

Adapting The Care Ecosystem For Dementia Care In Peru: A Context-sensitive, Technology-enabled Study



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Background

Dementia poses an increasing challenge in low- and middle-income countries (LMICs), particularly for caregivers. Although the Care Ecosystem (CE) model, developed in the US, has shown promise in providing caregiver support through phone calls and improving people with dementia wellbeing, evidence on how CE can be effectively adapted remains limited. This gap underscores the importance of systematically documenting and analysing the adaptation process in LMICs. Accordingly, a systematic adaptation of the CE was conducted to enable a future pilot testing in Peru.

Methods

The adaptation followed a four-stage, implementation-focused process. First, focus groups and interviews with 30 informal caregivers from four Peruvian regions informed contextual requirements. Second, original intervention content was adapted, and an initial digital care platform was developed and tested internally through role-play to ensure fidelity with intervention objectives. Third, an enhanced platform integrating all protocol elements was iteratively refined through pilot testing with team members and volunteer caregivers; this stage included optimization of a WhatsApp-based virtual assistant. Fourth, final tests with caregivers were conducted to validate procedures, and nurses received training to deliver the intervention.

Results

The CE was successfully adapted and operationalized into an open-source platform called conversational-care (<http://conversational-care.ai>) while preserving its core components. The structure of the care protocols was updated to include basic caregiving content and specific pathways for persons with low adherence; a comorbidities protocol was also added. These adjustments respond to country-specific challenges and caregivers' recommendations. The caregivers' baseline needs assessment was shortened and embedded into a concise care plan. Additional procedures addressed frequent connectivity challenges observed in Peruvian settings. Platform functionality, caregiver workflows, and virtual assistant prompts were tested and refined through pilot activities, allowing us to establish that sufficient inputs and system readiness were in place to proceed with a subsequent feasibility study.

Conclusion

Context-driven adaptation produced a tailored Care Ecosystem model for Peru combining protocols, a care platform, virtual assistant, and nursing staff to support caregivers of people with dementia. This study offers a replicable approach for adapting dementia care models and informing future scale-up studies in LMICs.

In northern Peru, if you're diagnosed with Alzheimer's, that's it. [...] You ask for a physocology appointment, and there are never any appointments available. [...] A phone call, in my case, would really help me a lot.

 Caregiver Ana (Lima)

Caregiver Maria 

We need someone to train us, to tell us 'When you're mom's hand or arm hurts, it's because of this, so you already know which professional to go to, or if her back hurts, you have to go to such and such person...

(Huancayo)

Caregiver Rosa (Lima) 

The patient's well-being and progress depend on us... we need a lot of physical and mental support.

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