

Mobile Phone Applications and Digital Health Management Tools for Patients with Pancreatitis: a Systematic Review

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Background

Digital health interventions may play an important role in the management of chronic conditions by:

- Facilitating long-term **monitoring of symptoms**
- Quick access to accurate **information & support**
- Encouraging **self-management**
- Reducing inequality** of healthcare access

In its **global strategy on digital health**, the **World Health Organisation (WHO)**¹ recommend an acceleration in the development and adoption of digital health interventions to achieve the vision of **'health for all'** and to improve health service efficiency and cost effectiveness.

Objective

To systematically review published evidence on the use of patient-centred digital health management tools in the management of chronic and acute pancreatitis.



Methodology

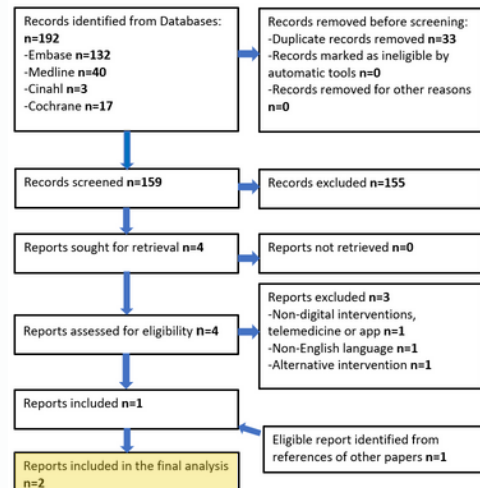
A systematic literature search was performed in the **Medline, Embase, Cinahl** and **Cochrane** databases identifying studies investigating digital health interventions with any pancreatitis-related outcome (Quality of Life (QoL), pain, gastrointestinal symptoms) in adult patients with **acute** or **chronic pancreatitis**.

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References

- World Health Organisation. Global strategy on digital health 2020-2025. Geneva; 2021. Contract No.: Licence: CC BY-NC-SA 3.0 IGO.
- Yang A, Aminmohammadi S, Murphy-Teixidor D, Jin D, Banks P, McNabb-Baltar J, editor Feasibility of a Mobile Phone Application for Post-Hospital Discharge Monitoring in Acute Pancreatitis. 52nd Meeting of the American Pancreatic Association; 2021 November 3-6, 2021; Miami Beach, Florida.
- Aivaliotis VJ, Lee Y, Zia J, Wassef W, Abramson M, Park W. Telephone-Based Mindfulness Therapy Intervention for Patients with Chronic Pancreatitis. Dig Dis Sci. 2017;62(2):502-9.

Results



Study 1

Investigated feasibility and acceptability of a mobile health application measuring behavioural and symptom-based parameters in the 7 days following hospital discharge for acute pancreatitis, and the effect of this intervention on QoL.²

Study 2

Determined feasibility and usability of a telephone-based mindfulness service for CP, and the effect of this intervention on QoL.³

Both studies described the digital health interventions to be not only feasible based on satisfactory compliance rates (67%, 71%), but also acceptable in terms of ease-of-use. There were significant improvements in QoL among patients post-intervention.

Conclusion

- Clear research gap** regarding the potential effectiveness or feasibility of digital interventions for pancreatitis.
- Studies identified in this review act as a strong prelude to the incorporation of such devices and the development of substantive clinical trials.
- The development of digital technology in healthcare has the potential to **improve service delivery on local, national and international scales** and should be a priority in line with WHO recommendations.