

Research Article

Understanding the Mind and Inventing the Future: The Problem of Failure to Show Up for Follow-Up Appointments with One's Health Provider

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Abstract

The paper introduces a system to deal with problems of society using SCAS, Socrates as a Service. SCAS is provided with a detailed description of a conventional problem faced by people, and in turn instructed to defined prospective mind-sets in the population who suffer with this problem. SCAS further provides information on the nature of these hypothesized mind-sets, what the mind-sets are thinking, and how the mind-sets would respond to topic-relevant slogans that would be generated to solve the problem. Finally, the paper finishes with the use of SCAS to summarize the issue, provide perspectives that people might have, and identify what next steps need to be taken, as well as innovations that should be introduced which deal with and even solve the problem. SCAS is a general approach. The paper here uses SCAS to investigate the 'why' patients fail to keep their doctor's visits, and what innovations might solve the problem.

Introduction

This paper grew out of the recognition that all too often patients fail to follow the suggestions of their medical and health professionals. The topic of compliance is a large one. The focus of this paper is on the simple problem of patients not showing up at the prescribed time for their follow-up appointments. The damage which ensues can be enormous, impacting the health of the patient, the cost to the medical practice, and the disruption of a system which must accommodate the schedules of a variety of people who then must regroup and update the schedules [1].

When dealing with this problem, we are actually dealing with issues of communication interacting with motivation and habit. How does the medical establishment work with individuals to ensure that they come to scheduled appointments. The importance of this question can be easily understood when one realizes the number of reminder messages which appear on the smartphones of patients, telling them of the upcoming appointment, asking them to 'e-check in' and then giving them the chance to cancel and reschedule. This and other actions such as reminder phone call are the obvious effort to minimize the expensive 'no-shows'. In recent years, the process has been automated, with AI-driven chatbots and voice interactions

finding their place in the seemingly impossible to solve conundrum of getting patients to show for their appointments [2].

The business literature recognizes the problems of 'no-shows'. The issues underlying the no-shows are extensive, as are the suggestions for improvement. The case of medicine is particular serious for no-shows simply because one cannot necessarily move the appointment to some later time and 'go from there'. A person's health is labile. Moving a scheduled appointment a month or two later, when a slot opens up, may be too late when the issue is the follow up from what can be a serious problem, and when not treated can evolve to a life-threatening one. One serious illness often comes to the fore, diabetes. The consequence of missing a follow up appoint with a doctor when the person has diabetes 2 can be severe [3-6].

The Contribution of Mind Genomics Enhanced by SCAS (Socrates as a Service)

The problem of no-shows was first brought into the world of Mind Genomics through collaboration with physicians in Chicago, IL, specifically anesthesiologist Dr. Glen Zemel. Author Moskowitz collaborated with Dr. Zemel on a variety of studies dealing with the mind of the patient in the hospital. As a practicing anesthesiologist, Zemel often recognized the issues involved in patients who fail

to follow up, often even having to forego surgery on the particular scheduled date because either they 'forgot' (rare) or forgot to follow the requirements of avoid food for the previous 12 hours and so forth. It was these immediate issues which ended up costing the medical practice many thousands of dollars.

The problem became more acute when authors Braun and Mulvey, and later Cooper, became involved in the issue of patients who failed to follow up at specific times. These individuals suffered from a variety of metabolic disorders; the most common one being diagnosed as pre-diabetic. The failure to return at the scheduled time for a follow-up morphed from being a financial loss to a medical practice into the possibility that diabetes might develop because the pre-diabetic essentially disappeared, but presumably the condition remained with the individual.

The evolution of Mind Genomics into a much deeper use of AI opened up the questions about what SCAS might be able to contribute to an understanding of why people fail to go to follow-up appointments with their doctor after learning that they are suffering from a serious condition. Could AI provide insights, especially with the newly discovered ability to 'prime' AI with a detailed background of an issue, and then instruct AI to 'flesh out' what might be going on in the mind of a person? As we move through the topics in this paper we must keep in mind that everything presented here regarding 'thinking' is the result of instructing Socrates as a Service (SCAS), viz., a version of AI powered by Chat GPT 3.5 [7].

Demonstration: Priming AI to Simulate Poor Patients Living in Public Housing

The remainder of this paper presents the results of a simulation using SCAS (Socrates as a Service, a form of AI growing out of ChatGPT 3.5), and the secondary analysis, viz., AI summarization of the data generated by the SCAS simulation. The important thing to keep in mind is that there is almost no information of any substantive import presented by the user, other than the initial framing of the situation, and what the user wants to 'discover' by having AI simulate the answers in place of having a human being do so.

The process begins with the orientation provided to AI, shown in Table 1. The table divides into three sections.

Section 1 - Input Information to SCAS

Here, the user creates a general picture of the situation. The input positions the user as a person working in a clinic in a poor area in Brooklyn. One might think this simulation with a variety of different so-called general pictures, such as stating that the area is inhabited by upper middle classes, that the person works in a concierge medical service, that the location is somewhere else. With that flexibility the user would be well on the way to parametrically exploring the different alternatives. The opportunities are endless.

Section 2 - Understanding the Mind-sets

Here the user presents SCAS with a minimum amount of information, sufficient however to allow SCAS to create mind-sets. The user does not define the concept of mind-set, nor does the user give any hint about what properties are possessed by the three mind-sets. Given only this minimal amount of information, really only one piece of information, that there are three mind-sets, the system requests AI to create names, and inner thoughts of these three mind-sets.

Section 3 - Request that SCAS Produce 12 Messages and Estimate the Performance of Each Message among the Three Mind-sets

The final request generated the desired 12 messages to be evaluated by three mind-sets. It is important to emphasize that nowhere in the instructions is any information presented to SCAS program that could be considered to be a subject-relevant prompt. All of the information generated by SCAS comes from the way SCAS processes the request.

Table 2 present the first part of the output, viz., the three mind-sets, explicated in terms of what each mind-set thinks at the time of making the appointment, and then a week before the appointment. The remarkable thing emerging from Table 2 is the realistic nature of the mind-sets and their thoughts. One could easily think that these are verbatim quotes emerging from a discussion with the patient about the issue of making and keeping medical appointments.

Table 1: The input to Socrates as a Service (SCAS).

<p>Section 1 - Input to SCAS I work in a walk-in clinic in Brooklyn, NY where the people live in PUBLIC HOUSING, owned by the city. They are low income. They have poor diets, and poor health. They have been coming to the walk-in clinic for years, and like the staff. My problem: I want to make sure that my patients show up for the medical appointments that we schedule together.</p> <p>Section 2 - 'Understanding' the mind-sets What I know: There are exactly THREE VERY DIFFERENT mind-sets of patients when it comes to keeping the follow up appointments that we make together, after they visit me FOR THE FIRST TIME. For each mind-set in turn, answer all the questions below. . Make the information in the answer realistic, simple to understand, easy to do, interesting, tug on the emotions, fun to read, and very convincing. 1. What is the name of the mind-set? 2. At the time of making the appointment, what is the mind-set thinking, specifically. Give me this answer in four sentences which help me understand what the mind-set is thinking 3. A week before the appointment does the mind-set think about the appointment, and if yes, then what is the mind-set thinking. Give me this answer in two sentences. 4. The morning of the day of the appointment does the mind-set think about the appointment, and if yes, then what is the mind-set thinking. Give me this answer in two sentences.</p> <p>Section 3 - Instructing SCAS to create messages Now for the second part. Create a basic set 12 messages which could be tested with each of the 3 mind-sets. Make the messages interesting, emotional, convincing, realistic, fun to read, memorable, short, and powerful. For each message in turn, tell me the likelihood that each of the three mind-sets will show up to the appoint at the right time Now repeat, but for each message in turn tell me the likelihood that the message will remain effective if given to the mind-set for 10 different visits over a period of 3 years.</p>

Table 2: The description of the three mind-sets emerging from SCAS. As noted in the text, SCAS was not given any specific material on mind-sets which to base what it returned to the user.

<p>Mind-set 1: "The Proactive Patient"</p> <p>At the time of making the appointment, the mind-set is thinking, "I am taking charge of my health and want to address any concerns early on. It's important for me to follow through on the recommended appointments and treatments to improve my health and well-being."</p> <p>A week before the appointment, the mind-set is thinking, "I need to prepare myself physically and mentally for the upcoming appointment. I should review any notes or questions I have for the medical professional to make the most out of our time together."</p>
<p>Mind-set 2: "The Carefree Patient"</p> <p>At the time of making the appointment, the mind-set is thinking, "I'm not too concerned about my health issues right now, but it doesn't hurt to schedule an appointment. I'll see how I feel closer to the date and decide whether or not to go."</p> <p>A week before the appointment, the mind-set may or may not be thinking about the appointment depending on their current health status or other priorities. If they do think about it, they might have a mindset like, "I guess it's coming up, but I have other things to deal with. Let's see how I'm feeling on the day itself."</p>
<p>Mind-set 3: "The Anxious Patient"</p> <p>At the time of making the appointment, the mind-set is thinking, "I'm worried about my health condition and need medical attention. I hope the upcoming appointment will provide answers and reassurance. I will do everything I can to keep this appointment and find the support I need."</p> <p>A week before the appointment, the mind-set is thinking, "The appointment is approaching, and I can't stop thinking about it. I hope the doctor will understand and address my concerns. I should write down any questions or symptoms I want to discuss during the visit."</p>

Table 3: Estimated likelihood of showing up for the follow-up appointment, for each of 12 slogans by each of the three mind-groups. Everything was generated by SCAS, using only the input to SCAS shown in Figure 1.

	Likelihood of Showing Up		
	Proactive	Carefree	Anxious
"Your health matters. Take control and prioritize your well-being. Keep your appointment and invest in a healthier future."	High	Moderate	High
"Don't let your health take a backseat. Your appointment is an opportunity to address any concerns and get the right treatment. Show up and take care of yourself."	High	Low	High
Your time matters, but so does your health. Keep your appointment and let us provide the care you deserve."	High	Moderate	High
"Your health journey starts here. Show up to your appointment and let our dedicated team guide you towards a happier, healthier life."	High	Low	High
"Imagine a life free from constant worry. Attending your appointment brings you one step closer to finding peace of mind and effective treatments."	High	Low	High
"We value your presence. Your appointment matters not only to you but also to the caring staff who are eagerly waiting to assist you. Don't miss this chance."	High	Moderate	High
"Your commitment to your own well-being begins with keeping your appointment. Let us work together to achieve your health goals."	High	Moderate	High
"Don't let uncertainty overshadow your health. Show up to your appointment and let us provide clarity and support along your journey."	High	Low	High
"We understand life gets busy, but your health should never be neglected. Prioritize yourself and attend your appointment for a healthier and happier future."	High	Moderate	High
"Don't miss out on the opportunity for personalized care and guidance. Your appointment is a crucial step towards improving your overall well-being."	High	Low	High
"You have the power to take charge of your health. Keep your appointment and let us support you on this journey towards optimal well-being."	High	Moderate	High
"Your health is your greatest asset. Honor it by showing up to your appointment and allowing us to provide the care you deserve."	High	Low	High

Table 3 shows how each of the three mind-sets would estimate the likelihood of showing up for the follow up medical appointment if the mind-set were to be reminded through the slogan. The slogans were created by SCAS. SCAS 'predicts' that all 12 would be effective for Mind-Set 1 (proactive), effective for Mind-Set 3 (Anxious), but not particularly effective for Mind-Set (Carefree). Once again it should be noted that these results make sense. We expected a mind-set named Carefree not to care about any of the messages, and thus not pay attention to follow up messages with the slogans shown in Table 3.

Inventing the Future Using Today's Topics

The second part of this paper focuses on the use of SCAS to understand what to do in order to improve the compliance of patients regarding their requested follow up visit. The original use of SCAS was to allow the user to type a 'squib' or information about a topic and have SCAS return with a set of 15 questions. The same feature was available for SCAS to return 15 answer to a given question. These feature remain in SCAS, and led to an effort to compare the answers to the same questions when SCAS was told that the answers had to be appropriate for the 21st century (now), and then that the answers had to be appropriate for the 22nd century (75 years hence).

The same set of 15 questions was used to compare the answers for the two centuries. The SCAS was primed to provide four separate answers to each of the 15 questions, requiring the answers to be appropriate for the 21st century (Table 4, answers A-D), and then be appropriate for the 22nd century (Table 4, answers E-H, italicized). Table 4 suggest that the answers for the 22nd century seem reasonable, and to be extensions of current day technology.

Summarization of Information Proposed - Broad Overviews Produced by SCAS

When the Mind Genomics study has been closed, SCAS creates a set of summarizations for each iteration, doing the summarizations separately. These summarizations are returned to the user in an email, usually within a half hour after the close of the study. Thus, in the not-unusual case of the user doing 10-15 iterations with different squibs, e.g., exploring different time periods with the same instructions, the user will receive one page for each effort, all of the pages becomes tabs in the one Excel workbook.

Table 5 shows one set of summarization, aptly summarized 'Ideas'. The three summarization are key ideas, themes, and then perspectives.

Table 4: Fifteen SCAS-generated topic-related questions about office visits to the medical professional. Each question shows four SCAS-generated questions assuming a year in the 21st century, and then a year in the 22nd century.

Topic-related questions and answers
Appropriate for the 21 st century - Answers A, B, C, D
Appropriate for the 22 nd century – Italicized, E, F, G, H
1 What innovative methods can we incorporate to analyze your unique health needs and optimize the effectiveness of your appointments?
A. Implement advanced SCAS algorithms to analyze your health data and personalize treatment plans
B. Conduct virtual reality simulations to accurately assess your symptoms and provide personalized recommendations
D. Utilize nanotechnology to develop microscopic sensors that continuously monitor your health and provide real-time insights during appointments
E. Virtual reality simulations to visualize and explain complex medical conditions.
F. Genetic testing to provide personalized treatment plans.
G. Wearable devices that continuously monitor your health and transmit data to your healthcare provider.
H. Artificial intelligence-assisted diagnosis and treatment recommendation systems.
2 Are there any concerns or anxieties you have about attending your medical appointments, and how can we alleviate them?
A. Offer telemedicine options for appointments, allowing you to consult with healthcare professionals from the comfort of your home
B. Provide therapy animals at the clinic to relieve anxiety and create a more calming environment
C. Implement virtual reality relaxation techniques during procedures to reduce stress and fears
D. Offer personalized appointment reminders through virtual assistants with comforting voices and reassuring messages
E. Offering virtual consultations for routine check-ups or minor concerns.
F. Providing transparent and detailed explanations of medical procedures beforehand.
G. Including a therapy dog in the clinic to provide emotional support during appointments.
H. Creating a calming and aesthetically pleasing environment in examination rooms to reduce anxiety.
3 How can we make the reminder system more engaging and memorable, ensuring you never miss your appointments?
A. Send personalized video messages from your healthcare providers reminding you about upcoming appointments
B. Gamify the reminder system by incorporating health challenges and rewards for attending appointments
C. Develop a smart wearable device that vibrates or emits pleasant scents as a reminder for appointments
D. Use augmented reality pop-up notifications that appear right in front of you to remind you about your appointments
E. Sending personalized holographic messages reminding you of your upcoming appointments.
F. Gamifying the reminder system, where each reminder completion earns you rewards or discounts.
G. Utilizing augmented reality to project appointment reminders directly onto your surroundings.
H. Incorporating soothing aromatherapy scents in the reminder messages to make them more memorable.
4 What aspects of our clinic environment or staff contribute to your comfort and eagerness to attend appointments?
A. Design a futuristic clinic space with interactive displays, soothing lighting, and comfortable ergonomic furniture
B. Train staff members in empathetic SCAS communication to enhance the patient experience during appointments
C. Provide virtual reality relaxation pods in the waiting area for a pleasant pre-appointment experience
D. Hire empathic humanoid robots as medical assistants to provide a welcoming and comforting presence
E. Incorporating nature-inspired designs and green spaces throughout the clinic for a calming ambiance.
F. Training our staff to use humor and light-heartedness to create a friendly and welcoming atmosphere.
G. Providing personalized music playlists during your appointments to enhance relaxation.
H. Implementing advanced patient recognition technology, where staff members can greet you by name instantly.
5 What potential barriers might hinder your ability to attend appointments, and how can we collaborate to overcome them?
A. Implement a personalized transportation service that caters to your specific needs and ensures timely arrival at appointments
B. Offer flexible appointment scheduling options to accommodate your busy lifestyle and minimize conflicts
C. Develop a mobile app that provides real-time language translation services for non-native English speakers
D. Provide financial assistance programs to support individuals facing financial constraints in attending appointments
E. Offering teleportation services for patients who find it challenging to commute to the clinic.
F. Providing free childcare for patients who are unable to find suitable arrangements while attending appointments.
G. Developing a mobile clinic that can visit patients at their homes or workplaces for added convenience.
H. Partnering with ride-sharing companies to offer transportation vouchers for your clinic visits.
6 How can we enhance your appointment experience to make it more enjoyable, informative, and empowering?
A. Offer virtual reality educational experiences where you can explore your body's systems and learn about your health conditions
B. Provide personalized health coaching sessions during appointments to empower you in managing your own well-being
C. Incorporate interactive touchscreens in examination rooms to display your health data and encourage active participation in discussions
D. Introduce personalized health apps that allow you to track your progress and receive tailored health recommendations after each appointment
E. Creating interactive virtual reality tours of your body to enhance your understanding of medical conditions and treatments.
F. Offering personalized health coaching sessions after each appointment to set goals and track progress.
G. Incorporating mindfulness and meditation exercises into the appointment routine to promote well-being.
H. Providing virtual group sessions where patients with similar conditions can interact, share experiences, and support each other.
7 Are there any additional resources or support systems we can provide to ensure your commitment to follow-up appointments?

- A. Establish virtual support groups where patients facing similar health challenges can interact and motivate each other to attend appointments
- B. Develop a comprehensive patient portal that provides access to educational materials, appointment reminders, and self-monitoring tools
- C. Offer online appointment booking with automatic reminders and notifications to facilitate seamless follow-up scheduling
- D. Implement a rewards program that provides incentives for attending follow-up appointments, such as discounts on healthcare products or services
- E. Connecting you with peer support groups or online communities to foster a sense of belonging and encouragement.
- F. Integrating a digital wellness platform that offers personalized tips, reminders, and resources to support your overall well-being.
- G. Implementing a reward system where attending follow-up appointments earns you points for discounts on non-medical products/services.
- H. Collaborating with local fitness centers or nutritionists to offer discounted wellness programs exclusively for our patients.

8 How can we collaborate with you to create a care plan that aligns with your lifestyle and encourages regular attendance?

- A. Employ telehealth consultations to discuss your preferences, constraints, and goals, resulting in a personalized care plan
- B. Integrate wearable devices with appointment tracking features, enabling real-time data sharing for better care plan adjustments
- C. Organize interactive group sessions where patients can collectively design care plans based on shared experiences and preferences
- D. Utilize SCAS-enabled healthcare apps that analyze your lifestyle patterns and provide tailored recommendations to improve adherence to the care plan
- E. Hosting interactive workshops where patients can actively participate in designing their care plans alongside healthcare professionals.
- F. Providing accessible and user-friendly digital platforms to track progress, set goals, and receive personalized recommendations.
- G. Involving your loved ones or support network in care plan discussions to ensure a holistic and inclusive approach.
- H. Offering alternative appointment options, such as telemedicine or group consultations, to accommodate different scheduling needs.

9 Do you face any specific transportation challenges in accessing our clinic, and how can we assist you in overcoming them?

- A. Implement self-driving clinic buses equipped with medical facilities to provide convenient and accessible transportation options
- B. Collaborate with emerging transportation platforms to offer discounted or dedicated rideshare services for clinic appointments
- C. Introduce community-based carpooling programs where patients living in the same area can share rides to the clinic
- D. Provide telemedicine options for appointments to eliminate the need for physical transportation
- E. Enabling automated flying cars for hassle-free and quick transportation to and from the clinic.
- F. Partnering with local autonomous vehicle services to provide reliable and convenient transport options.
- G. Offering telepresence devices that allow you to virtually attend appointments from the comfort of your home or office.
- H. Providing incentives for carpooling among patients residing in the same area to reduce transportation burdens.

10 Which aspects of our clinic's communication have been effective in reminding you about appointments, and what else can we do to improve the process?

- A. Use personalized SCAS chatbots that send appointment reminders via text messages tailored to your preferred communication style
- B. Employ virtual reality holograms that appear at your desired location and remind you about upcoming appointments
- C. Develop an immersive mobile app that incorporates appointment reminders through interactive games or quizzes
- D. Utilize biometric devices that monitor your vital signs and generate appointment reminders based on real-time health fluctuations
- E. Utilizing personalized holographic messages that appear at appropriate times throughout the day.
- F. Sending appointment reminders through advanced neural implants for seamless and immediate notification.
- G. Using augmented reality notifications synchronized with your smart devices to enhance accessibility.
- H. Offering a personalized chatbot that assists with appointment scheduling and reminders, using natural language processing.

11 Are there any concerns about the cost or insurance coverage that could impact your decision to attend appointments, and how can we support you in addressing them?

- A. Offer personalized financial counseling services to help navigate insurance coverage, co-pays, and medical expenses
- B. Collaborate with insurance providers to develop comprehensive coverage plans for preventive care appointments
- C. Introduce a healthcare affordability program that provides discounts or subsidies for individuals facing financial barriers
- D. Develop transparent cost estimation tools that accurately calculate expenses and empower informed decision-making regarding appointments
- E. Implementing a universal healthcare system, ensuring affordability and accessibility for all citizens.
- F. Utilizing blockchain technology to streamline insurance claims and enhance transparency in healthcare costs.
- G. Offering financial assistance programs or flexible payment options tailored to individual circumstances.
- H. Collaborating with pharmaceutical companies to provide reduced-cost medications for our patients

12 How can we make the waiting area more engaging and comfortable, ensuring you feel valued and eager to keep your appointments?

- A. Install interactive touchscreen walls that display engaging health-related content and allow patients to provide feedback or suggestions
- B. Offer virtual reality relaxation experiences with customizable settings to create a calming environment in the waiting area
- C. Introduce "smart seats" equipped with thermal and massage functions to provide personalized comfort during the waiting period
- D. Arrange live performances or art exhibitions in the waiting area to stimulate creativity and create a pleasant atmosphere
- E. Installing interactive art installations or immersive digital displays showcasing educational content.
- F. Introducing massage chairs or relaxation pods for patients to unwind while waiting.
- G. Offering complimentary healthy snacks and beverages in the waiting area for a delightful refreshment.
- H. Providing touchless entertainment systems with a wide range of digital books, movies, and games to enjoy during the wait.

13 Are there any educational materials or workshops we can provide to increase your understanding and motivation for attending follow-up appointments?

- A. Conduct interactive workshops on self-care techniques, empowering patients to take an active role in their well-being between appointments
- B. Develop a mobile app with a vast library of educational videos and articles that cover various health topics and reinforce the importance of follow-up appointments
- C. Organize health literacy programs in collaboration with community organizations to increase awareness about the value of regular medical check-ups
- D. Establish a patient education center within the clinic, equipped with interactive displays and knowledgeable staff to address questions and provide resources
- E. Organizing virtual reality workshops where you can explore the human body and learn about various medical conditions.
- F. Offering online courses and webinars on health-related topics, delivered by renowned experts in their fields.

G. Creating interactive animations or infographics that simplify complex medical concepts and procedures.

H. Providing access to an SCAS-powered chatbot that offers personalized health education and answers your specific questions.

14 Can you share any previous positive experiences you've had with healthcare professionals that encouraged you to keep your appointments, and how can we recreate those experiences?

A. Organize regular meet-and-greet sessions where patients can interact with healthcare professionals in a casual environment, fostering a sense of trust and connection

B. Implement a buddy system where patients are paired with healthcare professionals who have successfully motivated patients in the past

C. Provide opportunities for patients to share testimonials or success stories, showcasing the positive impact of regular appointments and encouraging others to follow suit

D. Collaborate with patient advocacy groups to invite guest speakers who share inspiring stories and emphasize the importance of consistent healthcare engagement

E. Implementing a proactive and empathetic approach where healthcare providers anticipate patient needs and address concerns promptly.

F. Encouraging open and honest communication, allowing you to actively participate in decision-making regarding your health.

G. Developing a supportive and collaborative atmosphere where healthcare professionals foster trust and actively listen to your input.

H. Providing extended appointment times to allow for thorough discussions and ensure all questions and concerns are addressed.

15 What can our clinic do to help you prioritize your health and overcome apathy or lack of motivation when it comes to attending follow-up appointments?

A. Develop a personalized health app that tracks your progress, sets reminders, and sends motivational messages to foster commitment and active involvement in your own well-being

B. Establish a mentorship program where individuals who have overcome similar challenges act as mentors, providing guidance and motivation to attend follow-up appointments

C. Organize wellness retreats or health-focused events to ignite passion and rekindle motivation for maintaining regular appointments

D. Integrate virtual reality simulations that showcase the potential positive outcomes of regular follow-up appointments, inspiring a sense of motivation and determination

E. Offering personalized health coaching sessions to set goals, monitor progress, and provide continuous support and motivation.

F. Providing access to online peer support groups where patients can share experiences, challenges, and success stories.

G. Sending motivational reminders and tips via immersive virtual reality experiences delivered directly to your devices.

H. Collaborating with local community centers or gyms to design engaging wellness programs, tailored to your specific interests and preferences.

Key ideas simply highlights what the term suggests, namely what are the ideas presented to the user. This study generates a great number of key ideas because input to the studies comprises the basic questions and the answers pertaining only to the 21st Century both shown in Table 4.

Themes further summarize the key ideas, this time using SCAS to group together the related group of key ideas, perspectives, in turn, take these themes and provide the basis for ongoing discussion and learning, showing two alternative points of view for each theme.

The 'Human Reaction' to These Ideas, as Envisioned by SCAS

As part of the summarization, SCAS returns with three different analyses of the sets of ideas. The analyses look at populations of people, whether these populations be defined by who they are (for both interested and opposing audiences), or by the way they think (alternative viewpoints). Table 6 shows the various groups and their reactions to the ideas uncovered by SCAS. It is important to keep in mind that these reactions are to the general ideas, not to any specific idea.

The final analysis deals with SCAS as an inventor. Table 7 shows two sections. The first section lists questions about what may be missing. These are typically questions which ask: *How do we... ?* The second section lists possible innovations, based upon the information processed by SCAS. The list of possible innovations is organized by topic.

Discussion and Conclusions

This paper emerged from recurring discussions about the real problem of 'no shows' in the world of medicine. The problem is a vexing one, perhaps growing because of the increasing difficulties encountered in the practice of medicine. One problem is the growing lack of affordability of medical treatments, the cost perhaps acting as a mechanism to discourage visits because of the fear of incurring

expenses that are unaffordable to the patient. A second problem is the reality that doctors no longer make house calls. The patient must go to the doctor, a trip which might be difficult to schedule in view of the competing demands on the patient's time. The third is the loss of the personal relationship between patient and doctor as the small, perhaps long-time practices are incorporated into the large medical practices. What was a personal relationship between patient and doctor (or other medical professional) now becomes a short interaction, often with the doctor's assistant taking the necessary measurements, and the doctor meeting the patient for a few minutes debrief [8].

The importance of this paper is not in the solution it provides, but rather in the way SCAS can help focus the problem, providing a source of ideas. The speed (minutes), the extensive results in terms of the 'human element', and the presentation of the results in an easy-to-understand format, all suggest that those in the medical profession might avail themselves of SCAS as they enter a new subject area, if only to understand some of the issues from the part of the patient, the doctor, and the system. Scattered publication suggested only the positive, the 'up-side', and not the down-side of using AI and such offshoots as SCAS to solve the problem of no-shows [9].

A second aspect of the approach presented here comes from the potential of instructing SCAS to 'imagine' what will happen in the years to come, or even to imagine what things were like a century ago or even longer. By simply asking SCAS to assume that all the topics are to be asked from the framework of the year 2200, almost 75 years into the future, it is possible to jump-start futuristic thinking. There is no reason to assume that the answers will be 'correct.' On the other hand, to SCAS there is no penalty for being 'wrong', so that SCAS dutifully produces its best guess, once it has been properly instructed. It is that potential to focus on the future in terms of concrete questions and suggestions which make the approach attractive, especially in light of the simplicity of executing just another 'iteration,' albeit this time priming SCAS to guess about the future or guess about the past [10,11].

Table 5: Summarization of the output from SCAS in terms of key ideas, themes emerging from the key ideas, and then a discussion of the positives and negatives of each theme

<p>Key Ideas</p> <ol style="list-style-type: none">1. Implementing cutting edge technologies and innovations in the clinic to enhance health understanding and appointment effectiveness.2. Alleviating concerns and fears about attending medical appointments through various approaches.3. Making appointment reminders more engaging and memorable through creative approaches.4. Creating a comfortable and exciting clinic environment to enhance the appointment experience.5. Overcoming obstacles that may prevent patients from attending appointments through collaborative solutions.6. Providing additional resources and support systems to ensure commitment to follow-up appointments.7. Collaborating with patients to develop care plans that align with their lifestyles and motivations.8. Addressing transportation challenges for patients and providing assistance.9. Improving communication and appointment reminder processes.10. Addressing concerns about cost and insurance coverage impacting appointment decisions.11. Enhancing the waiting area to provide a more engaging and comfortable experience.12. Providing educational materials and workshops to increase understanding and motivation for follow up appointments.13. Replicating positive experiences with healthcare professionals to motivate patients to attend appointments.14. Helping patients prioritize their health and overcome apathy or lack of motivation through various support methods. <p>Themes</p> <ol style="list-style-type: none">1. Technology and Innovation: Implementing cutting edge technologies and innovations in the clinic to enhance health understanding and appointment effectiveness.2. Addressing Concerns and Fears: Alleviating concerns and fears about attending medical appointments through various approaches. Addressing concerns about cost and insurance coverage impacting appointment decisions.3. Appointment Reminders: Making appointment reminders more engaging and memorable through creative approaches.4. Clinic Environment: Creating a comfortable and exciting clinic environment to enhance the appointment experience. Enhancing the waiting area to provide a more engaging and comfortable experience.5. Overcoming Obstacles: Overcoming obstacles that may prevent patients from attending appointments through collaborative solutions. Addressing transportation challenges for patients and providing assistance.6. Support and Resources: Providing additional resources and support systems to ensure commitment to followup appointments. Providing educational materials and workshops to increase understanding and motivation for followup appointments. Helping patients prioritize their health and overcome apathy or lack of motivation through various support methods.7. Collaboration and Communication: Collaborating with patients to develop care plans that align with their lifestyles and motivations. Improving communication and appointment reminder processes. Replicating positive experiences with healthcare professionals to motivate patients to attend appointments. <p>Perspectives</p> <ol style="list-style-type: none">1. Technology and Innovation: Plus: Increased efficiency and accuracy in health understanding and appointment effectiveness. Minus: Potential resistance or reluctance from patients and healthcare professionals to adopt and adapt to new technologies. Interesting: The potential for new technologies to revolutionize healthcare and improve patient outcomes.2. Addressing Concerns and Fears: Plus: Increased trust and comfort for patients, leading to greater attendance at appointments. Minus: The challenge of identifying individual concerns and tailoring approaches to address them effectively. Interesting: The different approaches and techniques that can be used to alleviate fears and concerns, such as education, communication, and emotional support.3. Appointment Reminders: Plus: Improved attendance rates and reduced missed appointments. Minus: The risk of reminder fatigue or annoyance if reminders are too frequent or impersonal. Interesting: The potential for creativity and innovation in designing engaging and memorable appointment reminders, such as gamification or personalized messages.4. Clinic Environment: Plus: Enhanced patient satisfaction and comfort during appointments. Minus: The potential cost and logistical challenges of redesigning clinic environments. Interesting: The creative possibilities for creating a more engaging and comfortable clinic environment, such as incorporating artwork, comfortable seating, and soothing colors.5. Overcoming Obstacles: Plus: Increased attendance rates and improved access to healthcare for patients facing obstacles. Minus: The complexity of addressing various obstacles, such as transportation challenges or financial barriers. Interesting: The potential for collaboration and partnership with community organizations or local government to address obstacles collectively.6. Support and Resources: Plus: Improved patient understanding and motivation for follow-up appointments. Minus: The challenge of ensuring patients have access to and utilization of support and resources. Interesting: The potential for innovative methods of delivering support and resources, such as online platforms, mobile apps, or peer support groups.7. Collaboration and Communication: Plus: Improved patient engagement and satisfaction through personalized care plans. Minus: The time and effort required to collaborate and communicate effectively with patients. Interesting: The potential for technology to improve collaboration and communication, such as telehealth or online communication platforms.
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Table 6: The 'human' reaction to these ideas as envision by SCAS.

<p>Interested Audiences</p> <p>1. Healthcare providers and administrators: They are responsible for implementing and improving clinic practices and can benefit from understanding the latest technologies and approaches to enhance patient experiences and outcomes.</p> <p>2. Patients and healthcare consumers: Patients are the primary beneficiaries of these innovations and advancements. They can gain insights into the potential improvements in their healthcare experiences and possibly suggest them to their healthcare providers.</p> <p>3. Technology companies and innovators: These individuals or organizations can identify potential opportunities for collaboration or further development of cutting-edge technologies that can be implemented in healthcare clinics.</p> <p>4. Researchers and academics: They can explore these topic questions as potential areas for further study and evaluation of the impact of different interventions on patient experiences and outcomes.</p> <p>5. Insurance providers: Understanding the potential impact of these innovations on patient care and outcomes can help insurance providers assess the value and feasibility of coverage for these technologies and approaches.</p> <p>6. Government health agencies: These organizations can consider the implementation of policies or guidelines that encourage the adoption of these technologies and innovations in clinics to improve patient care.</p> <p>Opposing Audiences</p> <p>1. Traditional healthcare providers: Some traditional healthcare providers may oppose the implementation of cutting-edge technologies and innovations in the clinic due to concerns about the cost, feasibility, and potential disruption to their established practices.</p> <p>2. Insurance companies: Insurance companies may oppose the adoption of certain innovations, such as genetic testing or virtual consultations, due to concerns about increased costs or a lack of standardized protocols for coverage and reimbursement.</p> <p>3. Privacy advocates: Individuals or organizations focused on privacy may oppose the implementation of technologies like artificial intelligence-assisted diagnosis systems or continuous health monitoring devices, citing concerns about the collection and use of personal health data.</p> <p>4. Technological skeptics: Some individuals may be hesitant to embrace cutting-edge technologies or innovations in healthcare due to a lack of trust or understanding, fear of relying on machines for medical decisions, or concerns about the potential loss of the human touch in healthcare interactions.</p> <p>5. Patients with limited access to technology: Patients who do not have access to smartphones, internet connectivity, or other necessary devices may face barriers in benefiting from certain technological innovations, leading to concerns around accessibility and equity in healthcare.</p> <p>Alternative Viewpoints</p> <p>1. Some individuals may argue that these cutting-edge technologies and innovations may be too expensive to implement in a clinical setting and may be more suitable for research or specialized facilities.</p> <p>2. Others may have concerns about the privacy and security of their genetic information if genetic testing is implemented, and may not want their data to be used for other purposes without their consent.</p> <p>3. Some individuals may prefer traditional methods of appointment reminders, such as phone calls or emails, and may find the proposed creative approaches to be unnecessary or excessive.</p> <p>4. There may be individuals who feel uncomfortable or overwhelmed by virtual reality simulations or other immersive technologies, and prefer more traditional forms of education and communication.</p> <p>5. Some individuals may have concerns about the potential for misdiagnosis or lack of human interaction if artificial intelligence-assisted systems are implemented, and may prefer the expertise of healthcare professionals without relying solely on technology.</p>
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Table 7: Using SCAS to suggest new products and services.

<p>What is missing</p> <p>1. How can we leverage telemedicine or remote monitoring technologies to provide convenient and effective healthcare management outside of traditional clinic appointments?</p> <p>2. How can we ensure that patients have access to their medical records and test results in an easily understandable format, allowing them to actively participate in their own healthcare decisions?</p> <p>3. How can we address the issue of long wait times and improve the efficiency of appointments to minimize patient frustration and maximize the use of their time?</p> <p>4. What measures can we take to ensure the privacy and security of patient data collected through innovative technologies and devices?</p> <p>5. How can we involve patients in the research and development of new technologies or treatment approaches to ensure that they meet their unique needs and preferences?</p> <p>Innovations</p> <p>1. Technology and Innovation: Virtual reality (VR) health education modules to enhance health understanding and engagement. Implementation of artificial intelligence (AI) chatbots for personalized appointment scheduling and reminders. Use of wearable devices to track health metrics and provide real-time feedback to patients and healthcare providers.</p> <p>2. Addressing Concerns and Fears: Telemedicine services to allow patients to consult with their healthcare providers from the comfort of their own homes. Patient advocacy programs to provide guidance and support for navigating the healthcare system. Transparent pricing and insurance coverage tools to help patients understand the costs associated with medical appointments.</p> <p>3. Appointment Reminders: Interactive appointment reminder apps with gamification elements to make the process more enjoyable and memorable. Text message reminders with personalized messages and relevant health tips. Voice assistant integration to provide reminders and answer any questions patients may have.</p> <p>4. Clinic Environment: Integration of nature inspired designs and calming elements in clinic spaces. Inclusion of comfortable seating options and amenities to create a more relaxing waiting area. Use of ambient lighting and scent therapy to enhance the overall atmosphere.</p>
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5. Overcoming Obstacles:

Collaborating with ridesharing services or offering transportation assistance for patients who face challenges in getting to appointments.
Implementing telehealth options for patients in remote or underserved areas.
Partnerships with community organizations to provide additional support for patients who face financial or logistical obstacles.

6. Support and Resources:

Online patient portals to provide access to educational materials, appointment summaries, and personalized care plans.
Peer support groups and social networks for patients to connect with others facing similar health challenges.
Incentive programs and rewards for patients who consistently follow up with their healthcare appointments.

7. Collaboration and Communication:

Shared decision-making tools that allow patients to actively participate in their care plans.
Electronic health record systems that enable seamless communication between healthcare providers and patients.
Continuity of care programs to ensure a consistent and coordinated approach to appointments across different healthcare providers.

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