News and Perspectives

From Reactive to Proactive Care: How AI Is Connecting Rio's Residents to Public Services

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Abstract

In the sprawling city of Rio de Janeiro, accessing health care can be challenging, even when services are available. A new initiative aims to change that by using AI to proactively connect people to public services. In this *News and Perspectives* article, JMIR Correspondent Luke Taylor reports on the Connect Rio program, the second story in his two-part series on how AI is helping make health care more proactive in Brazil.

Key Takeaways:

- Using AI and outreach via WhatsApp, the Connect Rio program is helping to identify and connect people who might otherwise fall through the cracks to public services.
- A massive data integration initiative across the city's public health services has made the program possible and could be a powerful tool for more proactive care.

Read the first article in this two-part series on AI and proactive health care in Brazil here.

Around 13% of Rio de Janeiro's 6.7 million residents live in poverty. Many reside in the sprawling favelas that straddle the city's hills, where health and social needs are greatest. But the problem is not always that there are not enough public services for everyone.

"Sometimes people cannot get public transport to where they need to go to receive a service, or they simply don't know they are eligible for help," says Cristiane Martins, MA, co-director of Building Together Research Collective, a participatory research group working in Cidade de Deus, one of Rio's largest favelas. "There is also a lot of bureaucracy to navigate. And now everything is electronic, in some cases people don't know how to use the technology or the system itself fails."

Since May, the Connect Rio program has been trying to reach these underserved populations. Using AI, Rio's city government is identifying people falling through gaps in public services, contacting them through WhatsApp to understand why—and, where necessary, helping them get the help they need.

The approach was one of the 2025-2026 Bloomberg Philanthropies Mayors Challenge winners and is being piloted by every major department, from health to transport. In social services, the program has increased the uptake of welfare payments for Rio's poorest families. In education, the program has helped identify and message parents of children with prolonged school absences—school attendance of children in Rio's 10 poorest neighborhoods increased by around 10%, Rio's city hall says.

"We are building a new way of designing public policy to expand opportunities and social protection for those who need them most," says Thiago Trabach, MSc, Director-President of Iplan Rio, a technology company that is responsible for the city's digital infrastructure and for the development of the PrefRio WhatsApp tool. "Instead of expecting citizens to navigate a complex government, we are making the government go to them."

The approach is particularly valuable in health care, where it can be used to identify problems before they become serious, says Renato Cony, MD, Rio de Janeiro's undersecretary for health promotion, primary care, and health surveillance.

Improving Postnatal Care

The health department's first application of Connect Rio aims to improve postnatal care.

New mothers can be hard to track down after leaving hospital, Cony explains, as they often move in with relatives who help care for the baby. Because Rio's primary health care teams are organized geographically, it can take 15-30 days for a team to realize that a mother and her newborn have moved into the neighborhood, potentially missing a high-risk period for maternal mortality and morbidity.

Now, women discharged from maternity wards are automatically contacted through WhatsApp and asked each day if they are experiencing warning signs, including fever, pain, and bleeding. If a red flag is detected, a nurse is assigned and can arrange for a health worker to be sent out or for the woman to return to hospital.

In a two-month pilot with 300 women, 15 reported significant warning signs and were referred back to maternity services, with some receiving antibiotics or intensive care treatment.

The program is currently expanding to 1500 women and is expected to reach 11 municipal maternity hospitals and 242 primary health care clinics by December 2026. "It's early, but we think this could have a significant impact, lowering the maternal death rate by around 30%-35%," Cony says.

Connecting Data, Addressing Barriers

Connect Rio's concept became possible because Rio's City Hall spent years integrating its masses of disjointed public data—including health care, social services, and education—into a giant data lake, a centralized, cloud-based data repository (called, fittingly, Datalake).

Previously, health data were fragmented. A doctor seeing a patient could rarely see conditions, medication, or tests previously recorded by another service in the health system.

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>
> Joao Carabetta, MSc

Now, health service databases covering around 100 million consultations over the past decade are linked. When a nurse responds to a new mother's concerns, they can see her previous consultations, examinations, and procedures across Rio's public health care network.

"You would much rather have a family doctor who has known you your whole life than a random doctor who knows nothing about you—right?" says Joao Carabetta, MSc, former Chief Tech Officer for Rio City Hall. "Connecting these datasets is a bit like having a family doctor for everyone."

For Connect Rio's postnatal program, women can hop between WhatsApp calls, video consultations, and clinic visits as needed, with all interactions recorded in the same dashboard and monitored by a nurse.

"We really believe that this is a kind of revolution," Cony says. "We have the opportunity now to bring together a physical journey and an electronic journey, which would reduce the time spent on health care while lowering costs and increasing access."

The feedback from WhatsApp is helping the city understand the systematic reasons why residents fail to use certain services and to address barriers, Cony says.

"We are often finding that some women cannot go to hospital because they have nobody to look after their other children, for example, highlighting the importance of childcare in postnatal health care," Cony says.

In another example, when the education department contacted the family of a child who stopped attending school, it discovered severe tooth pain was keeping him at home—his family did not know how to access dental care. A health worker was sent and the boy returned to school.

Challenges and Potential

Joining billions of records in a common data lake creates challenges.

Privacy is a major concern, so each team is only given access to the data needed for their work and that data is encrypted both when stored and being transferred across systems, Trabach says. "Wherever possible, we use anonymized data rather than directly identifiable information."

There are also practical limitations to applications of the program. Some new mothers change phone numbers or do not respond to contact from unknown numbers, Cony says. Nurses on the program have had to learn how to calculate risk remotely, where they cannot examine a patient firsthand and must rely heavily on what the person tells them.

And there is a risk of information overload. Giving frontline workers too much information to review for each patient costs time, so dashboards are being refined to show only the most relevant information for each case.

"We only provide information that could directly change their actions, otherwise they must request it. The existence of a common data lake does not mean every doctor, teacher, or social worker can see everything," Cony says.

Rio's City Hall says the next target is vaccination to reduce the 15% of children who have not received all of their pentavalent vaccine doses.

Health officials have mapped where unvaccinated children live, planning to use WhatsApp to understand why families are falling behind, and then follow them through their vaccination milestones.

Eventually, Cony says, using AI alongside the city's data lake could allow them to move beyond identifying care gaps and begin predicting who is at risk of becoming seriously ill so they can intervene earlier.

"We could identify the diabetic person at risk, increase the medication, lower their blood sugar, and prevent a stroke or heart attack," Cony says.

Keywords: artificial intelligence; telemedicine; public health; health services accessibility; health information systems; social determinants of health; patient care management

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