

Letter

Advantages of teledermatology for incarcerated patients: A scoping review

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To the Editor

Over 1.2 million people are currently incarcerated in the United States, with 96% serving sentences longer than 1 year.¹ With frequently overcrowded conditions and high rates of communicable skin diseases,² incarcerated patients often require dermatologic care during their sentences. This population faces unique challenges in accessing dermatologic care, with many receiving care only from a primary care physician.³ Additionally, healthcare costs for incarcerated patients account for 18% of operating expenditures in the United States, higher than any other country reporting such data.⁴ The barriers to accessing care in this population necessitate different approaches to treatment. This scoping review aims to explore the documented advantages of using teledermatology for incarcerated populations.

We searched MEDLINE, Embase, CINAHL, Web of Science, and Sociological Abstracts using the terms “prisons,” “correctional facility,” and “teledermatology.” Eligible studies were published in English and investigated the outcomes of teledermatology in incarcerated populations. Studies without original data, such as systematic reviews, were excluded. Two reviewers independently screened abstracts and full texts and extracted data on population characteristics and treatment outcomes. Disagreements were resolved with a third reviewer.

We screened 43 studies, of which 10 met eligibility criteria, representing 2417 patients. Dermatology was the most frequently requested specialty in telemedicine programs, accounting for 50% to 54% of requests (n = 350), and dermatologic concerns comprised 7.9% of all sick encounters for 1 correctional facility's telemedicine primary care team. Medical transport costs ranged from \$700 to \$1,000 per day in 1995–1997, increasing to approximately \$2,000 per day in subsequent years.⁵ Telemedicine reduced visit costs to \$70 in 1 study (n = 400). Furthermore, 84.0% to 86.3% of patients (n = 387) were successfully managed without requiring an in-person

visit, avoiding transport costs. In a retrospective chart review, 86.7% of teledermatology patients (n = 352) improved by their second visit, with 62.6% (n = 254) requiring only 1 consultation. The most frequently treated conditions were eczematous disorders (9.3% to 39%; n = 333) and infections or infestations (5.1% to 42.8%; n = 265). One study assessing diagnostic accuracy found that referral/request forms matched the post-teledermatology diagnosis in 57.1% of cases (n = 200). Summaries of the included studies are provided in [Table 1](#).

The need for dermatologic care in prisons and correctional facilities is well documented. When implemented, teledermatology is a popular and cost-effective tool for managing skin conditions in incarcerated patients. Our findings indicate high rates of satisfaction with this modality among both patients and physicians. The majority of patients were effectively managed without costly in-person visits or multiple follow-ups, reducing transport expenditures. Teledermatology programs increase access to specialized care and allow for more accurate diagnoses. From both cost and treatment efficacy perspectives, teledermatology offers notable advantages over in-person or non-specialist care. Additional studies are needed to perform comprehensive cost-benefit analyses and further assess patient satisfaction with this modality.

Potential conflicts of interest

The authors declare no conflicts of interest.

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Table 1. Characteristics of Included Studies.

Study	Country	Participants, n	Primary Outcomes	Secondary Outcomes
Stoj et al	USA	98	86.3% of diagnoses successfully managed with teledermatology alone	57.9% of patients were prescribed new systemic treatment; 86.0% were prescribed new topical treatment
Seol et al	Korea	406	86.7% of patients improved by the second visit; 62.6% of patients required only 1 consultation	Diagnosis frequency: infectious diseases (42.8%), eczematous disease (29.4%), disease of skin appendages (14.5%), papulosquamous disease (4.3%)
Stephan et al	Germany	200	Prediagnosis request forms matched post-teledermatology diagnosis in 57.1% of cases; 39.7% had a VAS itch of at least 5; 7.7% had VAS pain of at least 5	Diagnosis frequency: eczema (32%), infectious skin diseases (23%), tumors (15%), acne (11%)
Kesler et al	USA	400	Telemedicine visit cost \$70; in-person transport cost \$700, yielding significant cost savings and potential expansion	Dermatology was the most frequently used specialty in the telemedicine system (54.6% of all telemedicine appointments)
Clark et al	USA	359	16% of teledermatology visits required in-person follow up; secondary diagnoses were listed more in in-person visits (52.0% versus 26.3%); procedures recommended more in-person than teledermatology (16.8% versus 1.2%)	Recommended follow-up time was shorter for teledermatology appointments (2.3 versus 4.8 months); diagnosis frequency: psoriasis (28.1%), acne/rosacea (17.3%), dermatitis/eczema (9.3%), benign lesions (5.4%), infections (5.1%), malignant lesions (3.0%)
Chuchvara et al	USA	Not published	The most successful visits used both live consultation and photographs uploaded prior to the visit	N/A
Zarca et al	France	450	82% of patients completed a treatment plan with only 2.9% requiring a later in-person appointment, versus 35% completing a plan without teledermatology	Teledermatology was well accepted by all responding physicians (n = 9), all willing to continue this treatment model
Swift et al	Germany	177	Over 7 months, an estimated 660 hours of unproductive provider travel time were saved	7.9% of all sick encounters at a military correctional facility were for dermatological complaints
Phillips et al	USA	138	Diagnosis frequency: eczema/dermatitis (39%), prurigo nodularis/lichen simplex chronicus (11%), inflammatory dermatoses (11%), infections and infestations (10), tumors (4.3%)	Most frequent therapeutic recommendations: topical steroids (34%; n = 86), antihistamines (15%; n = 40), antibacterials (15%; n = 40)
Norton et al	USA	189	Reduced cost: single-day transport for dermatology care \$1000; dermatology was the most telemedical specialty (50%) of 16 participating specialties	Diagnosis frequency: eczema/dermatitis (33.3%), appendageal disorders (22.7%), papulosquamous disorders (16.9%), and infections/infestations (7.4%)

Abbreviations: VAS, visual analog scale.

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