



Smart Health

A care that never gives up



Business Overview

Our mission is to save 5000 lives in the next five years.

If you have diabetes, you're twice as likely to have heart disease or a stroke than someone who doesn't have diabetes (according to CDC).

We are a healthcare startup that wants to save people's lives by leveraging AI (Artificial Intelligence) proven research to prevent chronic complications for diabetes and cardiovascular diseases patients.

URL:

<https://smarthealthmonitoring.com>

Speciality:

Healthcare / Remote Health Monitoring

Company Size :

4

Business Description 1

- **Business idea**

Saving lives and reducing healthcare costs by predicting diabetes & cardiovascular diseases complications using AI.

- **Market gap / Innovation**

We aim to reduce chronic patients visits to the emergency room in developing countries.

- **Stage**

Smart Health is in the pre-seed stage.

Business Description 2

- **Market size**

The market size is more than 40 million only in the MENA region, 425 M globally.

- **Total revenue opportunity for your product or service**

Total revenue could be between \$40 to \$50 million.

- **Compete for % of the market**

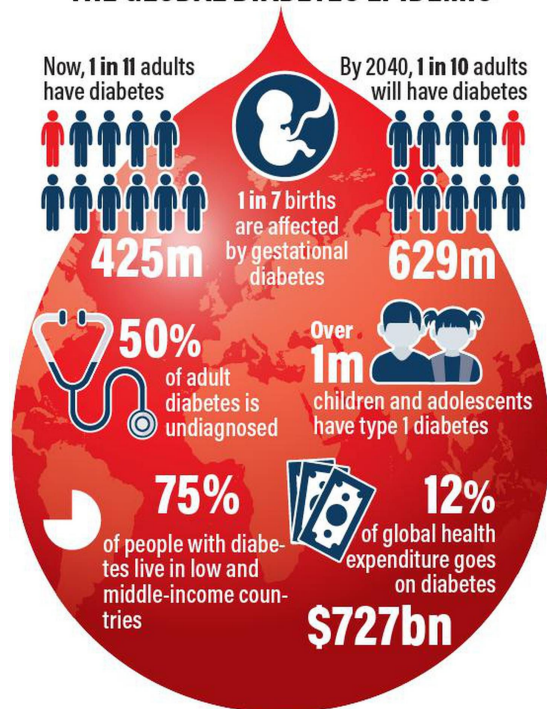
We might compete for 0.05 % of the market size.

- **Our audiences**

Our audiences are B2C and B2B2C.

Diabetes Market Size

THE GLOBAL DIABETES EPIDEMIC



\$39 Million
Diabetic MENA

The figure will increase to 108 million by 2045.

And 15.4% of adults aged 20 to 79 in the UAE are diabetic, while in Bahrain the number is 19.6 %. In Kuwait and Qatar, the figure jumps to 20%.

\$295.3 Billion
Weight loss market size reach by 2027

The weight loss and weight management diet market size was valued at 192.2 billion in 2019, and is projected to reach **\$295.3 billion by 2027**, registering a CAGR of 7.0% from 2021 to 2027.

\$84 Billion
Digital Health Market Size

The digital health market size is expected to reach **\$220.94 billion by 2026**, at 14.8% CAGR growth during the forecast period of 2021-2026.

Cardio Market Size

0.45 Million

New cases
in UAE 2019

More than half of the UAE residents are affected by heart diseases.

In 2017, the highest number of deaths are caused by cardiovascular diseases.

1.4 Million

Death every year
in MENA

Cardiovascular disease is the number one cause of death in the Middle East and North Africa region, responsible for more than one third of all deaths

10+ Million

Individuals with
high risk of
undiagnosed
arrhythmias

Atrial Fibrillation is a leading risk factor for stroke, heart failure, and CV mortality— early detection can save lives

Atrial fibrillation (A-fib) is an irregular and often very rapid heart rhythm (arrhythmia) that can lead to blood clots in the heart. A-fib increases the risk of stroke, heart failure, and other heart-related complications



Revenue Models

Physician Referrals (Patients Self-Pay or Insurance)

If 200 physicians referred 5 patients per week, it would be 1,000 patients per week or 52,000 per year. If Insurance plans pay up to \$900 per patient and so this would be \$45 million in potential revenue.

Direct to Consumer

We are in the process of rolling out a direct to consumer model for \$109 /month.

Self-Insured Employers & Health Plans

Employers can offer our program as an employee benefit and pay us based on milestones (enrollment, engagement, and diabetes management). If Smart Health had 24 employers/health plans generating \$130k of revenue each per year, it would be \$3 M in revenue.

Service Description 1

Use Case

Our service aims to prevent chronic diseases complications using AI predictions for diabetes & cardiovascular patients.

To achieve that patients will use an FDA approved all-in-one medical device that can send patient vital health signs to the cloud where it can be stored in the patient EMR records through (through our partner Aria) through a mobile App. The patient can then choose to add selected guardians and clinical team members to monitor his health condition in real time.

Service Description 2

End-To-End Process of Your Solution

- 1) User measures his vital health signs (glucose level /ECG/BP/PR etc) using an all-in-one device that uses Bluetooth to transfer all those measurements to a mobile app to the cloud (for real time monitoring & for saving the vital signs with the patient electronic records - our partner Aria).
- 2) A 24/7 clinical team and patient guardians monitor patient's health through the cloud.
- 3) The Clinical team calls the patient and then the guardian when there is upnormal health sign on the real time monitoring dashboard and provides initial advice and assistance. Then either book an appointment with a physical doctor or guide the patient to the nearest hospital.
- 4) Patient grant access to their electronic Medical records (EMR) for doctors or hospitals managing their cases to access their medical records stored on the decentralized system (through our partners). The patient and his doctors will be able also to access lab results electronically for those integrated through our partner.
- 5) AI models will be able to predict low & high insulin levels & recommended insulin dose for diabetic patient. And probability of being pre-diabetic for the patient family members (using BMI, fasting glucose measurement and family history).
- 6) For cardiovascular diseases patients, AI can predict heart attacks from ECG measurements (ST elevation myocardial infarction).

Service Description 3

Plan B

Our Plan B

Our plan B is to offer our software & the integrated Medical devices as a SaaS to Telemedicine platforms and to clinics inside and outside UAE. We can sell our SaaS to weight management startups and we can offer them access to weight scales, smart watches and Alexa*.

*Most of startups uses hybrid software that can work for both Android & iPhone which limit direct access to hardware.

Service Description 4

Workflow & Demo

Workflow (for Diabetic patients & Cardiovascular diseases patients):

- 1) https://drive.google.com/file/d/1S575ITtVORuCstAuFcFNljoFZ_EP_lr/view?usp=sharing
- 2) <https://drive.google.com/file/d/1k7nROJCcjGUQvF-5n3gXPStM7aLxOUNo/view?usp=sharing>

Demo Links (All the videos are for the same App but the App UI differs based on intended usage):

- 1) Patient UI: <https://youtu.be/wmGJE1QNH08>
- 2) Patient steps to connect to the device: <https://youtu.be/js1otpbhgyE>
- 3) How Guardian/Clinicians UI - monitoring patients: <https://youtu.be/CxRpQkLE9uA>
- 4) Diabetes diary: <https://youtu.be/ztlcYvRVByE>

Company's Value Proposition - Part 2

Unique / Innovative Elements About Our Service

- 1) Our strong motive is to save 5000 lives in the first 5 years.
- 2) AI models that can predict complications for Cardio & Diabetes patients. Heart attacks can be predicted from ECG measurements.
Pre-diabetes can be predicted from BMI & fasting glucose measurements. Those are supported by published researches.
- 3) Our solutions empower guardians with the ability to get real time updates about patient's health which enables them to close the gap of missing healthcare services in developing countries with the assumption that not all people living in developing countries are poor.
- 4) We empower patients to take control of their EMR records in addition to having all their health related data (including their vital health signs measured through our hardware) in one centralized platform.



Company's Value Proposition - Part 2

Validation

- 1) Two beta users have purchased our all-in-one devices. Patient number 1 is a diabetic Type 2 patient while patient number 2 is a cardiovascular diseases patient.
- 2) Client number 1, is taking care of a diabetic mother but due to her busy lifestyle wants to always monitor her mother's health on the go through the mobile app. And they are looking forward to get access to the 24/7 clinical care.
- 3) Client number 2, faced some challenges with our app and requested changes (regarding simplicity, naming, and details about the measured health signs) and we have completed most of them. The client bought the device for her brother-in-law who got a heart problem due to prolonged and unmanaged diabetes. Family were looking for a device that can give a quick and reliable measurement of some of the key vital signs of the body such as ECG, SpO2, and blood pressure, and able to store the data in the device or sync it to mobile devices. By that measurement, they expect that the device allows the users to detect changes in heart function that require evaluation by a doctor, so it can be an "early warning system" before seeing a cardiologist.

Value Proposition - SWOT



Smart Health
Building the future of healthcare

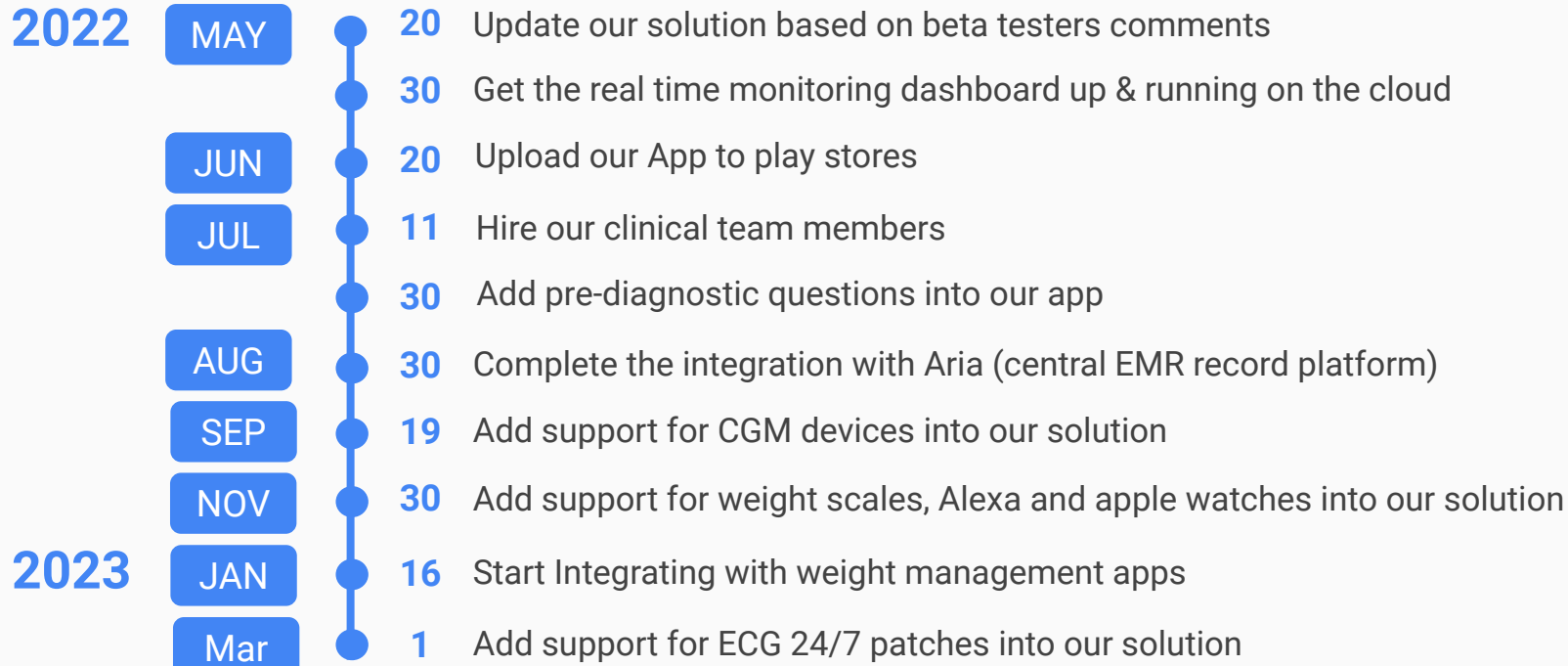
STRENGTHS		OPPORTUNITIES
Usage of AI to predict threatening health complications for chronic diseases.		Telehealth is becoming common now & digital health market is booming.
Storing patient vital health signs history in a global EMR records through our partner (Aria).		Weight management & nutrition startups are open for partnership to strengthen their positions & reduce their development cost of HW integration.
		Pharmacy E-Commerce startups are looking for our partnership.
WEAKNESSES		THREATS
We can't use existing patient dataset (ex.kaggle) to create our AI models.		Funding is an issue that can kill any startup and Accelerators tend to waste time in custom requests.
Universities will prefer large companies to collaborate within the AI field.		It takes a lot resources & approvals to include our AI on the app so we are working on alternatives
We can't operate at a loss to drive away competition.		

Competitive Analysis

	AI Predictions	All-One-Device	Guardian Monitoring	Centralized EMR records	Prevention Program	Monthly Cost	Life Coaching	In Person Consultation
Smart Health	✓	✓	✓	✓	✓	\$ 137	✓	-
First Response	-	✓	-	-	-	\$ 430	-	✓
Glucare	-	CGM only	-	-	-	\$ 60 (Upsells used)	✓	✓

Marketing Strategies

Milestones For Solution Readiness



Marketing Strategies

Road-Map To Market

2022

APR

27 Start a crowdfunding campaign

MAY

25 Start SEO marketing campaign & hire articles writers

31 Start paid Ads campaigns inside UAE

JUL

20 Partner with weight management, nutritionist, elderly care and telemedicine platforms

AUG

1 Start face-To-face marketing to clinics

SEP

29 Start putting our solution on affiliate networks

NOV

30 Reach out for resellers in countries outside our target zone (ex. African countries, Singapore, Japan)

Financial Projections

Revenue Streams

We plan to get our revenue from:

- 1) Selling our solutions to cardiovascular & diabetes patients.
- 2) Referrals fee from medical products / medical & fitness services / healthy products (ex. food) for diabetic & cardiac patients) that we will put in our app.
- 3) Referred patients from our partners (ex. Clinics & Aria).
- 4) Remote monitoring services for diabetic & cardiovascular patients.
- 5) Offering our services to resellers companies outside our target market in Africa and Asia.
- 6) Selling our saas service for telemedicine companies.
- 7) Offering our service as an OEM for old-style / outdated clinics inside our target market.
- 8) Offering our software solution to Elderly care centers.
- 9) Selling our product to self insured employer.
- 10) Referrals to healthy food restaurants suitable for diabetic and cardiac patients

3 years Financial Projections

- PDF Annual summary :

https://drive.google.com/file/d/1P1Ks016Wce0jTM7LeMbyENc4QKtkKd_K/view?usp=sharing

- Detailed Excel sheet:

https://docs.google.com/spreadsheets/d/1cFxoHbC-6ORIF_UyanFL4cohajELSTh3/edit?usp=sharing&oid=103541386931730031150&rtpof=true&sd=true



Skills/Talent Resources 1

Talents necessary for business success:

We are 100% remote team, and the technical skills needed like (programmers, data scientists, Cardiologist, Endocrinologist, clinicians) are available either in a remote setup or in the surrounding countries. All the talents that we need in available in the market although as always it is a challenge to hire a talent that fits the startup culture.

Attracting talents to our startup?

Yes, we got access to talent pools and we are continuously interviewing those who fit our culture and share our passion for saving lives in developing countries.

Talent pool identification:

Yes, we have identified the required talents to push our startup forward and we will leverage partnerships with other startups to reduce the dedicated resources that we need to succeed at the start.

We will need skilled clinicians and nutritionists and we started talking to many of those and they have great interest in our product.

We will hire our own clinicians (nurses & general practitioner) for the 24/7 patient monitoring. While the Endocrinologist & cardiologists will be paid per consultation.

Skills/Talent Resources 2

- Identifying talent pool to support the business growth?

We don't need a specialized talents.

The skill sets that we need is available in UAE and in the region.

And we also have the option of buying such services from other startups in the healthcare ecosystem or hiring remotely as we have experience managing team remotely.

The Team

CEO



Ahmed Elmalla

- B.Sc in Computer Engineering
- AI in healthcare from Stanford Medicine.
- 20 years of managing multi-million projects globally.
- Experience in software development, data analysis and digital marketing.
- Experience in building MedTech products.
- Expert in creating partnerships with market leaders.

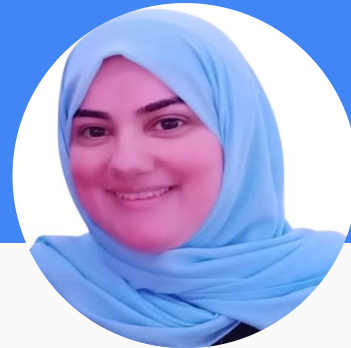
COO



Novi Susanti

- Bachelor's Degree in Business Management
- Business operation management in Global businesses (Samsung).
- Experienced cost & financial controller.
- Exceptional research & analytical skills.

CFO



Dr. Noha Kamal

- Over 19 years of experience in pharmaceutical treatments especially in diabetes & cancer
- Bachelor degree in pharmacy with diploma in clinical pharmacy
- Expert in medical Affairs operations & partnerships

CMO



Muhammad Sherif

- Bachelor's Degree in Business Administration
- Exceptional skills in face to face sales & relationship management.
- Experience in customer support.
- Experience in building companies from scratch.
- Natural talent in video editing and marketing material development.

Additional Information

- **Team Relocation**

Currently, 2 of the co-founders are in UAE (one in Dubai and another in Ajman). The 3rd co-founder will relocate to Dubai upon approval while the remaining co-founder will work remotely.

Contact Details

Primary contact of the company

- Name : **Ahmed Elmalla**
- Company : Not registered yet
Smart Health Monitoring (Brand Name)
- Position : CEO
- Mobile : +971504975003
- Email ID : info@smarthealthmonitoring.com
- URL : <https://linkedin.com/in/ahmedelmalla>



Sources

Diabetes Data sources:

- 1) <https://globalheartjournal.com/articles/10.1016/j.gheart.2016.10.003/galley/381/download/>
- 2) <https://www.arabnews.com/node/1683821/middle-east>
- 3) <https://journals.sagepub.com/doi/full/10.1177/1479164118819665>
- 4) <https://www.thenationalnews.com/uae/health/obesity-and-diabetes-researchers-seek-emiratis-to-take-part-in-national-health-survey-1.1117771>

Cardiovascular Data sources:

- 1) <https://www.acc.org/-/media/Non-Clinical/Files-PDFs-Excel-MS-Word-etc/Meetings/2017/Course-PDFs/Middle-East/Al-Ras-3/2B-YUSUFALI-Cardiovascular-Disease-in-the-Middle-East.pdf>
- 2) <https://www.healthline.com/health/living-with-atrial-fibrillation/facts-statistics-infographic>



Terms

Microalbuminuria is defined as low levels of urinary albumin excretion of 30 to 300 mg/d. Microalbuminuria is highly prevalent; in hypertensive and diabetic populations, its prevalence varies from 10 to 40%. It is interesting that microalbuminuria also is found frequently in seemingly healthy individuals (5 to 7%). Microalbuminuria as an Early Marker for Cardiovascular Disease

Diabetes mellitus (DM) is known as the most prevalent metabolic disorder caused by the inability of the pancreas to produce insulin sufficiently or the body's lack of ability to use insulin effectively.