Patient and provider experience and outcomes with synchronous teledermatology during the COVID-19 pandemic

To the Editor: Health care policy changes implemented during the COVID-19 pandemic significantly increased access to telehealth starting March 2020.1,2 Given the expanded acceptance of synchronous teledermatology, we collected data to inform the planning of dermatology access during and after the pandemic.

Our study engaged 3 groups to assess satisfaction and outcomes: (1) patients who received synchronous teledermatology services between March and July 2020 were contacted by phone and questioned about their experience, (2) local academic dermatologists scored individual patient encounters on a case-by-case basis between April and July 2020, and (3) a national sample of academic dermatologists belonging to the Association of Professors of Dermatology was examined via a web-based survey in September 2020. Descriptive statistics stratified patients by insurance group to explore poverty- and age-related differences.

The research team contacted 310 patients, of which 261 consented to participate (84% survey response rate).

Table I. Characteristics of 3 groups of study participants

| Group 1: patients | n = 261 |
|-------------------|---------|
| Sex, n (%)        |         |
| Female            | 165 (63) |
| Male              | 96 (37)  |
| Mean age (±SD)    | 38.5 ± 21.5 |
| Age (y), n (%)    |         |
| 17 and under      | 46 (18)  |
| 18-49             | 132 (51) |
| 50-64             | 45 (17)  |
| 65-79             | 27 (10)  |
| 80 and older      | 10 (4)   |
| Race/ethnicity, n (%) |         |
| Black/Afro-Caribbean | 41 (16) |
| White/Caucasian   | 195 (75) |
| Asian             | 6 (2)    |
| Multirace         | 7 (3)    |
| Other             | 12 (5)   |
| Health status, n (%) |       |
| Excellent/very good | 143 (55) |
| Good              | 90 (34)  |

| Group 2: local academic dermatologists | n = 6 |
|----------------------------------------|-------|
| Sex, n (%)                             |       |
| Female                                | 5 (83) |
| Male                                  | 1 (17) |
| Years of experience using synchronous teledermatology, n (%) |       |
| None (before telehealth visit)        | 9 (3)  |
| 2-6 visits                            | 93 (36) |
| 7 or more visits                      | 153 (59) |
| Unknown                               | 4 (2)  |
| Patient appointment type, n (%)       |       |
| New                                   | 30 (11) |
| Established                            | 231 (89) |

| Group 3: members of the National Association of Academic Dermatologists | n = 67 |
|------------------------------------------------------------------------|-------|
| Number of years in practice, n (%)                                    |       |
| 5 or fewer years                                                      | 24 (36) |
| 6-10 years                                                            | 13 (19) |
| 11-20 years                                                           | 11 (16) |
| 21+ years                                                             | 19 (28) |
| Level of experience with telehealth before COVID-19 pandemic, n (%)   |       |
| No prior experience                                                   | 30 (45) |
| Beginner                                                              | 30 (45) |
| Advanced                                                              | 5 (8)  |
| Expert                                                                | 2 (3)  |
| Count of patient visits via telehealth during COVID-19 pandemic, n (%) |       |
| <10 patient visits                                                    | 5 (8)  |
| 11-50 patient visits                                                  | 16 (24) |
| 51-100 patient visits                                                 | 17 (25) |
| 101+ patient visits                                                   | 29 (43) |
| Formats of telehealth used during COVID-19 pandemic, n (%)            |       |
| Synchronous (video and audio)                                         | 65 (97) |
| Synchronous (audio only)                                              | 47 (70) |
| Asynchronous (ie, store-and-forward)                                  | 32 (48) |

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response rate; Table 1). Over 80% reported that the physician was able to adequately diagnose or treat their skin concern (Fig 1). By insurance type, 81% of Medicaid-insured patients would like to continue using teledermatology postpandemic, compared with 63% of commercially insured and 44% of medicare-insured patients \((P < .05)\). Medicare-patients expressed the greatest technological difficulties \((P < .05)\).

Six faculty dermatologists individually scored 168 of 172 (97%) new and established patient encounters. Diagnosis or treatment goals were fully or partially achieved for 93% of all cases, 95% of acne cases \((n = 61)\), 77% for psoriasis \((n = 13)\), and 52% for rash \((n = 38)\). In a subanalysis of only new patients, diagnosis and treatment goals could still be achieved in 80% of patients. Full skin examinations were not offered via teledermatology. Technological difficulties impeded care for only 3% of total cases.

The web-based survey yielded 67 responses from national academic dermatologists. Almost three-quarters (73%) reported that they would continue teledermatology postpandemic. Nearly all dermatologists (94%-96%) would recommend telehealth to friends and family for follow-up of common skin conditions. Weaknesses identified were internet connectivity (29%), image quality (24%), and patient technical skills (21%).

Prior research demonstrated that access to dermatology care is limited and inequitable, especially for Medicaid-insured patients.\(^3,4\) Our study indicates that synchronous teledermatology is viewed favorably by Medicaid-insured patients with a high willingness to receive care this way. In addition, the non-attendance rate among teledermatology Medicaid-insured patients was 7.8%, approximately 20-percentage points lower than in-office visits (28.3%) during the year prior. Strategies that address non-attendance may increase the willingness of dermatologists to accept Medicaid-insured patients.

By bringing together 3 groups of patient and physician perspectives, this study demonstrated that telehealth was a practical approach to patient care in dermatology. Patients reported wanting to continue teledermatology post-pandemic. Study results may not be fully generalizable to nonacademic practices or conditions beyond the context of the pandemic. Patients may be biased toward favoring telehealth because of appreciation for safe access to care during periods of social restrictions. Regardless, our study points to opportunities for telehealth to address barriers to dermatologic care for Medicaid patients.\(^5\) With technological improvements and workflow optimizations, we anticipate increases in patient demand and provider satisfaction as long as insurance companies and government agencies offer acceptable reimbursement.

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Conflicts of interest
None disclosed.

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