

---

**Abstract**

# Healing From a Distance: A Cross-sectional Study on the Diagnostic Reliability of Store-and-Forward Tele dermatology

---

Erika Kim R Chan, RN, MD, MBA; Jacqueline Michelle D Melendres, MD, FPDS

Department of Dermatology, Rizal Medical Center, Pasig, Philippines

---

**Corresponding Author:**

Erika Kim R Chan, RN, MD, MBA

Department of Dermatology

Rizal Medical Center

Pasig Blvd, Metro Manila

Pasig, 1600

Philippines

Phone: 63 288658400

Email: [ekrchan@gmail.com](mailto:ekrchan@gmail.com)

---

**Abstract**

**Background:** Telemedicine delivers health care services between two distant locations through the use of information and communication technology. Several medical specializations, such as dermatology, have incorporated telemedicine into their practice. Since dermatologists are trained to diagnose skin, hair, and nail conditions with a clinical eye, tele dermatology may be an alternative when a traditional face-to-face clinic visit is not feasible.

**Objective:** The purpose of this study was to evaluate the diagnostic reliability of tele dermatology.

**Methods:** A cross-sectional study was conducted among patients from 2 government hospitals. A total of 39 patients were seen in a face-to-face setting and diagnosed by a consultant dermatologist. A written history of their present illness and accompanying photographs were taken and were shown to 3 consultant tele dermatologists, who then diagnosed their condition. Two senior dermatology residents then rated the face-to-face and tele dermatology diagnoses as either complete agreement, partial agreement, or no agreement. Descriptive statistics was used to summarize the general and clinical characteristics of the participants. The Cohen kappa was used to assess agreement in the evaluations between the tele dermatology and face-to-face diagnoses by senior resident raters #1 and #2.

**Results:** Over 70% of the diagnoses were deemed as either partial or in complete agreement with the face-to-face diagnosis for senior resident rater #1. Similarly, over 80% of the diagnoses were deemed as either partial or in complete agreement with the face-to-face diagnosis for senior resident rater #2. The agreement between the ratings of senior residents #1 and #2 ranged from fair to substantial.

**Conclusions:** The findings of the study showed that the diagnostic concordance of in-person clinicians and tele dermatologists ranges from fair to substantial, with over 70% of the diagnoses in partial or complete agreement. Although face-to-face consultations remain the gold standard, tele dermatology is an important alternative where dermatologic care is not accessible.

**Conflicts of Interest:** None declared.

(*iproc* 2021;7(1):e35386) doi: [10.2196/35386](https://doi.org/10.2196/35386)

---

**KEYWORDS**

tele dermatology; concordance; reliability

---

---

*Edited by T Derrick; this is a non-peer-reviewed article. Submitted 02.12.21; accepted 03.12.21; published 10.12.21.*

*Please cite as:*

*Chan EKR, D Melendres JM*

*Healing From a Distance: A Cross-sectional Study on the Diagnostic Reliability of Store-and-Forward Teledermatology*

*iproc 2021;7(1):e35386*

*URL: <https://www.iproc.org/2021/1/e35386>*

*doi: [10.2196/35386](https://doi.org/10.2196/35386)*

*PMID:*

©Erika Kim R Chan, Jacqueline Michelle D Melendres. Originally published in Iproceedings (<https://www.iproc.org>), 10.12.2021. This is an open-access article distributed under the terms of the Creative Commons Attribution License (<https://creativecommons.org/licenses/by/4.0/>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work, first published in Iproceedings, is properly cited. The complete bibliographic information, a link to the original publication on <https://www.iproc.org/>, as well as this copyright and license information must be included.