



PHARMA SENTINEL

“NO MORE GOOGLING FOR YOUR HEALTH”

Trusted, Personalized Medicines News & Alerts
for Consumers, Pharma & the Healthcare Industry

Video introduction: <https://youtu.be/aA0mtFfZJ6I>

COMPANY

Pharma Sentinel is a highly scalable **B2C2B** HealthTech startup addressing the rising global demand for **trusted medicines & medical conditions news & information**.

Over 1 billion or 7% of Google's daily searches are health-related* and we will provide consumers & businesses with *timely, tailored* medicines & medical conditions news, information & *alerts*: drug recalls, clinical trial opportunities, new drug releases etc.

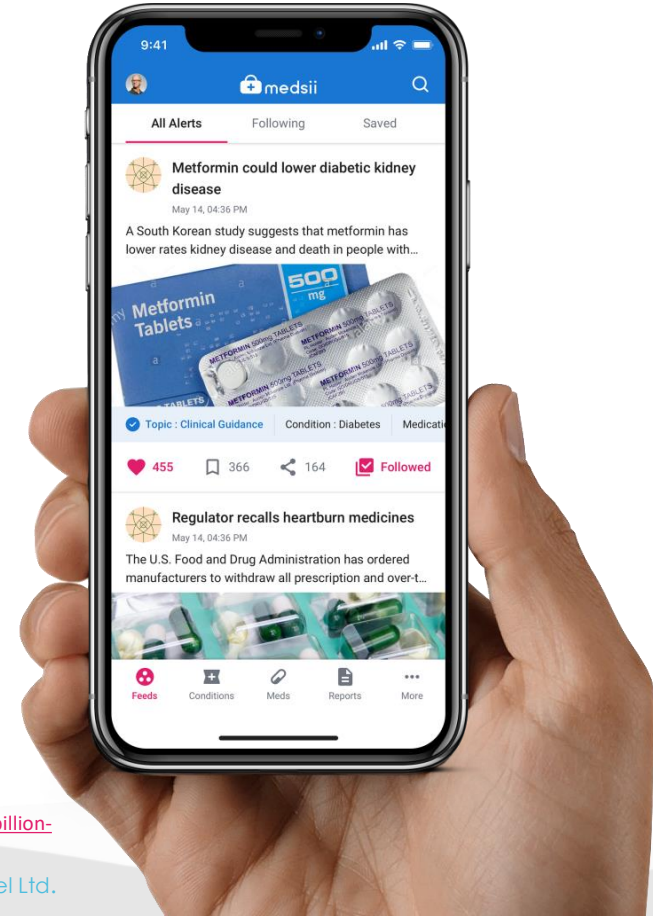
We dramatically increase user engagement via a data driven proprietary AI/ML based recommender system

medsii is our initial **B2C** brand, with multiple **B2B** brands in development: **medinews**, **medintel** & **medihealth**



Pharma Sentinel is HMRC S/EIS Advance Assurance approved & is in exploratory discussions with the **World Health Organization** (WHO) and several Patient Support Groups, including **Women's Health Concern**

<https://www.beckershospitalreview.com/healthcare-information-technology/google-receives-more-than-1-billion-health-questions-every-day.html>



PHARMA SENTINEL FOUNDERS

- Nasir, Rav and Paolo met at Cass Business School during their Executive MBA and each have 25+ years' functional, technical and industry expertise: Pharma, Technology (cloud, big data) & Digital (all channels), Regulatory & Compliance + successfully leading large, remote teams (USA, India, UK etc.)
- One is diabetic and takes 4 repeat prescriptions daily. Another previously worked as a regulator at the MHRA
- Two previously founded an IoT platform

DR NASIR HUSSAIN (CSO)



Nasir is our Chief Scientific Officer and registered pharmacist with 25+ years of pharma experience (Eli Lilly, Gilead) including 5 years at the MHRA (UK medicines regulator) and the European Medicines Agency. Nasir brings deep knowledge of drug development & regulatory requirements. He has also been involved as a founder and employee in 5 early-stage start-ups

RAV ROBERTS MBA (CEO)



Rav has a track record in the USA & UK of leading delivery of complex, global digital systems (Accenture, CapGemini). Rav previously co-founded 2 startups (1 in San Francisco) and brings a deep understanding of launching digital platforms, digital marketing channels, global digital & data governance + GDPR compliance @ Diageo. Rav is a Type 2 Diabetic & is passionate about helping people understand their medicines & conditions

PAOLO URSINO MBA (CTO)



Paolo has over 25 years experience in a wide range of tech, including cellular comms, IoT, B2B and B2C cloud platforms, web and mobile apps. He has worked for large corporates, e.g. Samsung & Broadcom, as well as co-founding two start-ups. Paolo is passionate about technology and has an MSc in Electronical Engineering from the University of Bologna

PHARMA SENTINEL ADVISORS: USA, UK & UAE

Dr Robert Adams MD, MBA



Bob is a retired, distinguished US Army Colonel & former US Navy Seal. After retiring, Bob founded & practiced in a full-service clinic Knightdale Family Practice. A prolific networker & book-writer, Bob is on the Board of Directors for a charity serving at-risk 21st Century male and female US veterans www.vlcnc.org & on the Board of the Institute for Medical Research Veterans Administration research team www.imr.org.

Brenda King MBE



Brenda is UK-based & has received national recognition and a MBE awarded for services to the Black & Minority Ethnic communities. Whilst running her charity, she represents the UK on several European forums including the European Economic and Social Committee. Brenda has a BSc in Statistics & Computing (University College London) and MSc in Management Science & Operational Research (Warwick University).

Wes Harry



Wes is based in the UAE and has over 30 years experience as senior director in the Middle East and Asian banking sectors. In his current role as a trusted advisor, he develops strategic alliances with global organizations, governments and educational institutions. Wes has a PhD in Sociology (University of Strathclyde) and visiting fellow in cross-cultural communications at several UK universities.

PROBLEM

Pharma Sentinel addresses a massive global societal problem

- **Extensive delays of up to 6 months in vital medicines safety reporting** which significantly increases health risks to the public
- No single, trusted source where consumers and healthcare professionals can receive push mobile alerts on medicines safety, latest breakthroughs and clinical trial opportunities to **empower people to manage their health**
- Consumers are **not aware of safety alerts** for their medicines or even clinical trials that they could follow or participate in
- Lack of on-demand, portability and readability of medicines information leads to incorrect medicine use and reduced adherence – we digitize Patient Information Leaflets in our app
- WHO Oct 2019: *“Drug labels are long, unreadable & confusing. Important warnings are not taken seriously & are often hidden in small print”*
- 29 million UK residents are on at least 1 repeat prescription for a chronic condition, which represents 49% of women and 42% of men*
- 32% of women in their 20s, **61% of women in their 50s** and 53% of men in their 50s are issued repeat prescriptions for at least 1 condition*



* UK Figures: Office for National Statistics, NHS UK

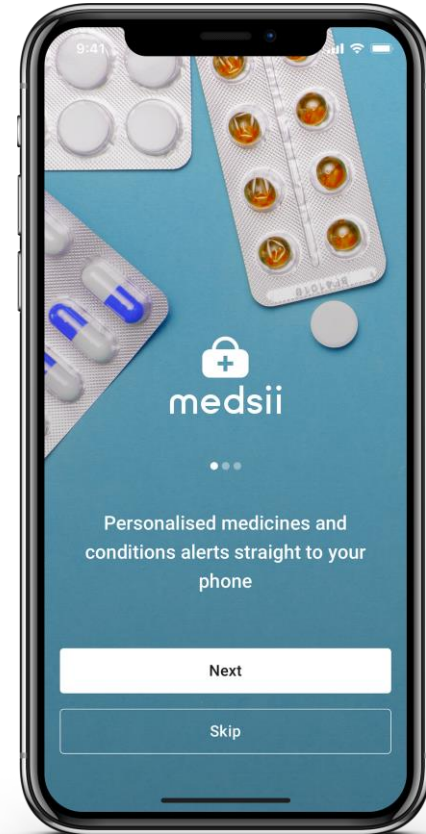
SOLUTION

Pharma Sentinel introduces medsii

- **medsii** searches for you and delivers **timely, relevant, accurate and readable** medicines & conditions information

No more social media or Googling for random, dubious results

- Consumers receive free, accurate and comprehensible information on medicines & conditions and can also register for paid push alerts e.g. **mental health, diabetes, sickle cell disease, IVF, menopause, cancer, pregnancy, obesity** etc.
- Our AI ML based recommender maximizes users' engagement & retention by identifying the most relevant medicines & conditions news for each individual user



SOLUTION USPs



EASE OF USE

Mobile-by-Design, portable patient leaflets, optimized user interface, designed for Consumers



FIRST TO MARKET

For User-Centric
Personalized Conditions & Medicines
push Information, News & Alerts



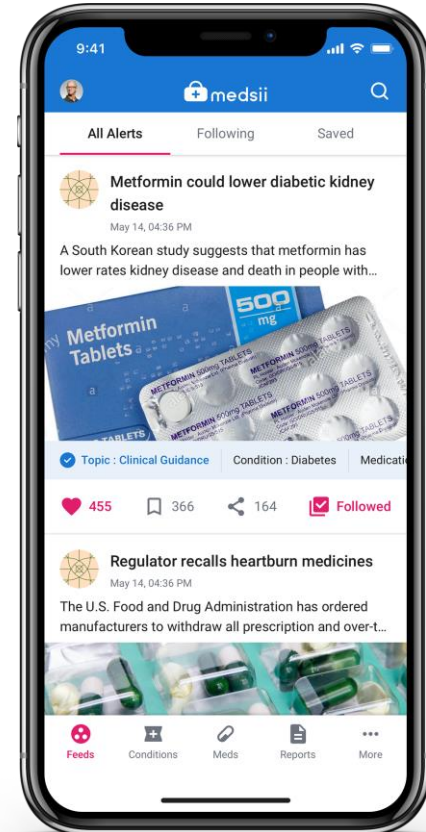
SIGNPOST SUPPORT

Users directed to Local &
International Patient-Support-
Groups for support



AI DRIVEN
PERSONALIZED ALERTS

Machine learning algorithms drive
personalized & timely Conditions
and Medicines Push Alerts to users



REVENUE MODEL



SUBSCRIPTION

Monthly (£4/\$4) or annual (£40/\$40)
Unlimited dynamic, personalized medicines
& conditions alerts



IN-APP PURCHASES

Users can purchase access to, and
save, single topics/alerts should they
not wish to subscribe



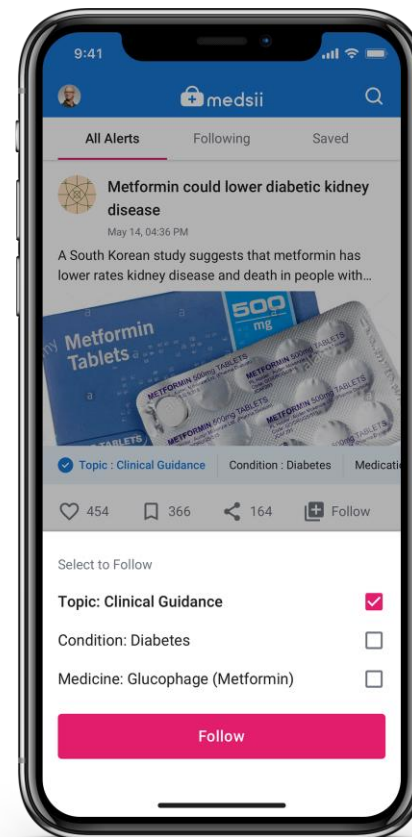
IN-STREAM ADS

In-stream ads & sponsored posts
opportunities (every 7th post)




LICENCED DATA SERVICES

Anonymized data as a service for
pharmaceuticals, biotech, financial
analysts, insurance for actuarial risk
assessments, FMCG etc.



TARGET STRUCTURE – BUSINESS / PRODUCT LINES

Pharma Sentinel is a multi-brand, cross industry vertical B2C2B play, starting with  **medsii**, our consumer “medicines information for me” app



B2C & B2B BUSINESS MODEL

B2C Initial Target Countries

USA
131 MILLION medicine takers
(251 MILLION smartphone users)

UK
29 MILLION medicine takers
(58 MILLION smartphone users)

CHINA

CHINA
571 million medicine takers
(783 million smartphone users)

INDIA

INDIA
463 million medicine takers
(375 million smartphone users)

LATAM

LATAM
200 million medicine takers
(250 million smartphone users)

B2B Business Verticals

PHARMA & BIOTECH
Legal requirement to proactively collect ADRs of marketed medicines from all sources

INSURANCE
Patient co-pays & actuarial risk & life tables assessment

PHARMA & BIOTECH

INSURANCE

HR FLEX BENEFITS

HEALTHCARE PROFESSIONALS

FMCG HYGIENE, COSMETICS

FMCG HYGIENE, COSMETICS
Consumer behaviour, competitor information and brand & product protection

PHARMACISTS & HEALTHCARE PROFESSIONALS
Pharmacists, HCPs, scientists and students receiving up-to-date medicines alerts

HR FLEX BENEFITS
Employee Flex Benefits white-label SAAS licence model

POTENTIAL OUTCOMES



BEST-CASE SCENARIO

Becomes market leader for
B2C & B2B medicines news
& information

→ \$1B+ in yearly revenue



REALISTIC CASE SCENARIO

8% UK & 1% USA B2C

Target Penetration +
limited B2B Revs

→ \$100M+ in yearly revenue
in Y5



WORST-CASE SCENARIO

→ We help people taking
medicines for chronic
conditions information +
direct them to Patient
Support Groups for help

THE ASK & FINANCIALS

- Pharma sentinel seeking to raise seed funding of between £500k and £1 million
- Also seeking FAANG, healthcare and big pharma Advisors & Non-Execs
- SEIS / EIS Advance Assurance approved by HMRC
- Launching Jul/Aug 2020. Moderate growth assumed, e.g. 45 downloads per day after 1 year.

	FY1 2020/1	FY2 2021/2	FY3 2022/3	FY4 2023/4	FY5 2024/5
Consumer Users	4,733	228,543	1,162,891	3,790,900	11,182,607
Paying Consumer Users	533	30,964	246,546	885,975	2,730,705
Consumer Revenues	£15,913	£971,313	£9,431,541	£38,469,081	£124,635,840
B2B Revenues	£32,504	£601,337	£4,645,674	£16,756,084	£43,793,309
TOTAL REVENUES	£48,417	£1,572,650	£14,077,215	£55,225,165	£168,429,149
B2C CAC Costs	£19,273	£1,028,114	£7,643,746	£26,758,722	£70,203,584
B2B Bus Dev Costs	£8,125	£150,313	£1,161,006	£4,179,555	£10,674,833
Other Costs (ex BD & CAC)	£392,108	£2,062,812	£4,610,546	£6,750,551	£10,084,489
OPERATING PROFITS	-£371,093	-£1,668,675	£660,267	£17,498,474	£76,372,266

MARKET OPPORTUNITY


- **8% UK & 1% USA penetration = 2.8m subscribers**
- **medsii** will partner with patient support groups to beta-test the app and push partner groups information to users
- 10% of medsii profits will be donated to patient support groups *as chosen by users*
- Targeting 23 million UK chronic condition sufferers between 20 and 79
- Also targeting English-speakers in the developing world, e.g. India, Pakistan, Philippines, Nigeria, who all have a larger English-speaking population than the UK
- **Spanish-speaking** countries next target
- **Data partnerships with pharma**, who have a legal requirement to proactively collect adverse drug reaction data

TAM UK
29 m
on repeat
prescriptions
(USA c 120m)

Target UK
23 m
between 20 and 79
yo
(USA c 96m)

8% UK +
1% USA
penetration =
2.8 m
subscribers

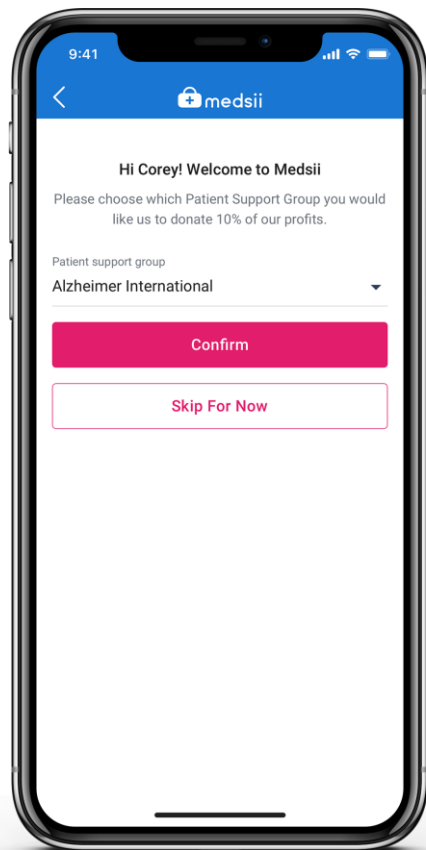
COMPETITOR FEATURE ANALYSIS

Feature	 medsii	Google	WebMD	NHS UK	Yellow Card	Patients Like Me
Push App Alerts	✓	No	No	No	No	✓
Tailored News	✓	? ¹	No	No	No	No
Patient Support Groups	✓	No	✓	✓	No	No
Mobile First	✓	No	No	No	✓	No
Global Sources	✓	✓	✓	No	No	No
Trusted Information	✓	? ²	✓	✓	✓	No

¹ Google alerts allow users to sign up for different types of alerts, however these alerts are not easily customizable by users for the manifold variations in medicines and conditions

² Google search promotes advertisements to the top of results, thereby prioritizing listings of commercial companies and their products/services rather than relevance

CORPORATE SOCIAL RESPONSIBILITY @ PHARMA SENTINEL



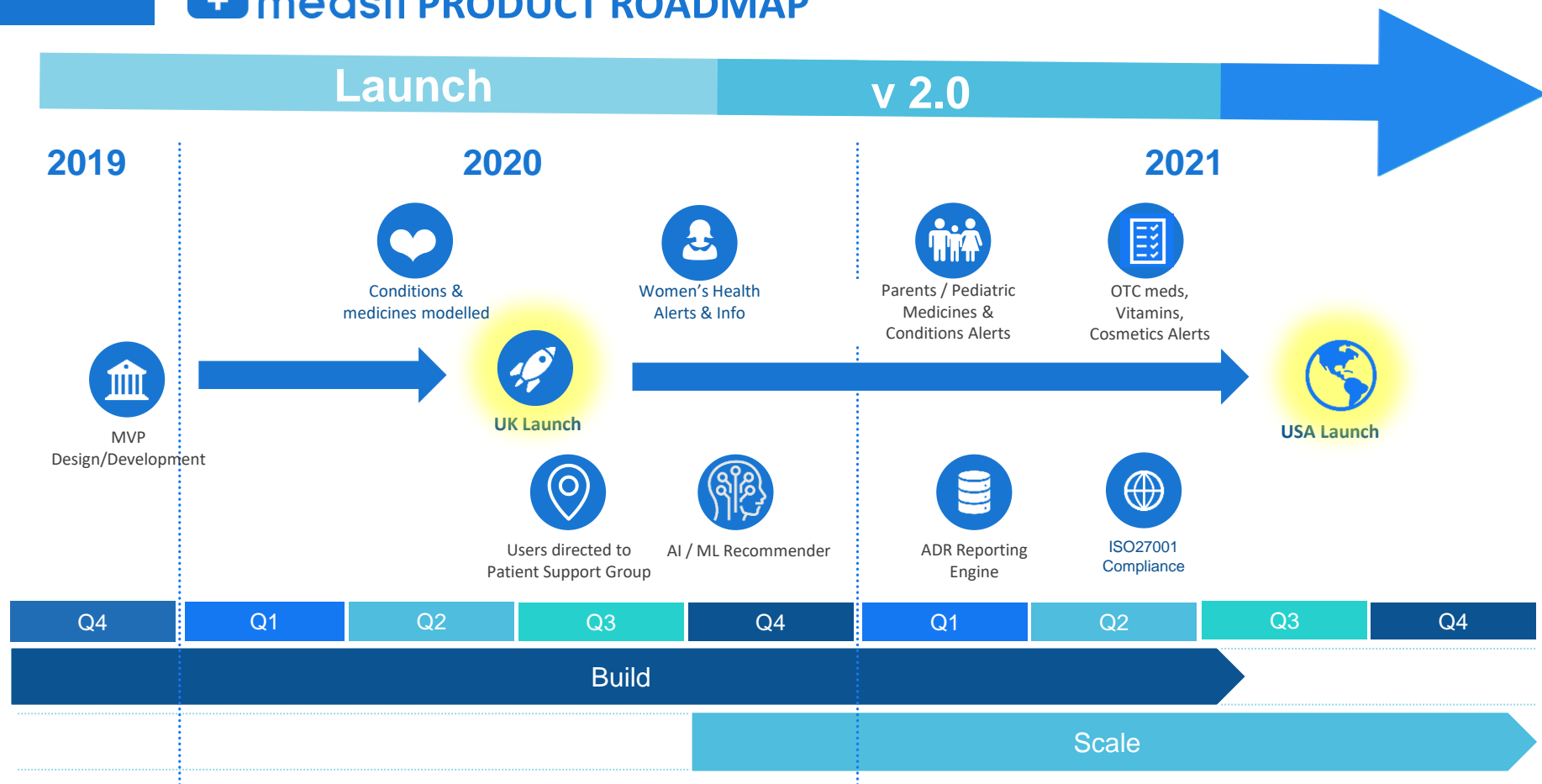
CSR is central to our strategy

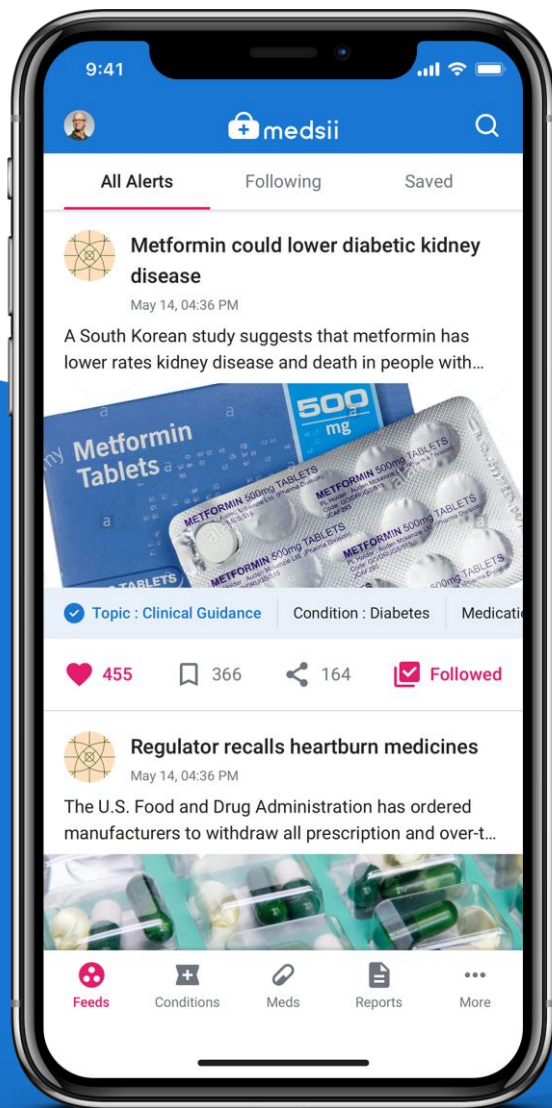
Pharma Sentinel will donate 10% of profits to local, national and international Patient Support Group charities e.g. Breast Cancer UK and Alzheimer's Disease International

Our users globally can choose which charities to support when they register

We will also provide all information and alerts on conditions prevalent in the developing world, such as Malaria, Tuberculosis and AIDS *completely free for all users globally*

medsii PRODUCT ROADMAP





Thank you!

PHARMA SENTINEL DEMOCRATIZING MEDICINES DATA

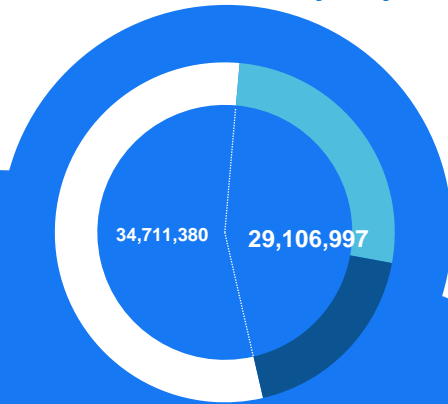
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Video introduction : <https://youtu.be/aA0mtFfZJ6I>

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APPENDIX 1: TOTAL ADDRESSABLE MARKET (UK only)

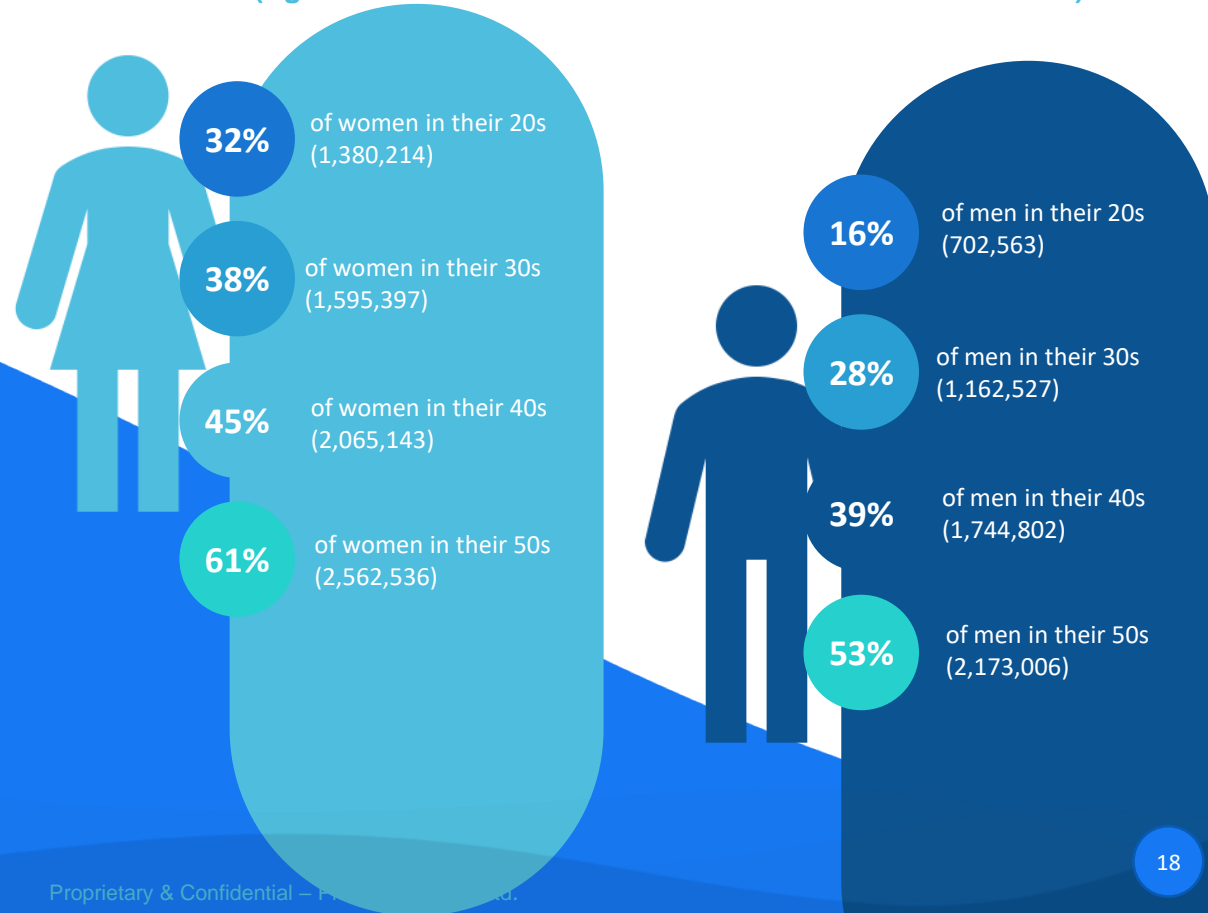
UK Total Addressable Market 29 million people



16,029,153 - Females
13,007,844 - Males

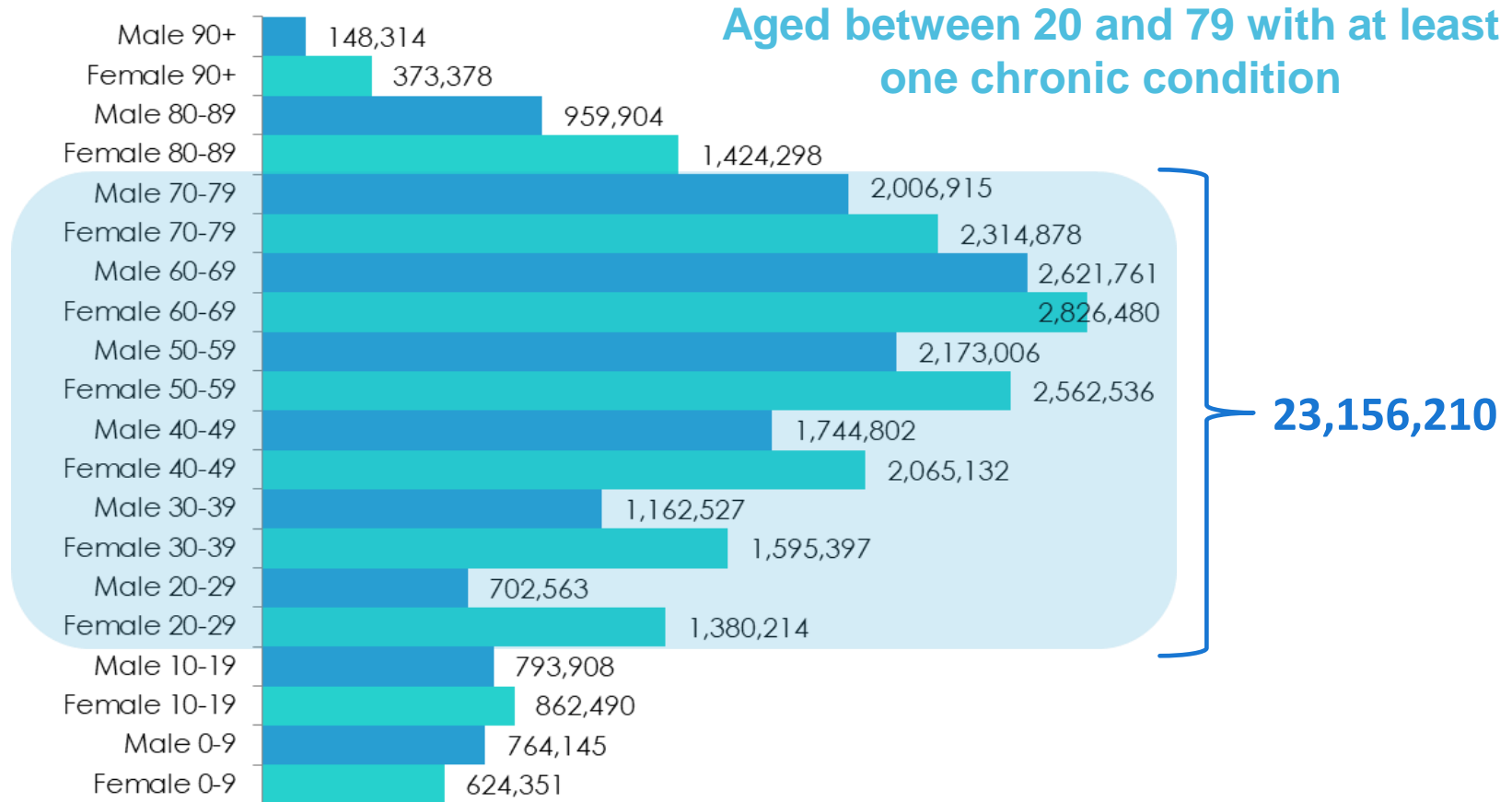
29,106,997 on at least one repeat prescription (46% of UK population), 49% of all females & 42% of males.

Pharma Sentinel UK Target Market 23 million (Age between 20 and 79 with at least one chronic condition)



Data Sources: ONS, NHS (2017)

APPENDIX 2: UK CONSUMER TOTAL ADDRESSABLE MARKET (BREAKDOWN)



APPENDIX 3: PROGRESS TO DATE

- MVP 1.0 Technical platform design & development complete:
 - Logical & physical data model developed
 - Backend APIs suite developed and Live
 - UI / UX wireframes, screenflow designs finalised
 - App prototype complete in Sketch & InVision
- Android and iOS apps launch in July/August 2020
 - User Surveys conducted in UK, USA, India and Africa
 - Licensed WHO Vigibase (data on medicines side effects) and working with other datasets
- Patient Support Groups engaged for App reviews & feedback
- **We plan to introduce a paid subscription service in Q4 2020 (v2.0)**

APPENDIX 4: FINANCIALS ASSUMPTIONS

Consumer App¹

- Moderate growth assumed, e.g. 1000 daily app downloads after 21 months. 45 downloads per day after 1 year.
- UK Addressable *Consumer* Market is ~ 23 million users (Adults of age 20 - 79 with at least one chronic condition).
- UK launch in Jul 2020 with a fully functional App. **We launch a paid subscription service in Q4 2020.**
- Preparing for launch in USA in 2021. (USA addressable market size ~ 120 million users, using UK as a proxy).
- Churn of 15% per month / monthly subscribers and 15% per annum / annual subscribers modeled
- **By end of Y5 (2024/5), a 8% penetration of UK addressable market plus 1% of USA yields 2.8 million subscribers**

Healthcare Professionals App (Pharmacists, Physicians, Medical & Pharma Students)

- TAM Healthcare Professionals = 3.7 million (developed nations only)
- Addressable users = 410k
- B2B Healthcare Professionals App launches Q1 2021

¹Note: all figures exclude in-app purchases (not yet modelled)

DISCLAIMER

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