Solutions4Health



Third ITU/WHO Workshop on "Artificial Intelligence for Health" Lausanne, Switzerland, 22 January 2019

Solutions 4 Health - Overview



Objectives

- Approximately 1.1 billion people across the world smoke tobacco.
- Someone dies from a smoking-related illness every six seconds
- Leading cause of **preventable** death.
- Most smokers want to stop smoking but don't have access to the tools they need to quit
- Deliver a solution at scale available on mobile phones (iOS, Android) and voice activated devices – Alexa & Google Home
- Build this on strong behavior change theory and existing evidence base (NICE/NCSCT)
- Cost effective solution, available 24/7



Population Wide Behavior Change Delivery at Scale



Building upon 10 years of delivery experience







Strong Evidence Base

Prochaska and Diclemente





What we know from the evidence:

- Goal setting
- Self-monitoring
- Action planning
- Normative feedback
- Cognitive bias re-training
 - Identity change





NHS National Institute for Health Research Natural Language Processing enables Bella to create real rapport with user, thus enabling a personalised conversation.

Utilized our experts within the app in video form, providing stronger and more holistic support.

Recommends options for NRT



●●000 EE 4G Bella

Online

past?

15:38

each of your previous attempts can be

used to help with this one. What is the

successfully stopped smoking for in the

longest time, in days, you have

€ 44% ■ III EE 🤶



Bella Online

|≣| you should be using a higher dosage of

NRT. My expert friend, Darush, can show you how to use NRT. Would you like to see the video?

11:33

9 Jul-2018, 11:32 am

● 1 86% ■

Sure

9 Jul-2018, 11:32 am 🛷



Thanks Darush! Hope you found that helpful, Kesh. Let's move on...

9 Jul-2018, 11:32 am

Do you have any safety concerns about using NRT?

9 Jul-2018, 11:32 am

Type your message





Even that period of time is major achievement for regular smokers, how did you manage it?

24 Oct-2017, 3:36 pm

24 Oct-2017, 3:36 pm

24 Oct-2017, 3:36 pm 🛷

Just willpower really..told myself i was not going to smoke on holiday and just kept myself distracted. I couldnt keep it up tho

About 3 days..i know that isnt much :/

24 Oct-2017, 3:38 pm 🛷



That's interesting! Well with your motivation to stop and with use of medication this can be built on this time.

Bella Community

Strong evidence base showing **peer** support increases the likelihood of successful behavior change. ILLI EE 🤶 01:51 @ √ 58% ■ III EE 🗢 01:51 @ 7 58% 🔳 **Bella Community** \leftarrow ← free, I managed to survive through 2 party's with lots of free flowing alcohol & 85% of my friends Express yourself to the Community Post smoke 😁 1 smile · 2 comments lozy89 🙂 Smile Comment Flag Smile Hey guys I'm Laura & I am now 2 weeks smoke free, I managed to survive through 2 party's with lots of free flowing alcohol & 85% of my friends smoke 😁 Comments 1 smile · 2 comments Steve 📁 Flag 🙂 Smile Comment That's amazing we'll done proud of yoy 0 smile · 0 comment Sandra Flag 🙂 Smile Reply karen Were do I begin Wow that's amazing - this is my first week of being without a cig - I am treating myself to a 🙂 Smile Comment Flag cheeky Nando's tonight 😀 0 smile · 0 comment Flag 🙂 Smile Reply Robbin

Case Study

- Quit with Bella Being rolled out across hospitals in Wales
- Doctors and Nurses to **prescribe** "Quit with Bella" to all smokers.
- Future plan is to provide this in Wales across population of **3 million**

"Every smoker wishing to quit is a unique individual. New technologies and AI offer exciting opportunities to individually tailor support for each smoker in their quit attempt and afterwards. With proper evaluation, these technologies can be used to enhance traditional stop-smoking services between sessions and also engage the majority of smokers who are unwilling or unable to attend specialist support." **Professor Keir Lewis** - Professor of Respiratory Medicine



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Past few months....





