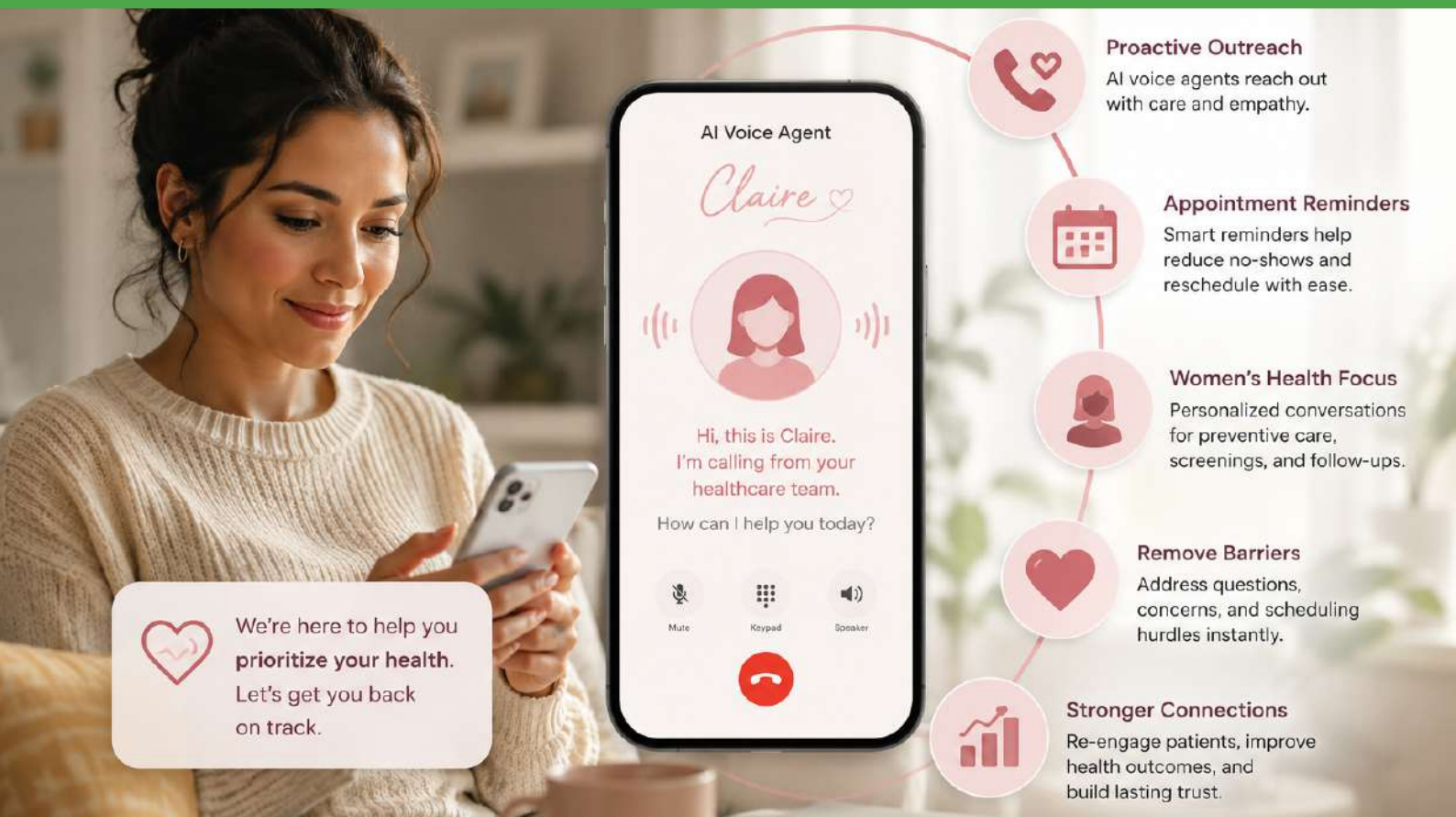




How BigRio Designed a Scalable Patient-Reactivation Model for a Leading U.S. Health System

Client

The client is a long-established health system committed to serving a diverse, multigenerational patient population. Its Women's Health program provides comprehensive services spanning preventive care, routine OB-GYN care, breast health, and screening services.

As part of its patient-engagement efforts, the health system sought to reconnect with more than 3,300 patients who were overdue for routine OB-GYN care.

Business Challenge

The client sought to strengthen patient engagement and reconnect patients who had fallen out of routine care while reducing the operational burden placed on front-office and care-coordination teams.

Key challenges included:

High no-show rates led to missed appointments, reducing continuity of care, delaying diagnosis, and leaving unused provider capacity. A diverse patient population included individuals who preferred languages other than English. Limited multilingual outreach reduced understanding, trust, and response rates. Patients postponed screenings such as mammograms and pap smear tests until symptoms worsened. Most patients were overdue by 13+ months, creating care gaps and increasing the risk of delayed diagnosis.

Social determinants of health (SDOH) factors like transportation, childcare, work schedules, housing insecurity, and financial constraints often prevented patients from keeping appointments or following treatment plans.

Administrative teams spent significant time conducting manual outreach for appointment reminders, referral follow-up, and patient rescheduling. Care coordinators spent significant time making reminder and follow-up calls, leaving less time for higher-value patient support. Limited understanding of why patients disengaged, as traditional outreach systems recorded only whether a patient answered, and not why they missed care or what barriers they faced, such as

transportation, childcare, work schedules, language, or technology access. Frequent changes in phone numbers, full voicemails, and patients not answering calls from unknown numbers also led to traditional outbound call campaigns and low contact rates.

Patient portal adoption was also lower among the concerned populations due to digital literacy, internet access, or preference for phone-based communication. The client wanted a scalable approach that could improve patient access while supporting staff with more structured engagement workflows.

BigRio Solution

BigRio partnered with the client to design a scalable AI-powered patient reactivation model that placed the patient experience at the center of care reconnection.

Rather than simply increasing outreach capacity or automating reminder calls, the solution was designed to better understand each patient's experience by capturing concerns, barriers to care, language preferences, communication preferences, and the support needed to reconnect with routine healthcare.

This patient-centered engagement model enables health systems to move beyond transactional outreach toward more personalized, empathetic conversations that generate actionable insights for care teams while reducing the operational burden of manual follow-up.

BigRio worked closely with the client's clinicians and operational leaders to tailor every aspect of the workflow, including conversation design, voice selection, pacing, privacy controls, call summaries, barrier discovery, MyChart support, video-visit interest, and staff follow-up processes, to reflect the needs of SBH's Women's Health patients and care teams.

Collaborative Co-Design

A defining aspect of the project was its collaborative development process. Through an iterative co-design process, BigRio incorporated the client's feedback into the language workflow, female voice configuration, conversational pacing, privacy controls, call summaries, barrier discovery, MyChart support, video-visit interest, and staff follow-up process.



This ensured the solution reflected the operational realities of the client's Women's Health teams and the needs of the patient population rather than implementing a generic voice-agent workflow.

Human-Centered Patient Conversations

Using Large Language Models (LLMs), the voice agent was designed to provide a warm, patient, and supportive "front door" experience through short, natural, and culturally sensitive conversations.

Barrier Discovery

Rather than simply reminding patients about appointments, the AI captured structured information about barriers to care, including transportation, childcare, work schedules, technology challenges, or other concerns, allowing staff to prioritize appropriate follow-up.

Multilingual Patient Engagement

The solution incorporated multilingual engagement requirements, with Spanish included in the initial design and Arabic and French identified as important areas for future expansion, reflecting the diversity of the patient population served by the health system.

Flexible Workflow Design

The initial workflow was designed to capture structured patient-engagement outcomes without requiring immediate EHR integration, allowing the client to validate the model before pursuing deeper system connectivity.

Strategic Use Cases



Preventive Care Outreach

The workflow supported preventive-care outreach by identifying patient interest in mammography screening and capturing scheduling preferences for appropriate staff follow-up across both mobile and facility-based screening programs.



Patient Reconnection

The solution engaged patients who had become overdue for annual OB-GYN visits, helping identify interest in returning to care while capturing the information needed for staff outreach.

Virtual Care Interest

When patients identified barriers to in-person appointments, the workflow captured interest in virtual visits and shared that information with staff for appropriate follow-up.

Patient Portal Engagement

The AI agent introduced patients to the benefits of the health system's patient portal and identified patients interested in receiving additional assistance with portal activation.

Structured Follow-Up Support

Rather than automating appointment scheduling, the solution captured patient interest, barriers, scheduling preferences, and follow-up requirements, giving the client staff structured information to support patient reconnection and care coordination.

Validated Project Outputs and Future Success Measures

Validated Project Outputs

The engagement model delivered several foundational capabilities to support future deployment:

- Designed around an overdue population of more than 3,300 OB-GYN patients, subject to external approval
- Captured structured patient engagement, barrier, and follow-up information for care teams
- Developed through an iterative co-design process with the client clinicians and operational stakeholders
- Established a scalable patient-reconnection workflow that can evolve with future system integration

- Created a foundation for expanding AI-assisted patient engagement across preventive and routine women's healthcare

Future Success Measures

As the solution scales, the client plans to evaluate performance using metrics such as:

- Patient contact rate
- Interest in reconnecting with care
- Appointment requests generated
- Mammography screening interest
- Patient portal activation support
- Staff follow-up effort
- Appointment completion rate
- Long-term patient re-engagement

Expected Business Value

The patient-reactivation model was designed to improve both patient access and operational performance by enabling health systems to better understand and respond to the needs of patients who have fallen out of routine care.

Expected benefits include:

- More personalized patient engagement through conversations that identify barriers, preferences, and support needs.
- Better utilization of appointment capacity by reconnecting patients with preventive and routine care.
- Reduced administrative burden through structured AI-assisted outreach and follow-up workflows.
- Actionable patient-engagement data that helps clinical teams prioritize interventions and improve care coordination.
- A scalable foundation for expanding AI-enabled patient engagement across additional specialties and service lines.



Why BigRio?

BigRio designs healthcare-native AI solutions that help health systems strengthen patient engagement, improve access to care, and modernize operational workflows through responsible, human-centered AI.

The client engagement demonstrates a repeatable patient-reactivation framework that can be adapted across Women's Health, Primary Care, Specialty Care, Population Health, Preventive Screening, and other service lines where patient disengagement, missed appointments, and manual outreach create operational and clinical challenges.

By combining clinical workflow expertise, privacy-conscious architecture, conversational AI, and collaborative solution design, BigRio enables healthcare organizations to build scalable patient-engagement programs that improve both the patient experience and operational efficiency while creating a strong foundation for enterprise AI adoption.

LET'S CONNECT

For more information on how BigRio can help you, contact us at info@bigr.io or [click here](#).