paul / 44 Commercial Truck Driver



### Through the day

Paul is married with 2 kids. He has been driving commercially for Transporter Inc. for the past 20 years.



### Constant fatigue

For as long as he can remember, Paul has suffered with fatigue no matter how much sleep he gets.



### Found MediGo

His wife has also been complaining about his snoring. So, she decided to go online to find solution and landed on the MediGo website. Booked an appointment with a doctor.



### Online consultation

After a few consultations with his doctor, he was suggested to start a trial for machine therapy



### Trial of CPAP therapy

It took him a while to get used to sleeping with mask on. However, he started to notice the positive outcome from the therapy



### Feel energetic

Paul feels energetic and fresh during the day and is more alert on the road!

# MINIMUM VIABLE PRODUCT (MVP)

## High Value Low Effort

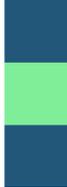
## High Value High Effort

A grid of 12 sticky notes representing low-effort MVP features. The notes are arranged in three rows and four columns. The colors of the notes are: yellow, yellow, pink, pink (top row); blue, pink, pink, pink (middle row); pink, pink, pink, blue (bottom row).

- sign in page
- scheduling page
- Chat box
- Products & Services
- Test for SA
- Social Media links
- Book an Appointment
- FAQs
- Sleep Community
- Contact
- Account sign-up /log-in
- Reviews

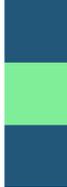
A grid of 6 sticky notes representing high-effort MVP features. The notes are arranged in two rows and three columns. All notes are yellow.

- accessability
- Forum
- ecommerce
- videos
- Doctor platform
- App

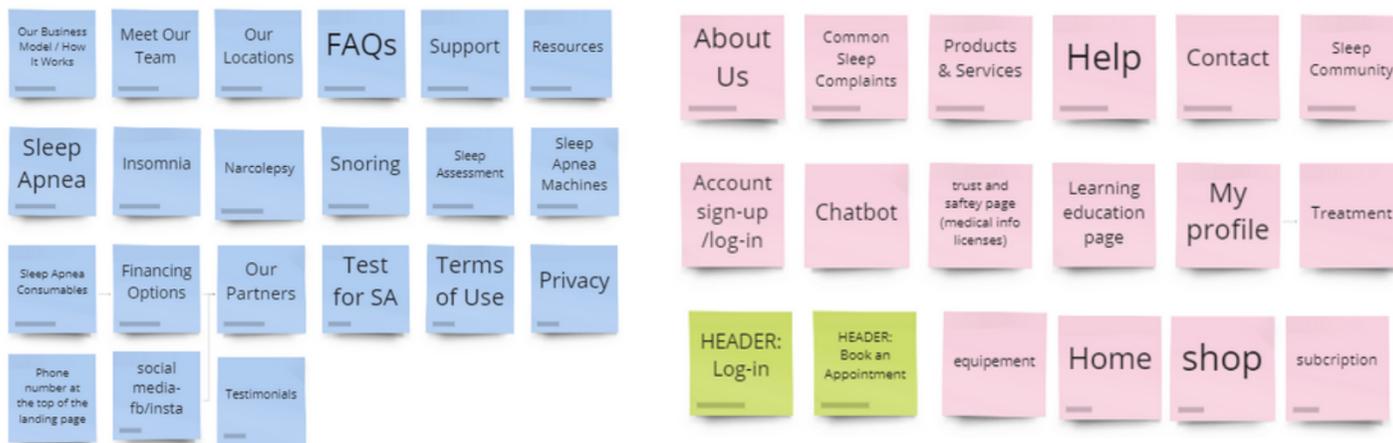


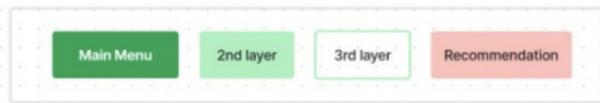


# **INFORMATION ARCHITECTURE**



The IA was structured based on the result of card sorting we conducted which helped us determine what content goes under each category.





# Homepage

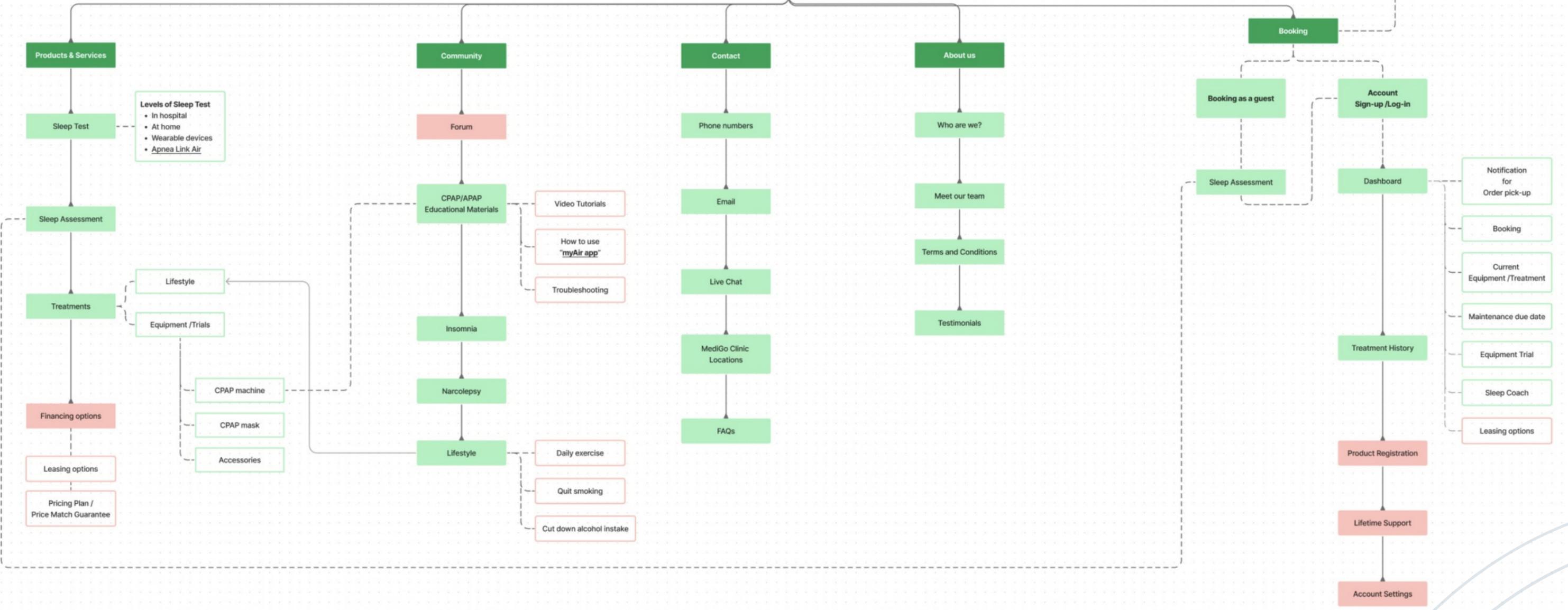
From the client's response: "No patients testimonials on the web, BUT want to link Google reviews"

From the client's response: Internal complaints handling process if patients are dissatisfied with the equipment / services

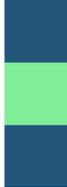
From the client's response: The booking system would have to integrate with "Best Practice" or "CorePlus"

## Footer

- About us
- Products & Services
- Booking
- Community
- Contact
- Account Sign-up /Log-in
- Terms and Conditions
- Privacy Policy
- Social Media Links

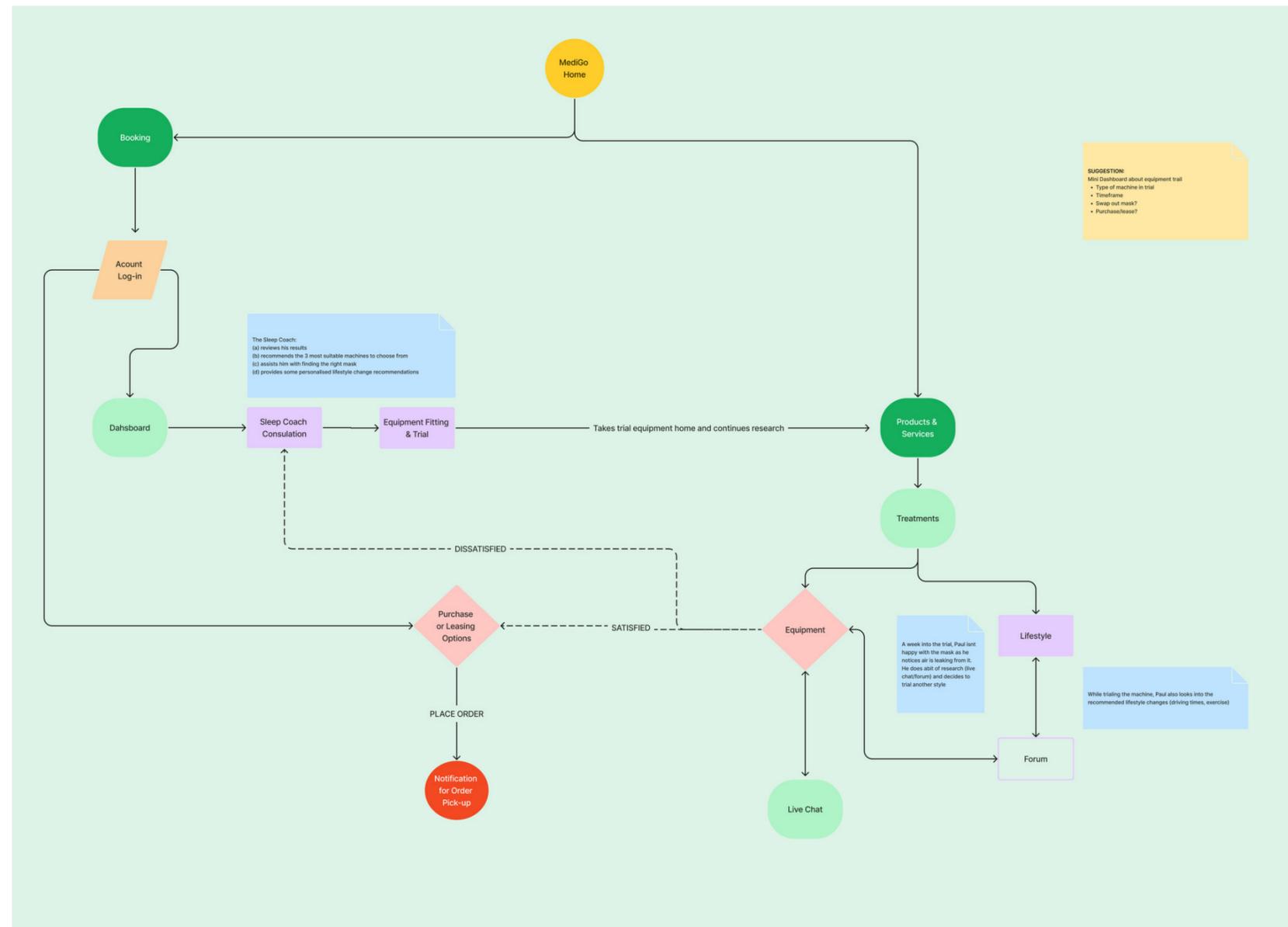


# USER FLOWS



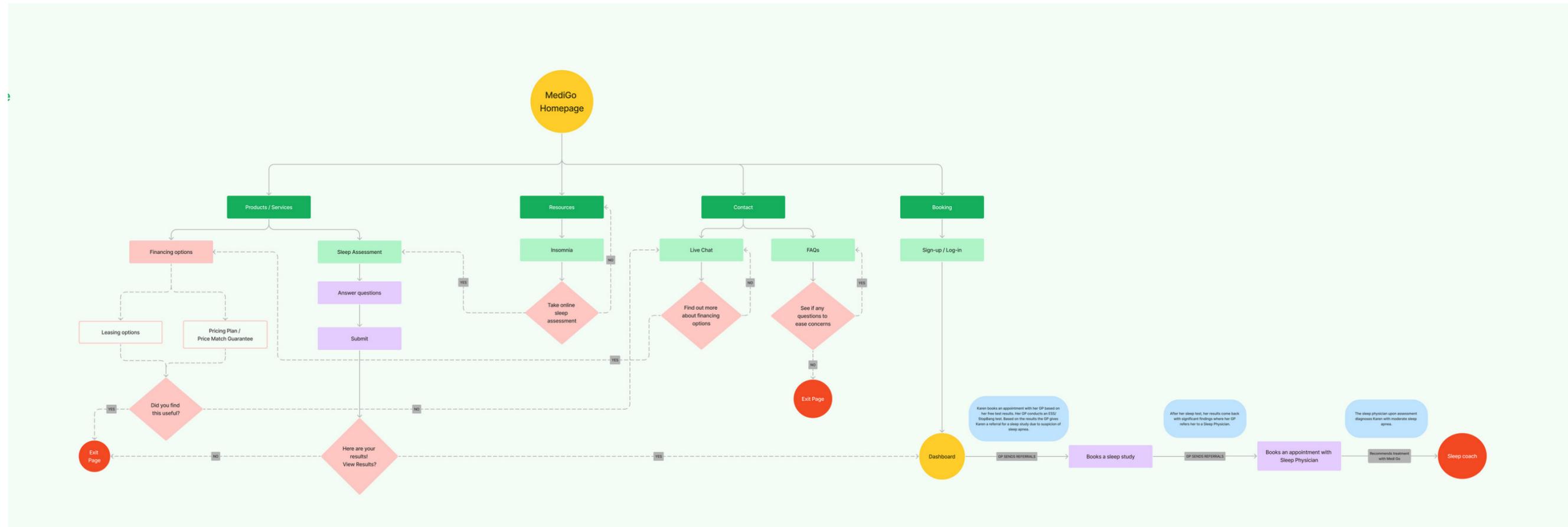
# COMPLIANT USER

The user was diagnosed with sleep apnea and referred to the MediGo Sleep Coach

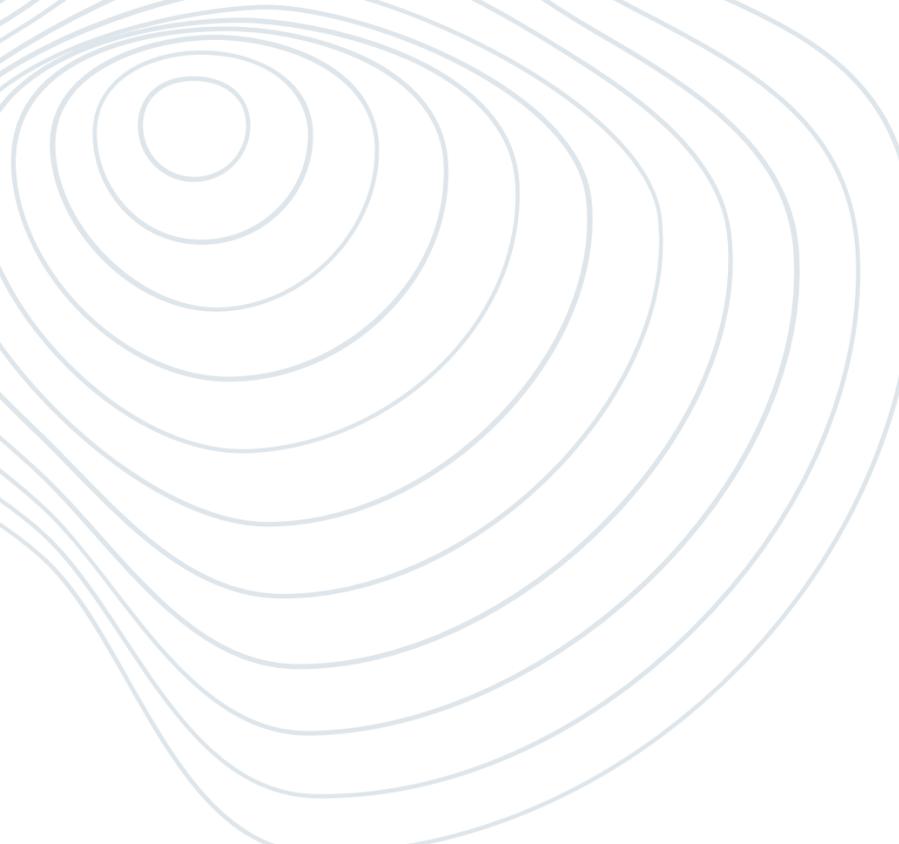
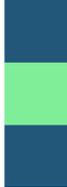


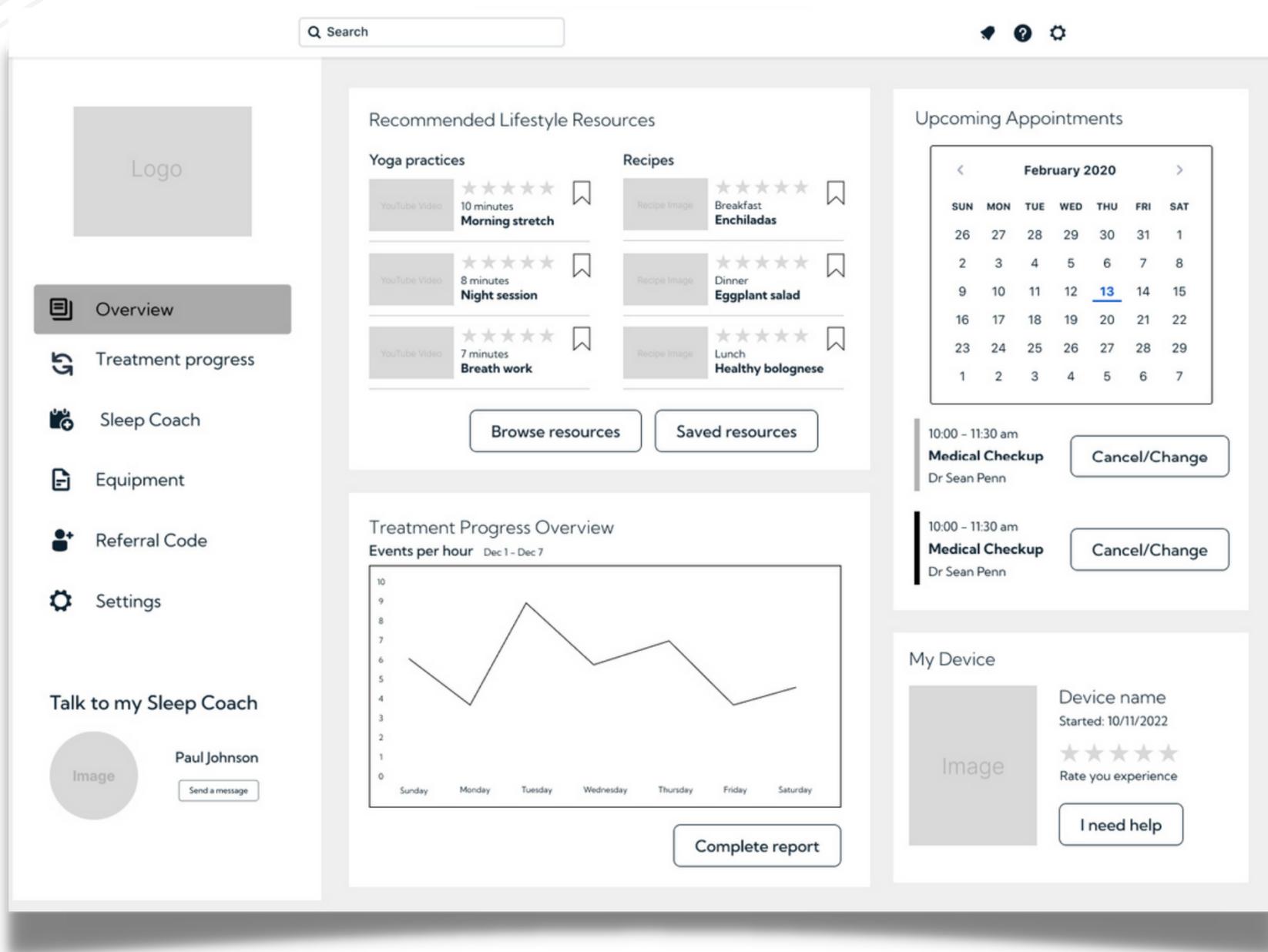
# NON-COMPLIANT USER

The user needs more information in order to feel confident before commencing treatment



# WIREFRAMES



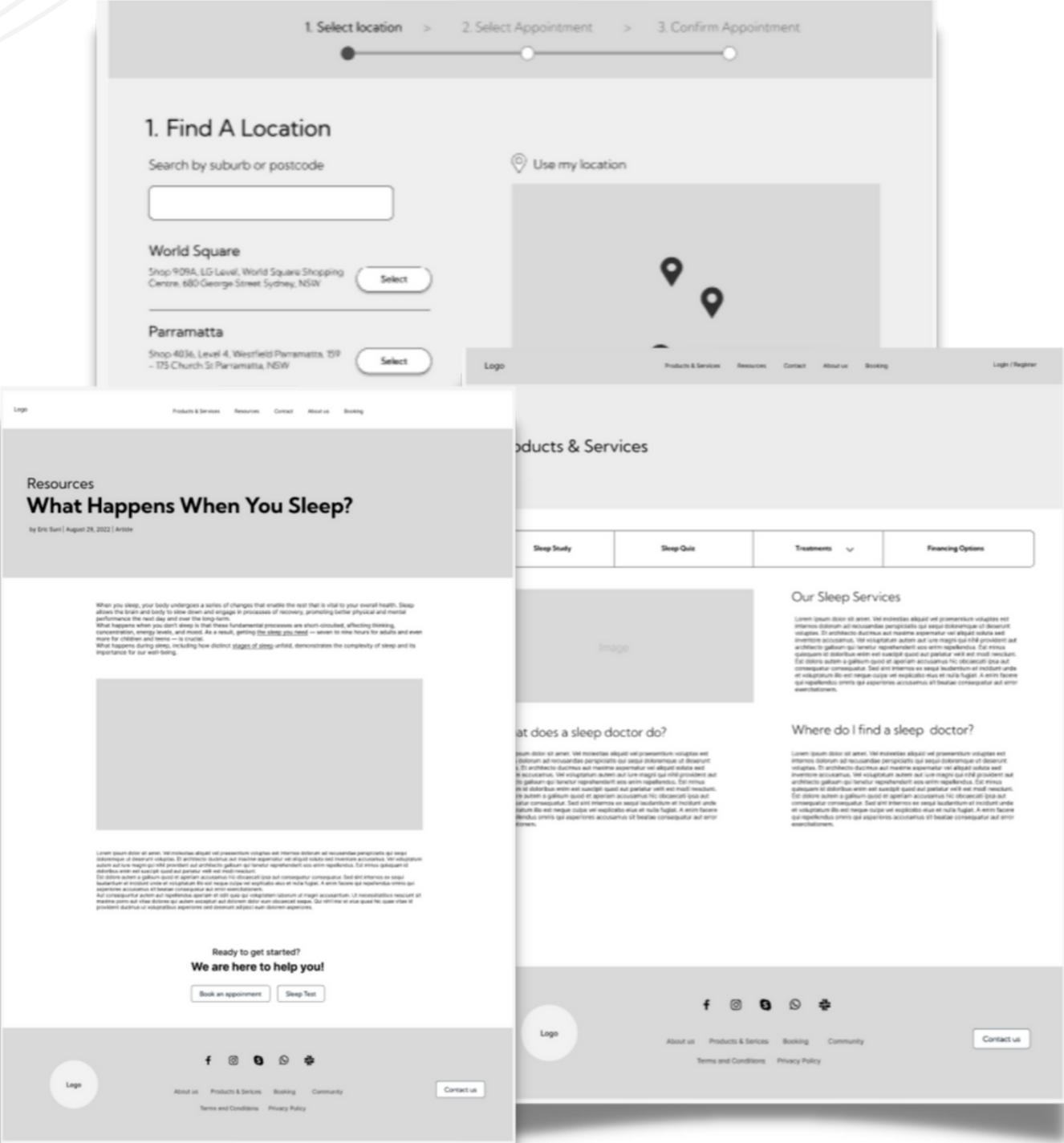


# DASHBOARD DESIGN

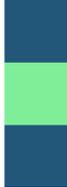
A patient-centric platform that integrates with Doctors and Sleep Coaches to effectively manage the patient's treatment journey

# THE USER NEEDS

Provide an information hub for users to self-educate and feel confident to begin treatment for a better quality of life



# PROTOTYPE

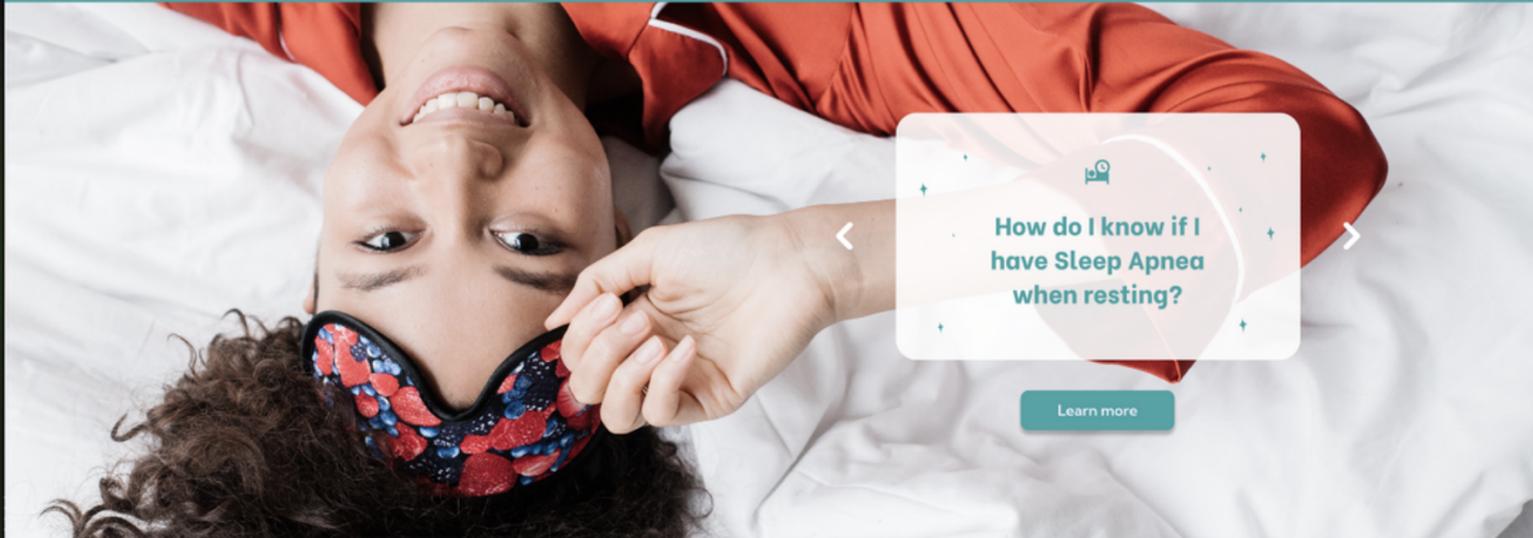




PROTOTYPE

← → ↻ 🏠 🔒 https://medigosleep.com/ ☆ 👤

MediGo SLEEP Product & Service Resources About Us Support 🔍 Search Login / Register



How do I know if I have Sleep Apnea when resting?

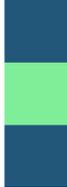
Learn more

Four in every ten Australians are not getting the sleep they need

⋯



# USER TESTING



# TESTING OVERVIEW



## We Tested



- **3** patients - male
- **1** partner - female
- 40 - 65 years old



- **2** professionals
- 1 male & 1 female



## User Testing Goals

### Patient:

1. Test discoverability, layout and content of 'Treatment' and 'Lifestyle'
2. Determine value-add of an online patient community
3. Test efficiency of onboarding and booking processes

### Partner:

1. Determine value-add of a sleep quiz
2. Test discoverability, flow and layout of 'Support' and 'Locations'
3. Determine value-add of guest bookings

# TESTING OUTCOMES



## Highlights

### OVERALL LOOK AND FEEL:

- 6/6 liked the colours, use of imagery to support text, layouts

### IMAGERY:

- 3/6 questioned the use of young people sleeping peacefully
- 3/6 liked the representation of diverse age groups/genders, found it motivating that they looked well-rested

### SLEEP QUIZ & SLEEP STUDY

- 6/6 liked the inclusion of the sleep quiz
- 2/6 wanted more direction on next steps after receiving results
- 3/6 liked that information about sleep studies was provided

### EQUIPMENT & TRIALS:

- 2/6 wanted to see 'Lifestyle' changes before sleep apnea machines
- 2/6 would have liked to see more information about sleep masks



## Highlights

### COMMUNITY:

- 6/6 thought it was a nice point-of-difference
- 3/6 suggested that older users may not actively participate

### PATIENT PORTAL:

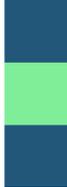
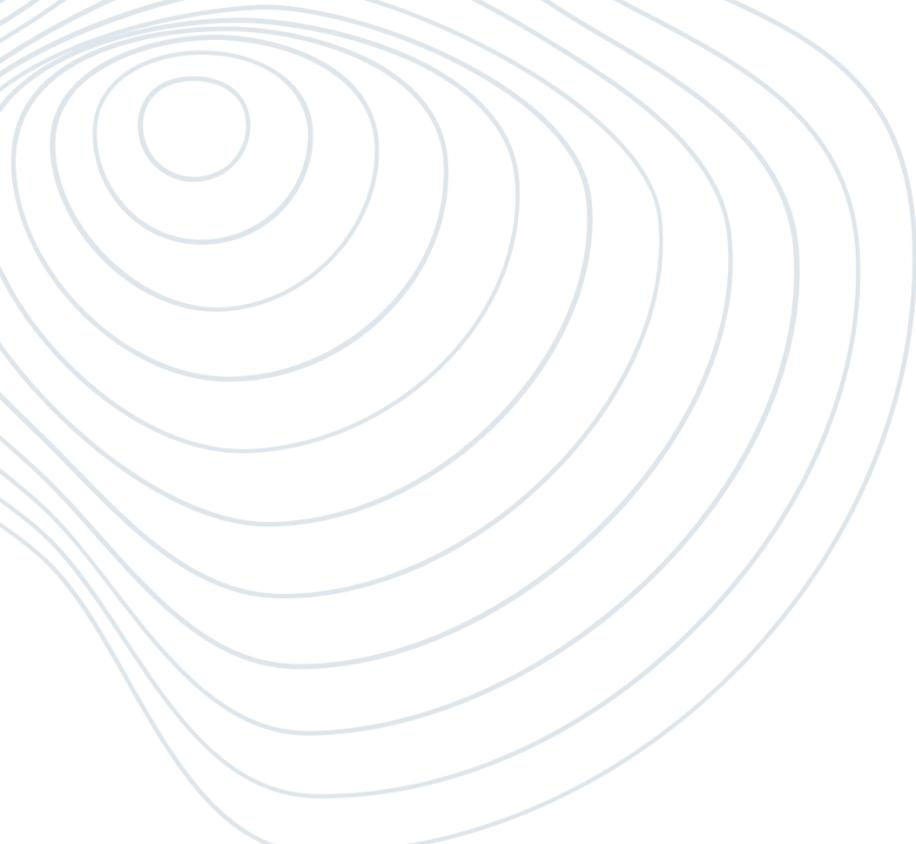
- 3/6 would have liked to see further explanation of stats displayed
- 3/6 indicated more utility could be built into Treatment Progress e.g. alerts if something seems amiss, equipment maintenance



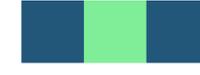
## Iterations

- 6 major changes made to enhance discoverability, searchability and understandability
- 16 minor changes made to enhance readability





# RECOMMENDATIONS





## Education

- Education about the dangers of untreated sleep apnea may improve compliance rates
- Education about masks may help reduce stigma/fear



## Alerts

- Notifications via email and/or SMS when CPAP machine is due for maintenance
- Reminders about upcoming appointments and integration with calendar app's on mobile devices



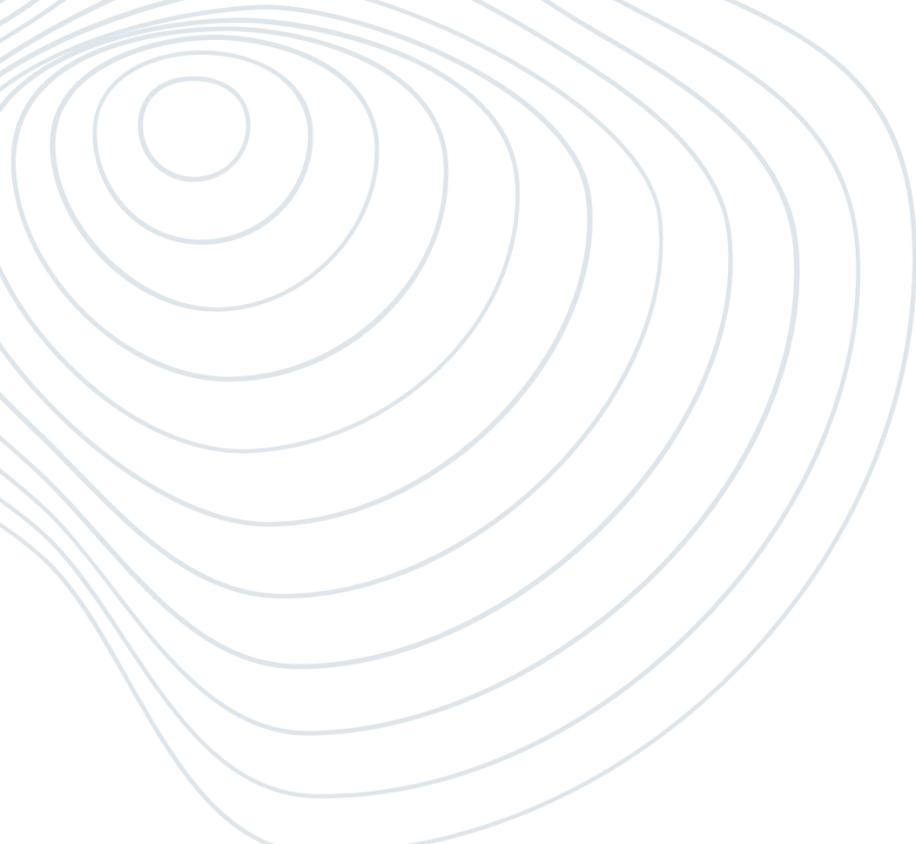
## Further Development

- Mobile application linked to the patient portal
- Integrate financing options on dashboard
- GP & Sleep Physician dashboard integration



## Other

- Having a Partner section to assist with monitoring and treatment
- Description of stats on dashboard

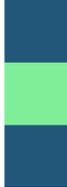


**THANK YOU**

**Q&A**



# APPENDIX



# LINKS

- [Miro](#)
- [Wireframe](#)
- [Prototype](#)