Tech vs COVID-19: TecSalud use a telepresence robot with patients



By using a **telepresence robot**, <u>TecSalud</u> doctors give remote consultations to patients diagnosed with <u>COVID-19</u> to prevent the risk of infection and save protective materials.

Fernando Castilleja, Director of the Tec Salud Department for Wellbeing and Prevention (Bienestar y Prevención), explained to CONECTA that the robot's name is **A-NÍMO**, which **means a friend who provides moral encouragement** ('ánimo' in Spanish).

"The idea of **A-NÍMO** stems from the search for close contact in real time with hospitalized patients for the purpose of **protecting both patients and health workers**," points out Castilleja, who is also the COVID-19 contingency plan coordinator at **TecSalud**.

The robot is in the therapy department at the **San José Hospital**, one of the **TecSalud** hospitals in Monterrey.



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A ROBOT EQUIPPED WITH CUTTING-EDGE TECHNOLOGY

The **robot,** which is 1.6 meters tall, also has a **loudspeaker and six microphones**, and doctors can turn the volume up or down without any delays in sound reproduction.

Its **two cameras** move up and down to give a **wide view** of the room and enable viewers to **see whether the patient** is sitting or in bed.

"(Patients can) see the doctor, albeit on the screen, hear their voice and have a conversation. It gives them the sensation of human contact," said Martín Hernández Torre, a pulmonologist at TecSalud.

The specialist can **control the robot from a computer** and direct its movements with the mouse.

"You can drive it as if it were a drone or a remote-control car," indicated Hernández.

"You get a dialog similar to a video call and it also helps us take decisions with support staff like doctors or nurses," commented Martínez.

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THE BENEFITS

This robot makes face-to-face doctor-patient consultation possible without their being in the same room. They can even be kilometers apart.

Hernández Torre says that the robot uses fewer and makes better use of supplies like masks and gloves during the **COVID-19** emergency.

"It **increases** the number of **people we can help** without having to expose more people or use more protective equipment," he pointed out.

Moreover, **A-NÍMO** has **motion sensors** which help it move freely around the room and its **battery** lasts for **8 hours of continuous** use.

Hernández also mentioned that it is made of **material** that can be **sanitized** in exactly the same way as stretchers, monitors and medical equipment.

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It uses special robot-handling software that can be installed on **any computer** and in some cases on mobile devices like tablets and smartphones.

"With this technology we can **achieve goals** that we thought were **impossible**. It makes these things a reality and we can do them in our community," enthused Hernández.

OTHER TECSALUD TECHNOLOGICAL TOOLS

TecSalud medical specialists have access to user-friendly tools and platforms for the **remote attention and monitoring** of patients with COVID-19.

"Using digital platforms has enabled us to set up collaborations with groups from other Mexican states and around the world to share experiences, protocols and research outcomes," added Doctor Castilleja.



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The **technological tools** the TecSalud COVID-19 team has developed to deal with the emergency include:

Assistance by WhatsApp and email.

The email **covid19@tecsalud.mx** provides information and counseling, and 1,400 chats from different Mexican states have been dealt with by **WhatsApp**.

Remote monitoring and teleconsultation system

This service is offered to patients diagnosed with **COVID-19** who are being treated at home. Patients can see how their condition is progressing and keep a record of their symptoms, such as **fever**, **coughing and difficulty breathing**.

"Our patients **being treated at home** have responded favorably to these technologies over the short time we've been using them. It gives them a way of monitoring their symptoms and getting in touch with a **TecSalud** doctor," he added.

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