PRACTICAL CASE 1

How doctors are turning smartphones into surgeries with video appointments and assessment via text

It's 2.10pm on a Tuesday afternoon and I'm video-calling my GP from my office. I made the appointment five minutes ago and I'm back at my desk within a quarter of an hour, advice on board and a prescription winging its way to my local pharmacy.

I'm trialling the "digital doctor" service Babylon Health, one of several new healthcare apps that are picking up steam in the world of tech start-ups: in January, it received $25 million (nearly £18 million) of investment, including backing from the founders of Google's AI division DeepMind, and this month the Government announced a £4.2 billion investment in digital innovation for the NHS.

Many of the services being developed are trying to tackle the problem of access to primary care — those lengthy GP appointment waiting times that keep hitting the headlines.

When we can get same-day deliveries and taxis in minutes using our phones the process of seeing a doctor does seem somewhat archaic, especially for people working full-time with long commutes who often end up either choosing to ignore potential problems or using out-of-hours services such as walk-in clinics and A&E.

Subscribing to Babylon costs £4.99 per month and allows unlimited GP appointments, access to your electronic records and an "Ask" service for questions by text.

Beyond this, paid-for features include specialist consultations, therapy sessions and tests that are sent to your home. The argument is that most of us don't need physical examinations; we need efficient diagnostic advice.

Pick-up has been particularly high with male patients, pregnant women and people seeking mental health treatment, and there have been more than 300,000 downloads since the service launched around a year ago.

The rising popularity of Fitbits and health-monitoring apps means Londoners are more in control of our own health than ever, and more comfortable using phones to supplement healthcare. A PwC report this month showed that one in four people would be willing to consult their GP via their smartphone.

Dr Adrian Bull is managing director of Imperial College Health Partners, which is part of Digital Health London, a network hub set up to build a viable marketplace for

health tech entrepreneurs and to establish engagement with the NHS and health sector. He believes that the widespread use of services like these is not far away.

"These things will never replace a clinical physical examination," he says. "But in five years, if a doctor wants to listen to your heart via your phone, they will be able to, and it will be more accurate than a stethoscope. We must never let technology become a hurdle between patient and clinician but insofar as these technologies can open up a new channel of communication, making it cleaner, faster, simpler — that's terrific."

Currently these services — other examples include Push Doctor and Vitality GP — are available to private patients, whether as individuals or through workplace schemes, but Babylon is also being trialled by the NHS in Essex.

The Babylon pool of doctors are former NHS GPs who still work at least one day a week in a surgery. Founder Dr Ali Parsa says: "The GPs providing our service are saying the same things to both patients using the service and in their surgeries — only about one in 10 patients need further investigation, perhaps a test. In the same day a patient can ask a question, book a consultant and see a specialist. Even with the most expensive private healthcare in the world they couldn't do things that quickly, simply because of the logistics."

*Another service, launched in December, again by former NHS GPs, is i-GP. It asks users to fill out an assessment which uses an advanced clinical algorithm to ask further questions depending on the patients' answers before analysing if they could be treated without visiting a doctor in person.

Founder Dr Sukhbinder Noorpuri says: "We have a good insight into patient needs and demands. We understand there are limits and you can't treat everybody and that's why we have a filter system."

But the healthcare technology sector is not just dealing with problems around primary care. The future of this sector could see technology that monitors how patients use medication — containers designed with a mechanism which sends a signal to both doctor and patient confirming that tablets have been taken. Remote sensoring devices, which a patient wears on a troublesome joint, could analyse the problem and lead to a quicker, more accurate diagnosis. And sensors that monitor blood sugar or chemical levels could automatically drive responses to balance those levels.

To people who still think a visit to the doctor means a waiting room, thermometers and a friendly GP who has known you since you were born peering into your ear, the digital healthcare revolution might sound worrying, inefficient and even scary.*

Choose 3 out of the 6 exercises that follow:

Exercise 1- Provide a definition for the following words/expressions (5 points) and write a complex sentence in a different context (5 points).

A. COMMUTE: It is a noun meaning displacement or travel. Movement of someone or something from one place to another.

- You need to be careful of how you commute in your daily routine.

B. HUB: It is said of a hosting place used to stocking.

- This is the hub of the country's water.

C. PICK UP STEAM: To start speeding or widening.

- This new student is picking up steam since he attends to English online classes.

D. WALK-IN CLINICS: It is said of a medical place where people can be attended without the need of a previous arrangement.

- I had a terrible headache so I commuted to the walk-in clinic to get my prescriptions.

E. START-UPS: Emergent companies that are beginning to pick up steam.

- I need to raise money to have a good foundation for start-up.

Exercise 2- Find synonyms for the following expressions (5 points) and write a complex sentence using the word originally employed in the text in a different context (5 points).

A. OBSTACLE: Hurdle.

- This issue hurdles all the process of improvement.

B. EXPECTANT: Pregnant.

- My sister is expectant so I'm going to be the cool uncle.

C. RIGOROUS: Accurate.

- That is an amazing way of giving rigorous information

D. PROBLEMATIC: Troublesome.

- My son can be troublesome, but he is a sensible boy.

E. BOUNDLESS: Lengthy

- Studying this you will have boundless opportunities.

Exercise 3- The following verbs: MAKE, KEEP, THINK, SEE and DRIVE have been used in the text. Write a complex sentence with the following phrasal verbs showing you know the meaning (10 points)

A. MAKE UP: Although he knew he was in trouble for being late, he decided to make up a story about a flat tire so that his boss wouldn't be as angry.

B. KEEP DOWN: The government implemented new policies designed to keep down the rate of inflation, which had been steadily increasing over the last quarter.

C. THINK OVER: Before she submitted her resignation, she took a long weekend to think over the job offer, considering all the potential risks and rewards.

D. SEE INTO: The wise old woman seemed to see into his very soul, understanding his secret fears even though he never spoke a word about them.

E. DRIVE UP: Because the rare storm damaged most of the local crops, the resulting scarcity is expected to drive up the price of fresh vegetables in the coming weeks.

Exercise 4- Translate the paragraphs from '*Another service' to 'and even scary.*

Otro servicio que se lanzó en diciembre por, de nuevo, NHS GPs es el conocido como i-GP. Dicho dispositivo solicita a sus usuarios rellenar una hoja de valoraciones que utiliza un algoritmo clínico avanzado que pregunta al paciente cuestiones dependiendo de sus respuestas antes incluso de analizar si deben o no ser tratados sin la necesidad de visitar físicamente a su médico.

El fundador Dr. Sukhbinder Noorpuri declara que "hemos obtenido una buena percepción de las demandas y necesidades de los pacientes. Entendemos que hay límites y que no podemos tratar a todo el mundo, por esa razón hacemos uso del sistema de filtrado".

Sin embargo, el sector de la tecnología médica no se enfrenta con problemas de la atención primaria. El futuro del sector se podría centrar en tecnología que monitoriza el uso que los pacientes hacen de su medicación, lugares diseñados con un mecanismo que remite la información tanto al paciente como al médico de que efectivamente la

medicación ha sido suministrada. Los dispositivos de detección remota, los cuales son usados por el paciente, podrían analizar el problema y llevar a un diagnóstico más rápido y preciso. Los sensores, además, que monitorizan el azúcar en sangre o los niveles de sustancias químicas podrían dar respuesta esas necesidades de forma automática y equilibrar los niveles que se encuentren inestables.

Para las personas que todavía creen que visitar al médico significa una sala de espera, termómetros y un doctor muy simpático que te conoce desde que has nacido escudriñándote el oído, la revolución de la medicina digital puede sonarles preocupante, ineficiente e incluso aterradora.

Exercise 5. How good do you consider 'video appointments and assessment via text' in contrast with face-to-face treatment? (200-250words)

Video appointments and text-based assessments represent a significant shift in mental healthcare, offering powerful advantages while presenting distinct contrasts to traditional face-to-face treatment.

The primary strength of remote options lies in accessibility. Patients in rural areas, individuals with mobility challenges, or those with social anxiety can receive consistent care that might otherwise be unavailable. The convenience of attending sessions from a private space eliminates barriers like travel time and cost, which can improve attendance. Text-based therapy, in particular, allows for a degree of reflection and anonymity that some people find less intimidating than a live conversation, enabling them to open up more easily.

However, the main trade-off is the loss of non-verbal communication. In face-to-face therapy, a clinician can observe subtle body language, tone, and facial expressions that provide critical context for a holistic assessment. This physical presence is often key to building a deep therapeutic alliance—the trusted bond between patient and therapist. While video calls capture some of these cues, they cannot fully replicate the nuanced connection of being in the same room.

In conclusion, while numerous studies show that remote therapy is highly effective for many common conditions, it is not a direct replacement for all situations. For those requiring intensive support, or for whom the subtle dynamics of in-person connection are paramount, face-to-face treatment remains the preferable standard. The best approach ultimately depends on the individual's specific needs, comfort with technology, and the severity of their condition.

Exercise 6: Provide the outline of a unit of work delivered online, that is, online learning, for the 4th year of CSE. In point form, include the context of the high school, the methodology employed, the evaluation criteria, the final outcome and an outline of the main activities for 6 sessions.
Unit of Work: Digital Citizenship and Well-being (Online Delivery)

This unit is designed for online delivery to a 4th-year Compulsory Secondary Education (CSE) class.

1. **Context of the High School**

   - School: I.E.S. Odiel, a public secondary school in Huelva, Andalusia.

   - Student Body: Culturally diverse, with varying levels of access to technology and digital literacy skills at home. The school has a 1-to-1 device program for students to use during school hours, but reliance on home equipment for online learning is expected.

   - Subject: Integrated into the "Values, Citizenship, and Human Rights" curriculum, with cross-curricular links to Technology and Spanish Language.

2. **Methodology**

   - Blended Asynchronous & Synchronous Learning: A mix of self-paced activities and live, scheduled sessions to accommodate different learning styles and schedules.

   - Project-Based Learning (PBL): The unit culminates in a practical, student-led project that requires applying the concepts learned.

   - Collaborative Online Work: Students will use shared documents, breakout rooms in video calls, and online forums to work together in small groups.

   - Flipped Classroom Elements: Students will review core content (videos, readings) before live sessions, which will be dedicated to discussion, application, and collaborative activities.

3. **Evaluation Criteria**

   - Forum Participation: Quality and consistency of contributions to weekly discussion forums.

   - Session Activities & Assignments: Completion of smaller tasks assigned during or after each session (e.g., worksheets, short analyses).

- Collaborative Final Project: Assessed on research, content accuracy, creativity, collaboration (peer evaluation), and final presentation.

- Final Personal Reflection: A short essay reflecting on personal learning and changes in perspective regarding digital citizenship.

4. **Final Outcome**

Upon completion of this unit, students will be able to critically evaluate their own digital footprint and online behaviors, identify and combat misinformation, and apply strategies to promote positive mental well-being and respectful communication in digital environments.

5. **Outline of Main Activities (6 Sessions)**

Session 1: Your Digital Identity

- Topic: Digital footprint and online identity.
- Activity: Students use online tools to search for their own digital presence and create a private "Digital Footprint Map." They will discuss in a forum: "Is your online identity an accurate reflection of you?"

Session 2: The Rules of the Road: Netiquette

- Topic: Effective and respectful online communication (Netiquette).
- Activity: In live session breakout rooms, groups are given scenarios of online miscommunication or conflict (e.g., a misunderstood text, an argument in a group chat). They must rewrite the dialogue to achieve a positive outcome.

Session 3: Fact vs. Fiction Online

- Topic: Identifying misinformation, fake news, and deepfakes.
- Activity: Students are given a curated list of social media posts and news articles. Using fact-checking techniques discussed in the session, they must work in pairs to verify or debunk the information and present their findings.

Session 4: Digital Well-being and Mental Health

- Topic: Cyberbullying, online pressure, and strategies for digital wellness (e.g., digital detox, privacy settings).
- Activity: A guest speaker (e.g., school psychologist) joins the live session for a Q&A. Afterwards, students begin brainstorming ideas for their final project, which must address a problem related to digital well-being.

Session 5: Project Workshop

- Topic: Dedicated work time for the final project.
- Activity: This session is primarily asynchronous or involves instructor check-ins with each group in separate video call rooms. Groups work on their project (e.g., creating a presentation, a short video guide, or an informational website).

Session 6: Project Showcase and Reflection

- Topic: Presentation of final projects and unit wrap-up.
- Activity: Groups present their final projects to the class in a live session. Following the presentations, students will independently complete and submit their final personal reflection essay.