

Dealing with Healthcare Insurance in a Time of Financial Pressure

Howard R Moskowitz^{1,2*}, Sharon Wingert¹, Stephen D Rappaport³, Sunaina Saharan⁴ and Jana Bayad⁵

¹Tactical Data Group, Stafford, VA, USA.

²Mind Genomics Associates, Inc., White Plains, NY, USA.

³Stephen D. Rappaport Consulting, LLC, Norwalk, CT, USA.

⁴Government Medical College, Patiala, Punjab, India.

⁵Experience Transformation, Humana, San Diego, CA, USA.

*Correspondence:

Howard R Moskowitz, Tactical Data Group, Stafford, VA, USA
& Mind Genomics Associates, Inc., White Plains, NY, USA.

Received: 04 Jun 2025; Accepted: 07 Jul 2025; Published: 15 Jul 2025

Citation: Howard R Moskowitz, Sharon Wingert, Stephen D Rappaport. Dealing with Healthcare Insurance in a Time of Financial Pressure. Nur Primary Care. 2025; 9(4): 1-8.

ABSTRACT

The paper focuses on issues of healthcare insurance in a time of inflation, when the cost of healthcare insurance is rising while the financial situation of many of the insured is becoming weaker. The paper shows how to use generative AI (ChatGPT 3.5) in the Mind Genomics platform, BimiLeap.com, to simulate situations involved in healthcare insurance. The paper comprises four separate phases that, when integrated, provide a deeper sense of the experience of individuals coping with the healthcare insurance industry. Phase 1 comprises a set of AI-simulated interviews with insurance customers, putting a human face on the experience. Phase 2 simulates experiences with healthcare insurances, both best and worst, giving a sense of what could go wrong. Phase 3 simulates a town hall meeting where senior executives from a healthcare insurance company explain the company vision and guide people around the world of healthcare insurance, albeit in a very general way. Phase 4 shows how generative AI can become a “colleague” who provides new ideas for healthcare insurance. The combination of four phases can be accomplished rapidly, inexpensively, and with the aid of generative AI, present the user with a simple, fast, inexpensive, and scalable system to navigate through the world of healthcare insurance from the point of view of a user suffering from the ravages of inflation.

Keywords

AI in healthcare insurance, AI-simulated patient experience, Generative AI, Healthcare policy innovation, Healthcare costs and inflation, Mind Genomics.

Introduction

The rising cost of living has led to numerous individuals making difficult decisions about their health, including the financial burden of accessing medical care, housing, food, and insurance. This financial juggling often results in patients sacrificing essential needs, leading to anxiety, stress, and deteriorating physical and mental health. The emotional burden of these decisions can lead to feelings of guilt, depression, and helplessness. Many patients resort to alternative or unproven treatments, which rarely address the root cause of health issues. Preventive care is often overlooked in favor of immediate necessities, leading to greater reliance on emergency services and enormous hospital bills [1-4].

The financial dilemma can cause mental health strains, as patients avoid learning about their medical conditions and become disconnected from their own health. Limited access to transparent information about healthcare costs exacerbates the financial burden on patients, forcing them to make rushed decisions without fully understanding how their choices will affect their financial standing. The high cost of healthcare is not just a medical issue but also a social and economic issue that leads to cycles of poor health and financial instability [5-7].

Phase 1: The Interview

AI-based simulations can help capture the complexity and frustration of the health insurance system by presenting problem-solving narratives rather than theoretical statistics. These narratives can be studied for patterns and elicit empathy, making the experience more tangible for policymakers and business practices (See Table 1).

AI systems enable broad variability in responses by switching between different personas and scenarios, allowing users to experience the spectrum of possibilities. Simulations also foster emotional engagement and critical thinking, converting disinterested readers into active participants better able to comprehend the stakes. AI simulation allows for real-time adjustments based on provider variables and evolving scenarios, shedding light on broader systemic issues.

In contrast to textbook analyses or survey statistics, simulations humanize the story, allowing researchers and reform advocates to understand the perspective of the would-be policyholder. This method not only tracks what is broken but can also reveal the gap between user expectations and reality, framing future discussions on better restructuring insurance policies and costs [8-10].

Table 1: AI simulation of ten interviews with individuals dealing with the world of healthcare insurance in a time of rising costs due to inflation.

Instructions Given to AI to Simulate Interviews About the Experience with Healthcare Insurance	
It is the beginning of 2026. The cost of healthcare has skyrocketed, along with other necessities of life. The financial situation of the past five years has “cratered” for many people. Insurance companies are attempting to extricate themselves wherever possible from the requirement to cover the expenses of the people who are their customers.	
In light of this negative situation, I have been asked to conduct interviews with ordinary people, to determine what they are experiencing, how they see the medical “industry” with respect to caring for them, and how they feel about their personal future in light of what they see the medical insurers doing, and the hospitals and doctors telling them about increasing costs.	
In the interviews, be extensive, veridical (tell me the unvarnished truth). Tell me who the person is, why the person is telling me this particular information, what the person may be thinking, and what the person would like to accomplish by talking about this topic.	
Ten Interviews Simulated by AI Regarding Experiences with Healthcare Insurance	
1. Melissa, Small Business Owner:	“I can barely keep my head above water. My insurance premiums went up another 8% this year. That’s nothing compared to the out-of-pocket costs; I needed an emergency ultrasound recently for some stomach pain, and my insurance barely covered it. I had to put most of it on my credit card. I feel like they’re just looking for reasons not to cover anything, constantly redefining “necessary treatments.” I’m exhausted trying to figure out their jargon; it’s like they intentionally make it confusing. I feel like they’re leaving people like me behind.” Melissa is trying to voice the struggle of the working middle class, having to keep her business running while being crushed by medical bills. She also vents about the lack of communication from the doctors about costs upfront. She’d probably like to see healthcare more accessible for small entrepreneurs.
2. John, Recently Retired:	“Medicare ain’t what it used to be.” John receives Medicare, but recent changes have impacted his stability. “You’d think that after paying into the system for decades, I’d be breathing easy in my retirement...hell no. They keep increasing supplemental plan premiums, and now some of the medications I need are no longer covered. You work hard so that you don’t have to worry in your later years, but it’s like one step forward and two steps back. I worry every day I’ll get sick and end up bankrupt.” John’s frustration centers on the promises made to him by the system. He’s losing faith he’s going to be “taken care of.”
3. Reena, Freelance Graphic Designer:	“I don’t really get sick, so I feel like I shouldn’t even need insurance.” Reena was reluctant to even get insured but felt forced to buy a plan due to mandates. “I pay nearly \$400 a month for insurance, but I still have to pay for almost everything—dentists, specialists, any routine care—it’s ridiculous! It feels like a protection racket at this point and not healthcare.” Reena feels resentment toward both the insurers and the system. She hates paying for health she isn’t “using,” and she’s afraid of being stuck in a future system where paying so much for something might never equate to value.
4. James, Warehouse Worker:	“In the past three years, I’ve developed diabetes.” James had not anticipated his health declining in his 40s and is finding that managing chronic conditions is both medically and financially stressful. “The doctor tells me I’ll need to make frequent visits—keep track of my A1C, and all that...but every time I see him, it costs me out of pocket because apparently, keeping me alive isn’t ‘urgent enough’ for insurance. I want to take care of myself, but how can I when every visit comes with a surprise bill.” James can’t help but feel cynical about a system that seems to make routine management of conditions less accessible than urgent care. His worry is that he’ll either have to stop trying or go into medical debt.
5. Sandra, Single Mom, Teacher:	“The bills piling up seem never-ending.” Sandra is still recovering from a major surgery she had in 2024. “I thought insurance was supposed to cover something like this, but now, four months later, I keep getting bills from the hospital and specialists popping up in my mailbox. My son even cut his hand last month, and I had to debate whether to take him to the ER because I couldn’t afford it.” Sandra believes healthcare should allow people to feel secure—especially as a parent. She’s overwhelmed and feels like she’s constantly looking over her shoulder, expecting another bill she hadn’t budgeted for.
6. Michael, Software Engineer:	“I try to stay healthy, but what does that matter anymore?” Even though Michael works in a relatively high-income profession, his frustration with healthcare is mounting. “I live pretty healthily, hit the gym often, but last year I tore my ACL playing basketball. I swear, that injury changed how I see the system. The MRI alone cost me over \$2,000 even after insurance kicked in. It makes you question—what’s the point of all those premiums? I might as well start paying for treatments out of pocket and skip insurance altogether.” Michael is eager for tech-savvy answers, potentially voicing support in the interview for revolutionary health changes like AI-assisted medical consultations or apps that allow for easier cost comparisons on treatments.
7. Elena, Clerical Worker:	“I’ve had to choose between my diabetes meds and the heating bill.” Health and everyday survival are becoming mutually exclusive for Elena. “I haven’t skipped my meds yet, but I haven’t paid my heating bill either. I just can’t do both. What was once ‘manageable’ for me, honestly is becoming impossible.” Her stress is compounded by the pressure she’s constantly under—to stay working, to stay healthy, to provide for her family, and avoid losing everything.
8. Tom, Delivery Driver:	“The doctor told me I needed to see a specialist... but no way.” Tom has been neglecting his back issues that stem from work. “Sure, I could go see a specialist and get treatments or physical therapy that I’m pretty sure I need—but honestly, I’m just gonna tough it out. I can’t afford what that’s going to cost between the deductible and extra bills.” Tom acknowledges that he’s jeopardizing his future health to make ends meet today. He tries to fight through the pain, but he feels the medical industry is giving up on “people like him.”
9. Farrah, Attorney:	“Even in a higher-earning profession, I’m shocked.” Farrah picked a stable legal career, knowing she could afford quality healthcare, yet she’s seeing surprising limits. “With my son’s diagnosis, I thought the professionals would take care of everything. He’s doing better, but the follow-up lab work, the therapy sessions... they’re costing much more than anticipated. As a lawyer, I’m used to contracts—but reading insurance terms? It’s a whole other language.” Farrah wants transparency. Even as someone with legal literacy, she questions how the average person can navigate it all.
10. Sheila, Single Mother of Two, Receptionist at a small law firm:	“I try to make sure my kids can see a doctor when they’re sick, but it’s getting impossible. My insurance used to be a safety net, but now it’s more like a trap. Copays are ridiculous, and they find ways to deny coverage for essential things like my medication for diabetes—to say the insulin isn’t necessary is literally putting my life at risk.” Sheila pauses, clearly frustrated. “What frustrates me most is that it’s hard to argue with doctors or the insurance company. They make the rules. I’m scared when I think about my future, and I don’t know what’s going to happen to my kids if I end up in a hospital for something preventable.”

Phase 2: Questions and Answers About the Healthcare Insurance Experience

AI healthcare simulations in the form of questions and detailed answers offer a dynamic environment for users to explore the complexities of healthcare insurance, fostering empathy and awareness. Simulations are more interactive than traditional charts and tables, adapting to real-time scenarios and providing feedback loops. Table 2 gives a sense of these stimulations.

AI simulations highlight emotional triggers, such as frustrations and anxieties experienced when navigating insurance or waiting for claim approvals. They also help address the overwhelming question of healthcare insurance limitations, transforming abstract limitations into concrete barriers and encouraging critical thinking about policy reforms. AI simulations provide immediate feedback on decisions and offer multiple courses of action, making them credible and impactful [11-15].

Table 2: Questions and answers regarding the AI simulation of the healthcare insurance experience.

Instructions to AI Regarding the Healthcare Insurance Experience
For each question below, do the following: Repeat the question. Preface by QUESTION: Write the best possible answer you could get. Make it realistic. Preface by ABSOLUTELY BEST: Give me the probability that this best situation will occur. Write the worst possible answer you could get. Make it realistic. Preface by ABSOLUTELY WORST: Give me the probability that this worse situation will occur. Write the most likely answer you expect. Make it realistic. Preface by REALISTIC. Synthesized Experiences – Best, Worst, Realistic QUESTION 1: How affordable do you find basic medical services, like routine check-ups or emergency visits? ABSOLUTELY BEST: “My routine check-ups and urgent care visits are largely affordable, thanks to comprehensive insurance coverage that includes low copays and deductibles. I’ve managed to avoid any significant financial burden due to healthcare.” Probability: 10% ABSOLUTELY WORST: “Basic services like check-ups or emergency visits are almost unaffordable. Even with insurance, the copays and unexpected fees make it difficult to justify routine care visits. Sometimes I even avoid going to the doctor because I fear the financial consequences.” Probability: 20% REALISTIC: “Basic services like check-ups can be affordable if they’re planned and I choose in-network providers. However, emergency visits tend to be far more expensive, quickly escalating to unaffordable levels even after insurance kicks in. It’s a constant balancing act with finances.” QUESTION 2: Have you ever had an insurance claim denied? If yes, what was the reason given, and how did it affect you? ABSOLUTELY BEST: “I’ve never had a claim denied. My insurance company has been very reliable in covering everything I’ve needed without any issues.” Probability: 1% ABSOLUTELY WORST: “Yes, I’ve had multiple claims denied for reasons like ‘out-of-network’ care, or the services were deemed ‘not medically necessary.’ It caused immense financial strain, forcing me to dip into savings, delay needed treatments, and increase my overall stress.” Probability: 2% REALISTIC: “Yes, a claim was once denied for a routine procedure that wasn’t ‘fully covered.’ This caught me off guard, and I had to appeal the decision. While I eventually got partial reimbursement, the entire process created a lot of stress and anxiety about potential future medical costs.” QUESTION 3: What are your general feelings toward insurance companies and your coverage at the moment? ABSOLUTELY BEST: “I’m satisfied with my insurance provider. They offer comprehensive coverage, respond quickly in customer service interactions, and I’ve had no major issues so far. I feel secure with the coverage I have.” Probability: 10% ABSOLUTELY WORST: “I’m extremely frustrated with my insurance company. They constantly deny claims or provide extremely limited coverage for necessary treatments. Their confusing jargon and constant red tape make it nearly impossible to get the care I need without a fight.” Probability: 30% REALISTIC: “I find my insurance coverage to be somewhat adequate but not without its frustrations. Customer service isn’t always helpful, and I often feel like they’re trying to minimize their payouts. However, it does cover most of the basic services I need, so I haven’t had to pay exorbitantly, yet.” QUESTION 4: Do you feel that doctors and hospitals understand your financial concerns? Why or why not? ABSOLUTELY BEST: “Yes, my healthcare providers have always been upfront about costs and helped me explore options to make treatment more affordable. Some have even offered payment plans or guided me toward community programs to help ease the burden.” Probability: 10% ABSOLUTELY WORST: “No, healthcare providers seem entirely indifferent towards my financial situation. Whenever I bring it up, they either apologize but express that there’s nothing they can do, or they just refer me to billing. There is no empathy or support.” Probability: 2% REALISTIC: “Doctors and hospitals aren’t indifferent, but they don’t go out of their way to highlight affordable options either. I feel like they sometimes avoid discussing costs unless I bring it up directly. I often have to talk to the billing office separately to figure things out.” QUESTION 5: What role do you think profit plays in how the healthcare system operates today? ABSOLUTELY BEST: “While profit obviously matters, I believe there’s still a genuine concern for patients’ well-being. Some healthcare providers manage to balance care and profitability without sacrificing one for the other.” Probability: 1% ABSOLUTELY WORST: “I think profit is the primary driver of the healthcare system today. It feels like every interaction is geared toward making patients pay more money, and as a result, patient care and compassion take a backseat.” Probability: 30% REALISTIC: “I believe that profit plays a significant role, and sometimes it overshadows patient care. Pharmaceutical companies and hospitals seem more concerned with the bottom line than the well-being of patients. Unfortunately, that’s just the nature of healthcare as a business these days.” QUESTION 6: How has your personal experience with healthcare changed over the past years? ABSOLUTELY BEST: My experience with healthcare over the past years has drastically improved. I have had quick access to specialists, received excellent care, and all my insurance claims have been processed smoothly. My relationship with doctors and my insurance company has been very positive, and costs have remained manageable. Probability: 10% ABSOLUTELY WORST: My experience has significantly worsened. Wait times are longer, I have struggled to get necessary treatments approved, and I face frequent billing issues. On top of that, costs have skyrocketed, making it difficult to afford even basic services. Probability: 30% REALISTIC: My experience has been mostly the same, with a few ups and downs. I’ve had occasional difficulties with insurance claims or delays in treatment approvals, but overall, the care I’ve received has been average. Costs have increased moderately. QUESTION 7: Have you ever had an insurance claim denied? If yes, what was the reason given, and how did it affect you? ABSOLUTELY BEST: No, I have never had an insurance claim denied, and all my submissions have been processed quickly and without issues. Probability: 1% ABSOLUTELY WORST: Yes, several of my insurance claims have been denied due to ambiguous reasons like “lack of medical necessity” for treatments that were urgently needed. This has caused immense stress and significant financial loss. Probability: 2% REALISTIC: I’ve had a few insurance claims denied here and there, typically for technical reasons or lack of pre-authorization. It usually causes some stress, but I’ve been able to resolve most of them after appealing. QUESTION 8: What are your general feelings toward insurance companies and your coverage at the moment? ABSOLUTELY BEST: I feel very satisfied with my insurance company. They offer clear explanations of coverage and go above and beyond to provide assistance when needed. Probability: 10% ABSOLUTELY WORST: I feel frustrated and distrustful of my insurance company. They always seem to find ways to deny or limit coverage, leaving me with large bills. Probability: 30% REALISTIC: I have mixed feelings about my insurance company. While the coverage itself is generally okay, the process for approvals and claim handling can be slow and confusing, leading to occasional frustration.

Phase 3: Briefing by the Health Insurance Companies About the Healthcare Insurance Application “Process”

Simulating a town hall meeting where healthcare insurance executives discuss strategies to cope with rising healthcare costs can provide better understanding of the complex interactions between stakeholders in the healthcare system (see Table 3). By incorporating audience reactions and presenting executives’ perspectives, the simulation generates a multidimensional view of how different groups interact in these situations. The real-time questioning from audience members, including policyholders, healthcare providers, and community members exposes gaps in communication and fosters a more in-depth understanding of practical challenges and solutions. This method also enhances critical thinking by introducing different viewpoints, illustrating

the trade-offs inherent in healthcare policy. Simulating a town hall meeting provides a richer learning experience, fostering dialogue, critical examination, and a deeper appreciation of how healthcare policies come into play [16-19].

Phase 4: Innovations Suggested by the Mind Genomics Platform

Phase 4 of our initiative focuses on AI-driven innovations in medical care and insurance, aiming to reduce costs and improve access to affordable services. AI can analyze complex data, identify patterns, and propose innovative solutions, enhancing patient care and operational efficiency, thus transforming healthcare and insurance. Table 4 shows sets of novel ideas generated by the Mind

Table 3: Simulation of a town hall meeting, including summarized presentation of executives from a health care insurance company, and general questions from the audience about the “process.”

Background Provided to AI In middle 2025, it was becoming obvious that many clients of health organizations were having problems with their medical costs, even many who were insured by well-known companies. The mayor of a small town invited three specialists from a medical insurer to give an evening devoted to “reducing your medical expenses, increasing your health coverage, and being happy as well.” In this briefing the specialists gave a 4-minute presentation on strategies to reduce health care costs for the typical adult. The presentation dealt with specific options available in one’s coverage with the company. Many of the attendees did not even realize that they could avail themselves of these benefits offered by the company. Please summarize the talks by the specialist focusing on strategies to reduce healthcare costs for the typical adult. Summary of the Talk Simulated by AI During the briefing, three specialists discussed strategies for reducing healthcare costs while maximizing coverage. They emphasized that many individuals are unaware of the benefits already included in their health insurance plans. The specialists outlined several key options to both save money and enhance health outcomes. These strategies included wellness programs, preventive care, telemedicine services, and flexible savings accounts for medical expenses, among other initiatives. The presentation aimed to empower people to take proactive steps in health management while minimizing out-of-pocket expenses. The specialists repeatedly encouraged participants to review their coverage to ensure they were making the most of what’s available. Please provide me affordable benefits of your particular health plan so I can decide whether to sign up. Here are the questions to answer for each affordable benefit: Describe the specific benefit. Preface by BENEFIT: How does the average person get this specific benefit from your health plan? Preface by HOW TO GET BENEFIT: What might disqualify a person already covered in your health plan from getting this benefit? Preface by DISQUALIFIED IF: What is some special information about this specific benefit to keep in mind? Preface by ADDITIONAL INFORMATION: Question Set #1 – Who is eligible? BENEFIT: What is one of the most affordable preventive care benefits included in your health plan? HOW TO GET BENEFIT: How does a covered member access preventive care services? DISQUALIFIED IF: What conditions or situations could disqualify a member from receiving preventive care under your plan? ADDITIONAL INFORMATION: Are there any limitations regarding the frequency of preventive care services? BENEFIT: Is this specific benefit available to all family members on the same plan or just the policyholder? HOW TO GET BENEFIT: Are there particular providers or facilities members must use to get this benefit? DISQUALIFIED IF: Are there exclusions, like certain preexisting conditions, that could prevent someone from accessing this benefit? ADDITIONAL INFORMATION: What is the specific timeline or waiting period for accessing this particular benefit after enrolling? BENEFIT: What does this specific benefit offer to the average person covered by the health plan? HOW TO GET BENEFIT: What steps should a plan member follow to access this specific benefit? DISQUALIFIED IF: Under what circumstances might someone be disqualified from accessing this specific benefit? ADDITIONAL INFORMATION: Is there any important or lesser known detail about this benefit that plan members should be aware of? Question Set 2 – Quasi Medical Issues (No Specific Indications) BENEFIT: Are annual physical exams covered in an affordable plan or offered at a reduced rate? HOW TO GET BENEFIT: How can covered individuals schedule and access their annual physical exam? DISQUALIFIED IF: Are there specific reasons someone might be ineligible for the annual physical exam benefit? ADDITIONAL INFORMATION: Is there a restriction on the types of tests covered during the physical? BENEFIT: Does this benefit apply to both preventive services and treatment, or just one of them? HOW TO GET BENEFIT: Is preauthorization required to access this benefit, or can a member avail of it directly? DISQUALIFIED IF: Could choosing an out of network provider disqualify or reduce this benefit? ADDITIONAL INFORMATION: Are there any annual or lifetime limits associated with this benefit that members should be aware of? BENEFIT: Can you provide details about the prescription drug coverage in the health plan? Are low-cost generic drugs covered? HOW TO GET BENEFIT: What process should a member follow to access this prescription drug benefit? DISQUALIFIED IF: Are there specific forms of drugs or categories not covered, even if a member is enrolled? ADDITIONAL INFORMATION: Is there a flat copay or tiered pricing for medications? BENEFIT: Does your health plan provide gym membership discounts or wellness programs as an affordable benefit? HOW TO GET BENEFIT: How does a policyholder access the gym or wellness discounts and services? DISQUALIFIED IF: What restrictions could prevent someone from receiving these discounts or wellness incentives? ADDITIONAL INFORMATION: Are there any conditions (e.g., meeting fitness goals) for continued access to these discounts? BENEFIT: What kind of telehealth services are included at an affordable rate in your health plan? HOW TO GET BENEFIT: How can a member schedule and use telehealth services for general health or specialty care? DISQUALIFIED IF: Could someone be disqualified from using telehealth services, and under what circumstances? ADDITIONAL INFORMATION: Are telehealth services available 24/7, and are there any copays or limits on consultations?
--

Question Set 3 – What specific medical issues are covered?

BENEFIT: Does your health plan offer affordable mental health care services (e.g., therapy, counseling)?
HOW TO GET BENEFIT: How would a member access affordable mental health services?
DISQUALIFIED IF: What circumstances might limit or disqualify a member from receiving mental health care?
ADDITIONAL INFORMATION: Is there a network of covered providers for mental health services, and are there telehealth options?
BENEFIT: Can you explain the dental coverage benefit offered under this health plan?
HOW TO GET BENEFIT: How do members claim or schedule dental services?
DISQUALIFIED IF: Are there exclusions (e.g., certain procedures or preexisting dental conditions)?
ADDITIONAL INFORMATION: Does the plan cover both preventive and major dental services, like braces?
BENEFIT: Does your health plan provide vision coverage as an affordable benefit?
HOW TO GET BENEFIT: What steps do members need to take to access vision services such as eye exams or glasses?
DISQUALIFIED IF: Are there limits on how often vision services (eye exams, updating glasses) are covered?
ADDITIONAL INFORMATION: Are there preferred providers members need to use to receive full coverage?
BENEFIT: Is there coverage for urgent care visits under your plan, and how affordable are they?
HOW TO GET BENEFIT: How would a policyholder access affordable urgent care under the plan?
DISQUALIFIED IF: Could someone be disqualified from this benefit if they visit ER instead of urgent care?
ADDITIONAL INFORMATION: Are there certain urgent care clinics or partners that must be used for full coverage?
BENEFIT: Does the plan cover preventive lab tests and screenings like mammograms or cholesterol checks?
HOW TO GET BENEFIT: How can a patient ensure they are eligible and receive these preventive services?
DISQUALIFIED IF: Are there restrictions, like age or medical history, that influence eligibility for these preventive screenings?
ADDITIONAL INFORMATION: Is prior authorization required for any of these types of diagnostic preventive services?
BENEFIT: What kind of financial support or reduced rates are provided for maternity and prenatal care?
HOW TO GET BENEFIT: What steps do expectant mothers take to ensure coverage for maternity care services?
DISQUALIFIED IF: What specific conditions could limit or exclude maternity coverage under the plan?
ADDITIONAL INFORMATION: Are there any special programs or services available beyond basic maternity care?
BENEFIT: Are vaccinations and immunizations covered under this plan as an affordable benefit?
HOW TO GET BENEFIT: How can a member access vaccines (like flu shots or routine childhood immunizations) through the plan?
DISQUALIFIED IF: Under what conditions may vaccination coverage not apply or be reduced for a member?
ADDITIONAL INFORMATION: Are there only certain vaccines covered, and does age affect eligibility for specific vaccines?

BENEFIT: What affordable coverage does your plan provide for chronic disease management (diabetes, high blood pressure)?
HOW TO GET BENEFIT: How does a member enrolled in the plan access services related to chronic illness management?
DISQUALIFIED IF: Would ongoing coverage for chronic disease management be impacted by specific circumstances (e.g., missed appointments)?
ADDITIONAL INFORMATION: Is there specific disease management support or coaching programs available through the plan?
BENEFIT: What kind of affordable emergency room (ER) coverage is included in this health plan?
HOW TO GET BENEFIT: How would a member access emergency services and ensure the maximum amount is covered?
DISQUALIFIED IF: Is there a situation where ER coverage might not apply, like using out of network hospitals?
ADDITIONAL INFORMATION: Is there a limit to how many emergency visits are covered, or specific copays involved?
BENEFIT: Does your health plan provide affordable coverage for specialist visits (e.g., cardiologists, dermatologists)?
HOW TO GET BENEFIT: How can a member use their health plan to see specialists, and are referrals needed?
DISQUALIFIED IF: Could a member be disqualified from specialist coverage without prior authorization or referrals?
ADDITIONAL INFORMATION: Are specialist visits capped at a certain number per year or limited to specific categories of specialists?

Table 4: Novel and innovative ideas generated for the healthcare insurance industry using the Mind Genomics platform, BimiLeap.com.

Financial Relief and Cost Transparency Tools

Price-Transparency Platforms: Create tools that allow patients to compare treatment alternatives, medication costs, and doctors' fees in real-time, empowering them to make informed medical decisions.
Health Cost Comparison Platforms: Develop an online tool or mobile app that provides patients with transparent, real-time price comparisons of treatments, hospital stays, procedures, and insurance plans, empowering them to make informed financial decisions.
Financial Aid Navigator: A service that helps patients identify and apply for available grants, sliding-scale payment options, government programs, or financial assistance from healthcare facilities to offset medical expenses.
Price Regulation Policies: Enforce policies that limit healthcare service price fluctuations, ensuring a cap on out-of-pocket expenses, copays, and deductibles to reduce financial burdens for underinsured patients.
Sliding-Scale Care Providers: A network of healthcare providers offering services on sliding payment scales based on the patient's income, prioritizing essential and preventive care. Patients can access care through a subscription or membership system that adjusts costs dynamically based on need and ability to pay.
Low-cost Subscription for Health Management Tools: A health service that provides low-cost subscription options for tools that monitor chronic conditions (e.g., diabetes, hypertension), enabling patients with tight financial constraints to self-manage their health regularly and avoid emergency care.
National Preliminary Care Coverage: Establish a public healthcare policy where the most economically disadvantaged patients are guaranteed access to basic care and screenings—funded by a mix of government revenue, community healthcare systems, and healthcare providers under a national affordable care network.
Healthcare Financial Navigators: Trained professionals or AI-driven systems that provide real-time advice and comparisons on cost-effective healthcare treatments and options, ensuring patients do not have to choose between essential expenses and medical care.
Develop financial planning apps that help users explicitly balance healthcare expenses with essentials like housing, groceries, and utilities. These tools could include specific features like automatic alerts when medical bills are due, healthcare savings goals, and recommendations for balancing medical costs with other priorities. Offer personalized financial coaching sessions specifically tailored to people managing high medical costs. This could be a service included through employers, insurance companies, or as part of community health offerings.
Budgeting App for Healthcare Expenses: A mobile app that helps individuals plan and budget for healthcare needs over time, connecting users with resources to make more financially sound decisions without compromising care. It should prioritize prescription and healthcare cost forecasting.

Low-Cost Health Insurance Models

Tiered Insurance Plans: Offering segmented, affordable plans that provide core necessities at different price points. Patients can select based on their financial capacity, and the core necessities include critical and preventive care. Insurance companies could implement sliding scale premiums based on income, offering more affordable plans that address both chronic and preventive care.

Family-Centered Healthcare Insurance: An insurance plan that allows individuals to share healthcare benefits with family members, allowing for more fluid movement of coverage between family members based on their immediate healthcare needs. This would reduce the strain caused when patients prioritize family health over their own.

Micro-Insurance for Specific Conditions: Introduce very targeted insurance products that cover only essential chronic conditions, mental health services, or preventive care at a lower premium.

P2P Patient Financial Assistance Platforms: A peer-to-peer crowdfunding platform designed for healthcare expenses, allowing friends, family, and even strangers to contribute directly toward an individual's medical bills.

Employer-Based Health Investment Accounts: Employers could set up accounts similar to 401(k)s but designed to cover medical expenses, allowing employees to grow their healthcare equity.

Early Warning Systems & Help for Financially Vulnerable Patients' Health

Health Risk Monitoring App: A personalized app that tracks patients' health conditions alongside their financial data to preemptively suggest when medical checkups are critical—even alerting healthcare providers in advance to send reminders.

Urgent Health Fund Memberships: A subscription service where patients can access a pool of financial resources, contributions, or rewards points specifically saved for expensive emergency care.

Debt-Management Therapy: Integrate financial counseling services with mental health programs, helping patients cope with the dreadful spiral of debt burden and health costs. These services would be fitness-based to relieve both their mental stress and financial burden.

Sliding Scale Healthcare Systems: Set affordable payment models based on a patient's income, allowing them to receive care and pay a percentage of what they earn.

Healthcare Savings Utility Apps: Financial wellness applications designed to help patients budget for health needs by offering savings plans that prioritize essential health treatments.

No-interest Medical Loans: Financial institutions or healthcare providers could offer low or no-interest loans explicitly for healthcare services, helping patients avoid tougher choices between rent, food, and medication.

Housing & Healthcare Subsidy Bundles: Create government or non-profit programs that bundle assistance for housing and healthcare to reduce financial strain. These could provide stipends that are flexible enough to assist with both rent/mortgages and medical payments.

Subscription-based services that allow patients with chronic diseases to manage their healthcare costs more predictably. These plans could include telemedicine check-ins and coverage for specific routine procedures at a low monthly fee, avoiding high upfront costs.

Personalized Health Strategy Counselors: Services that offer consultations with healthcare professionals or financial advisors trained specifically to help patients manage and budget for chronic illness and treatments.

Preventive Care

Preventive Health Incentives: Insurance companies or employers could provide financial bonuses, lower deductibles, or rebates for regularly engaging in preventative health measures such as screenings or wellness checkups, helping patients avoid expensive treatments later on.

Expanded Public Coverage for Preventive Care: A policy that ensures full or partial coverage for essential preventive care for all, regardless of income level or insurance status, to encourage early intervention.

Direct State Funding for Preventive Screenings: A policy offering free preventive care screenings to all citizens, entirely funded or heavily subsidized by state or federal governments, to reduce long-term healthcare costs stemming from avoidable chronic illness escalations.

Preventive Healthcare Incentive Programs: A service within insurance plans or by local governments that incentivizes preventive measures, such as flu shots or diabetes screenings. Financial rewards (e.g., utility subsidies, discounts on healthy groceries) would lower the upfront costs of maintaining health.

Implement government-funded preventive healthcare services for everyone, ensuring that cost is not a barrier to treatments that could prevent more costly chronic conditions.

Preventive Healthcare Mandates: Government policies that require insurance companies to fully cover preventive care, including check-ups, vaccines, and key services that might reduce the onset or worsening of chronic health conditions.

Help with Cost of Medicine

Medicinal Stipend Programs: Government employer-sponsored programs that provide stipends specifically for purchasing medications, reducing the need for patients to ration doses based on financial limitations.

Prescription Subscription Services: A flat monthly subscription fee for prescription medications where patients can access multiple medicines without worrying about individual or fluctuating costs.

Drug-Share Networks: A community-driven or nonprofit endeavor where surplus or untaken prescribed medicines (legally) can be donated and redistributed to those unable to afford their medications.

Medication Subscription Model: Implement a capped fee subscription service for chronic medication users, allowing them to access a specified prescription drug portfolio at a predictable cost.

Increased Efforts in Healthier Eating for Healthier Living

Health-Food Vouchers: Collaborate with grocery stores, farmers' markets, or meal subscription services to provide vouchers for nutritious foods to those with chronic conditions, paid for by healthcare subsidies or partnerships.

Food-as-Medicine Programs: Governments or charities could implement programs providing patients with chronic conditions access to low-cost, nutrient-dense meal services or vouchers, ensuring they maintain good nutrition while managing medical costs.

Multi-purpose Voucher Systems: Introduce government-issued vouchers for low-income households that can be used for either healthcare services, medications, groceries, or rent. This could be a flexible financial support mechanism that helps families navigate difficult trade-offs.

Partner with grocery chains, nonprofits, or health services: Create "food pharmacies," where healthcare providers prescribe certain foods for chronic conditions and patients can receive them for free or at a lower cost.

Introduce government insurance-funded meal delivery services for people at high risk of diet-related conditions. Meal kits could be specialized based on dietary needs and include educational resources on maintaining a healthy diet.

Provide tax breaks or deductions for purchasing healthier food options: Fill part of the gap created when cheaper, less nutritious meals are the only affordable option for financially stressed households.

Social Prescribing Policies: Health professionals could "prescribe" essentials like food or housing support services, connecting patients to community organizations or government programs for basic needs.

Community Health Food Co-operatives: Provide discounted or free healthy food options for patients with chronic illnesses, allowing them to improve their diet while managing financial strain. This could also be paired with medical advice on nutrition.

On-demand Health Coaches: Virtual service in which patients get real-time access to healthcare professionals (dietitians, fitness trainers, mental health therapists) to guide them in adopting low-cost or no-cost lifestyle changes that improve their health outcomes.

Increased Access to Mental Health Support

Mental Health-on-Demand: A low-cost or insurance-covered, virtual mental health service specifically tailored for patients facing financial stress from medical costs, available on-demand to reduce anxiety, depression, or other related symptoms.

Tele-Mental Health Platforms: Expand affordable or subscription-based psychological and emotional support services via telemedicine, ensuring accessibility to mental health resources regardless of financial standing.

AI-Based Mental Health Tools: Create AI-driven apps offering cognitive behavioral therapy, stress reduction exercises, and emotional support tailored for financially burdened patients who may not be able to afford traditional therapy.

Subsidies for Mental Health Services: Implement a system of mental health subsidies, especially for financially vulnerable people, ensuring original reimbursement levels for therapies, in-person counseling, and medications, without significant out-of-pocket costs.

Healthcare Cost Counseling & Therapy Bundles: Offer integrated counseling services where patients struggling with medical bills can receive both financial advice and mental health therapy to reduce the emotional burden of healthcare-associated financial strain.

Mental Health Wellness Subscriptions with Financial Counseling: A combined service that provides virtual mental health care and financial counseling in one subscription. Mental and financial well-being are closely linked, so offering support for both simultaneously could reduce both mental and economic stress.

Community-Based Financial and Mental Health Support Groups: Grassroots-level support groups that combine mental health care with financial planning education, particularly in communities hardest-hit by healthcare costs. These could be hosted by local libraries, community centers, and religious organizations.

Comprehensive Mental and Financial Health Parity Act: Extend existing mental healthcare parity laws to include financial counseling within health coverage and employer benefit programs. Mental health conditions exacerbated by financial stress would then be more comprehensively treated.

Emotional Support Networks: Establish peer-to-peer support groups, either virtually or facilitated through community resources, focused on handling the mental strain of managing healthcare alongside financial struggles. This could be funded or provided by NGOs or governmental bodies.

Employer-Paid Mental Health Leave: Policy requiring employers to provide paid mental health leave that is protected by law, allowing individuals to address stress stemming from healthcare costs without risking financial loss from lack of work.

Tele-Mental Health Expansion: Provide mental health services, including counseling and therapy, through apps or platforms covered both by insurance and government services, reducing the financial burden of in-person therapy.

Mobile Diagnosis and Care Units

Low-Cost Mobile Clinics: Deploy mobile health units to underserved communities to provide basic diagnostics and healthcare services at significantly reduced costs or free, addressing the fear of diagnostic costs and improving access.

Genomics platform, BimiLeap.com [16-19].

Discussion and Conclusions

AI can be valuable in healthcare and insurance by simulating real-life scenarios and synthesizing complex emotional responses. This allows deeper insight into how individuals might feel when confronted with medical conditions or insurance problems. Generative AI can create narratives that engage with the consumer's emotional landscape, providing a more visceral experience of what might otherwise be summarized in clinical terms. However, the question arises whether generative AI truly "gets inside the mind" of a patient or policyholder, losing authenticity or filtering out biases. AI's potential lies in offering consumers and stakeholders a "reality-check" backed by vast and diverse experiences, but it also has limitations and consequences. By relying too much on AI-generated solutions, we might overlook important cultural, emotional, and personal nuances. Collaboration with AI offers both opportunities and risks, but it is crucial to consider whether the feelings and insights generated by AI are helpful or merely reflections of technological limitations.

Acknowledgment

The authors are delighted to acknowledge the ongoing help of Vanessa A. and Angela A. in the preparation of this and companion manuscripts.

References

1. Anderson M, Dobkin C, Gross T. The effect of health insurance coverage on the use of medical services. *American Economic Journal Economic Policy*. 2012; 4: 1-27.
2. Committee on the Consequences of Uninsurance. *Coverage matters: Insurance and health care*. National Academies Press. 2001; 1.
3. Eti S, Dinçer H, Gökalp Y, et al. Identifying Key Issues to Handle the Inflation Problem in the Healthcare Industry Caused by Energy Prices an Evaluation with Decision-Making Models. *Managing Inflation and Supply Chain Disruptions in the Global Economy*. IGI Global. 2023; 162-178.
4. Hoffman C, Paradise J. Health insurance and access to health care in the United States. *Ann N Y Acad Sci*. 2008; 1136: 149-160.
5. Beech BM, Ford C, Thorpe RJ, et al. Poverty racism and the public health crisis in America. *Front Public Health*. 2021; 9: 699049.
6. Rosenbaum S, Wilensky G. Closing the Medicaid Coverage Gap Options for Reform. *Health Aff Millwood*. 2020; 39: 514-518.
7. Wang X, Seyler BC, Chen T, et al. Disparity in healthcare seeking behaviors between impoverished and non-impoverished populations with implications for healthcare resource optimization. *Humanities and Social Sciences Communications*. 2024; 11.
8. Subramani K, Manoharan G. Humanizing the Role of Artificial Intelligence in Revolutionizing Emotional Intelligence. 2024 3rd International Conference on Computational Modelling Simulation and Optimization. 2024; 237-242.
9. Tahri Sqalli M, Aslonov B, Gafurov M, et al. Humanizing AI in medical training ethical framework for responsible design. *Front Artif Intell*. 2023; 6: 1189914.
10. Zhang P, Boulos MNK. Generative AI in Medicine and Healthcare Promises opportunities and challenges. *Future Internet*. 2023; 15: 286.
11. Kajwang B. Insurance Opportunities and Challenges in An Artificial Intelligence Society. *European Journal of Technology*. 2022; 6: 15-25.
12. Loh M, Soo T. Opportunities and use cases of AI in the insurance industry. *Artificial Intelligence in Finance*. Edward

Elga Publishing. 2023; 244-270.

13. Stern AD, Goldfarb A, Minssen T, et al. AI Insurance How liability insurance can drive the responsible adoption of artificial intelligence in health care. NEJM Catalyst. 2022; 3.
14. Vázquez-Serrano JI, Peimbert-García RE, Cárdenas-Barrón LE. Discrete-Event Simulation Modeling in Healthcare A Comprehensive Review. Int J Environ Res Public Health. 2021; 18: 12262.
15. Weber M, Limmer N, Weking J. Where to start with AI Identifying and prioritizing use cases for health insurance. 2022.
16. Eling M, Nuessle D, Staubli J. The impact of artificial intelligence along the insurance value chain and on the insurability of risks. The Geneva Papers on Risk and Insurance Issues and Practice. 2021; 47: 205-241.
17. Gupta S, Ghardallou W, Pandey DK, et al. Artificial intelligence adoption in the insurance industry Evidence using the technology organization environment framework. Research in International Business and Finance. 2022; 63.
18. Maier M, Carlotto H, Saperstein S, et al. Improving the Accuracy and Transparency of Underwriting with Artificial Intelligence to Transform the Life-Insurance Industry. AI Magazine. 2020; 41: 78-93.
19. Zarifis A, Holland CP, Milne A. Evaluating the impact of AI on insurance the four emerging AI and data driven business models. Emerald Open Research. 2019; 1.