

Enhancing pandemic response through reliable remote monitoring and patient-centered telemedicine solutions

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INTRODUCTION & AIM

The COVID-19 pandemic highlighted the critical need for scalable solutions to manage infectious diseases during health crises. Home isolation and remote monitoring for mild cases became essential to prevent healthcare system collapse. Recognized as a "disaster-level" public health challenge, the pandemic underscored the need of real-time surveillance tools to manage outbreaks. StepCare, a remote monitoring software medical device, facilitates symptom monitoring, prioritization and early intervention addressing the dual challenges of patient safety and resource optimization.

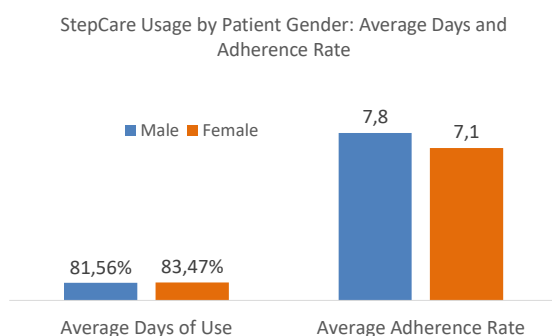
METHOD

Study Design:

- Type: Single-center, prospective study
- Location: Osakidetza OSI Bidasoa, Spain
- Period: First wave of the COVID-19 pandemic

Participants:

- Total: 35 symptomatic COVID-19 patients
- Gender Distribution: 51% men, 49% women
- Mean Age: 34.5 years
- Monitoring Duration: 7.5 days (average per patient)



Clinical safety was assessed by comparing severity categorizations from StepCare and the clinical team across 228 cases. Usability and satisfaction were evaluated through in-app data and post-study surveys with both patients and clinicians.

CONCLUSION

- StepCare is a secure and reliable tool for remote monitoring in healthcare crises.
- It improves clinical decision-making and healthcare system efficiency.
- High satisfaction and usability among patients and physicians.
- Potential scalability for other infectious diseases.

RESULTS & DISCUSSION

Usability and Satisfaction

Clinicians gave StepCare consistently high ratings, with an average score of 9.45 out of 10 across various aspects.

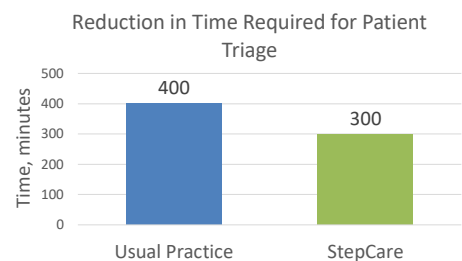
StepCare Score on:	Patients	Healthcare Professional
Content	8.5	8.75
Appearance	8.25	9.25
Navigation	8.25	9.5
Stability	8.5	9.0
Speed	8.58	9.25
Usefulness	8.33	9.0
Ease of Use	9.25	9.25
Adequate Display of Screens	8.8	9.25
Accessible User Manual	8.62	9.25
Clarity in Instructions for Use	8.75	9.25

Patient Risk Assessment

StepCare categorized severity **equally or more conservatively** than the clinical team in **100% of cases**, confirming its **clinical safety and reliability**. Additionally, **90.4% of its severity assessments matched the clinical team's expectations**.

Impact on Time and Costs

- StepCare improved efficiency compared to usual clinical practice:
 - **25% reduction in triage time** → From 400 min to 300 min for the full patient cohort



- **84% reduction in direct healthcare costs**. Main cost-saving: 1 - No need for home visits, 2 - Fewer patient-initiated calls, 3 - Reduced follow-up calls from healthcare professionals

Service Type	Usual Practice Cost, €	Cost with StepCare, €
Home visits	144.74	0.0
Patient-initiated calls	17.41	0.0
Follow-up calls from doctors	50.79	33.86
Overall clinical practice cost	212.94	33.86

