READ THE FULL STUDY
Mayo Clinic Proceedings: Digital Health
DOI: 10.1016/j.mcpdig.2025.100331

MAYO CLINIC PROCEEDINGS: DIGITAL HEALTH

✓ PEER REVIEWED

Infermedica

Driving virtual care adoption on a national scale with AI-powered virtual triage

Abstract

A national evaluation of 1.55 million encounters found that Healthdirect Australia's AI-powered Virtual Triage and Care Referral (VTCR) system, powered by Infermedica, improved care-acuity alignment, reduced unnecessary emergency department demand, and drove higher use of virtual emergency and non-urgent care pathways. VTCR also nearly eliminated care-seeking uncertainty and saw strong engagement among Aboriginal and Indigenous patients.

Key findings

99.6% elimination of patient uncertainty:
Patients unsure of their care path fell from 43.2% to 0.2%

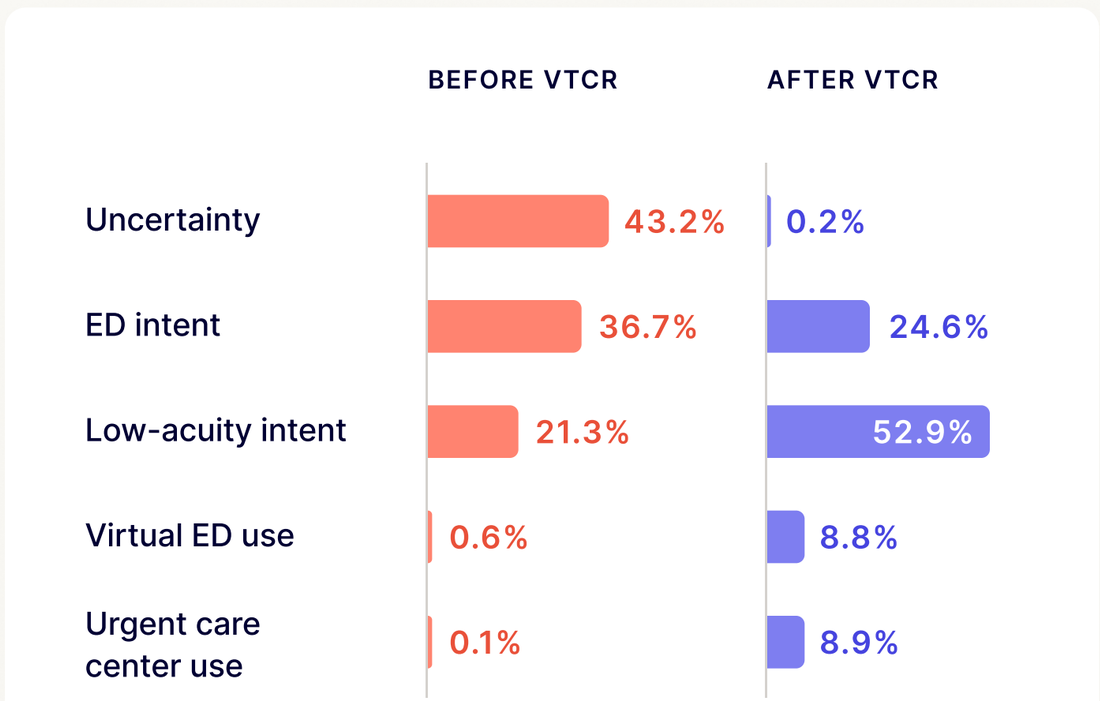
Emergency department intent significantly decreased:
In-person ED intent dropped from 36.7% → 24.6%

Faster adoption of virtual and alternative care pathways:

- Virtual ED use: 0.6% → 8.8%
- Urgent care center use: 0.1% → 8.9%

Non-urgent appropriate care more than doubled:
Lower-acuity care intent increased from 21.3% → 52.9%

Majority used virtual triage after hours:
68.8% of encounters occurred outside normal business hours



How Virtual Triage and Care Referral (VTCR) changes patient behavior

Impact & Opportunities:

- **Reduces system burden:** Potential to avoid 19,286 ED and 2,409 non-urgent in-person visits annually.
- **Improves care decisions:** Eliminates uncertainty and guides patients to the right care faster.
- **Drives virtual care adoption:** Shift toward virtual ED, urgent care, and telemedicine.
- **Advances equity:** Strong engagement among Aboriginal and Indigenous patients.
- **Scalable nationwide:** Demonstrates a sustainable digital front door model for Australia.

Read the full study and contact Infermedica to learn more about our AI-powered virtual triage.