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Impact of telehealth appointments on pharmaceutical management of dermatological conditions

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The impact of the COVID-19 pandemic caused dermatology providers to use telemedicine to safely arrange clinic appointments during lockdowns. This study aimed to evaluate the impact of telehealth on antibiotic prescription length. Specifically, we sought to compare antibiotic length prescription for virtual vs. in-person visits before, during, and after COVID-19 shutdowns. A retrospective cohort study was performed using all documented pharmaceutical prescriptions of tetracycline in 2019-2021 prescribed by dermatology providers at a large academic tertiary referral center. Results show an increase in telemedicine visits from 0.75% (2019) to 18.51% (2020), with a decrease to 3.98% in 2021 ($p < 0.0001$). Analysis demonstrates that a tetracycline prescription of over 91 days was given in 37.90% vs. 28.83% of visits for virtual vs. in-person visits respectively ($p < 0.0001$). Interestingly, 52.64% of antibiotic prescriptions written by staff physician dermatologists exceeded 91 days vs. 18.18% for dermatology fellows, 25.74% for resident physicians, and 21.35% for physician-assistants ($p < 0.001$). The demonstrated increase in duration of tetracycline prescription during virtual visits is perhaps indicative of less data available for clinical decision-making, longer wait times between provider appointments during this era of lockdowns, and providers desire to make the visit worthwhile. Future studies should explore factors related to provider decision-making in virtual compared to in-person visits. This research is important in laying a foundation for how virtual visits may play a greater role in dermatologic care as we move towards a post-COVID world.



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Consumer attitudes, knowledge, and behavior towards aging skin during the COVID-19 pandemic

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Background: Among the many changes brought about by the COVID-19 pandemic, makeup sales decreased while skin, nail, and hair care sales increased¹, suggesting a shift in focus amongst consumers. There has been little research examining how consumer knowledge, attitudes, and behavior towards how aging skin have changed during the COVID-19 pandemic. Methods: A cross-sectional, online survey was administered through REDCap. Eligible participants (English-speaking participants 18 years or older) were recruited and consented online through ResearchMatch. Results: A total of 1434 participants were recruited. 15% (216/1434) were between ages 18-30, 28% (408/1434) between ages 31-50, and 56% (810/1434) were ages 51 or above. 19% (272/1434) identified as men, 78% (1125/1434) were women, and 3% (37/1434) were genderqueer. Overall, the COVID-19 pandemic reduced the amount of time people spent per day covering up their age-related skin changes; 13% (181/1434) spent over 10 minutes prior to the pandemic, compared to 9% (128/1434) during the pandemic. The most influential factor that affected how people felt about their skin during the pandemic was spending more time on video conferencing platforms (28% (401/1434) were affected). Other factors included wearing masks and pandemic-induced stress, anxiety, or self-isolation. These factors tended to make people care more about their skin. Conclusion: Many consumers are affected both physically and emotionally by age-related skin changes. The pandemic has played an important role in how consumers feel about their skin.



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Impact of crisaborole & tacrolimus 0.03% on patient-reported outcomes and caregiver burden in children with atopic dermatitis

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Poor quality of life (QoL) is common in children with atopic dermatitis (AD) and their caregivers. This study used patient-reported outcomes (PROs) to monitor the impact of crisaborole (CRIS) and tacrolimus 0.03% (TAC) on children (2-15 years) with mild/moderate AD and on caregiver burden. This open-label study randomized 47 child-caregiver dyads to CRIS or TAC for 12 weeks. Disease severity (Eczema Area & Severity Index [EASI]), % body surface area, Investigator Global Assessment (IGA), QoL (Children's Dermatology Life Quality Index, Family Dermatology Life Quality Index), itch (PROMIS Peds Itch-Short Form), anxiety (PROMIS Anxiety-Peds), pain interference (PROMIS Pain Interference-Peds), depression (PROMIS Depression-Peds), sleep (Children's Sleep Habits Questionnaire), and caregiver burden (Caregiver Burden Inventory) were assessed at baseline, 6 and 12 weeks. A total of 36 dyads completed the study. Children (mean age=8.0±3.9 yrs) had mild baseline AD (EASI=4.9±3.7) and were diverse by race (39% white; 36% Black) and gender (53% males). Caregivers were mostly female (78%; 37±7.6 yrs). Both arms improved disease severity over 12 weeks (EASI: CRIS=-2.4 vs. TAC=-1.9, $p=0.577$). At 6 weeks, TAC had worse caregiver burden on emotional health (-0.1 vs. 1.8, $p=0.017$) and social relationships (-0.4 vs. 2.2, $p=0.006$) than CRIS. Within arm analysis at 12 weeks revealed TAC significantly improved caregiver burden, QoL (caregiver, child), and all child PROs except sleep (all $p < 0.05$). In contrast, CRIS only improved QoL (caregiver, child), depression, and pain interference (all $p < 0.05$). Our results confirm the utility of PROs to monitor treatment response. Both CRIS and TAC reduced disease severity, but TAC improved more child PROs. Future trials should implement PROs to fully understand the impact of treatment.



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Impact of the COVID19 pandemic on the execution of real world, pragmatic trials: The LITE study experience

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The LITE study (NCT03726489) is the largest US-based academic pragmatic trial in dermatology to date. It compares home v office phototherapy for psoriasis at 38 sites with goals of 1050 enrolled and equal skin type representation embedded in routine clinical care. The COVID19 pandemic resulted in profound impacts to routine dermatological care and execution of clinical research. To determine the impact of the pandemic on enrollment, we defined time periods as pre-pandemic (March 2019-March 2020) and post-pandemic (April 2020-January 1, 2022). Enrollment rate was calculated over each time period as per patient per active site to account for the closures and additions of sites throughout the study. To determine barriers and facilitators we collected qualitative responses monthly throughout the post-pandemic timeframe and analyzed. The overall enrollment rate dropped from 1.2 patients per site per month to 0.5 patients per site per month as of April 2020. Of the 29 active sites pre-pandemic (11 academic/18 private), 87% closed to enrollment at one time post-pandemic; all that remained open (n=4) were private. Post-pandemic, 12 academic and 2 private sites were newly activated, and 5 private practices were withdrawn. Commonly reported barriers included institutional holds, staffing shortages, worsening patient financial situations, reduced capacity for patient visits and office phototherapy, uncertain childcare and at-home situations, and increased loss of insurance coverage. LITE developed and transitioned to a remote consenting model, including assessments via teledermatology reflective of the shifting standard of care. Site-specific support for engagement, recruitment, and remote coordinating efforts were employed by the centralized team. Though creative solutions were implemented to address many reported barriers, the residual impact of the pandemic on the economy, healthcare, and family life continues to challenge the execution of the LITE study.



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Real world prescribing patterns of dupilumab for atopic dermatitis

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The prevalence of atopic dermatitis (AD) in the USA is ~12% in children and ~7% in adults. We conducted a retrospective, observational, cohort study examining prescribing patterns of the systemic biologic dupilumab for AD using University of Colorado Hospital and Children's Hospital Colorado electronic medical record databases. We sought to test the hypothesis that this expensive medicine (~\$3.5K/dose <https://www.drugs.com/price-guide/dupixent>, accessed 1/19/22) might be less commonly prescribed for Black and Hispanic patients. Study subjects were between the ages of 4 and 85 years of age as of 3/28/2017 (the date dupilumab was FDA approved to treat moderate to severe AD in those age 12 and older). AD diagnosis inclusion criteria included having at least two diagnoses of AD (defined as having at least two ICD-10 codes L20, L20.0, L20.8, L20.81, L20.82, L20.84, L20.89, L20.9). Any prescription of dupilumab was included. Dupilumab start date was required to be on or after 3/28/2017, and had to occur on or after a diagnosis of AD. 267 persons out of 7723 persons meeting AD diagnosis criteria received at least one dupilumab prescription. Mean (standard deviation) age among those prescribed dupilumab for AD was 47 (22) years and 57% were female. Analysis by patient characteristics revealed the following associations (odds ratio [confidence interval] p value): age per ten year increment (1.06 [1-1.12] 0.051), female (0.93 [0.73-1.20] 0.59), Black (2.3 [1.58-3.33] <0.001), and Hispanic (0.79 [0.50-1.19] 0.28). Our preliminary data revealed surprisingly that Blacks were more likely to be prescribed dupilumab than other racial and ethnic groups in our Colorado academic health care system. Our analysis will further explore associations with severity of disease, insurance type, and inclusion of patients who had multiple diagnoses of AD plus another diagnosis that may also be treated with dupilumab (e.g. certain cases of chronic rhinosinusitis with nasal polyps and asthma).



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Factors affecting electronic dermatology consultations for patients with uncertain cutaneous neoplasms

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With the growing incidence of skin cancer globally, electronic consultations (e-consults) can be a useful tool for dermatologists in the assessment of cutaneous lesions. In this study, we sought to characterize the social and institutional factors affecting completion of initial e-consults as well as in-office follow-ups. Patients with an ICD 10 code of neoplasm with uncertain behavior at The Ohio State University Medical Center that received an e-consult order from May 2017 to May 2021 were queried. Additional information collected included patient demographics, zip code affluence, follow-up in-office appointment and referral status, as well as number of completed visits. In-office follow-up appointments were defined as completed or as no-contact. These factors were then used to assess differences in the completion of e-consults, and the status of in-office follow-up appointments. A total of 667 patients were identified as having received an order for an e-consult, of which 427 (64%) had a completed e-consultation while 240 (36%) did not. Year of encounter ($p < 0.0001$) and number of completed visits ($p < 0.004$) were found to be significantly associated with completion of initial e-consult and remained significant in the multivariate model. For in-office follow-up appointments, 429 patients presented for an in-office appointment, while 82 had no contact. The status of follow-up appointments was significantly associated with patient's race ($p < 0.0001$), language spoken ($p < 0.0028$), and referral status ($p < 0.018$). In the multivariate model, patient race remained as the only significant association ($p < 0.003$). Electronic consultations to assess possible cutaneous neoplasms is an important tool in the growing incidence of skin cancer. Our study demonstrated a successful increased utilization of e-consults, though the follow-up model was affected by social factors. Additional systems need to be implemented to ensure minorities and non-native English speakers are obtaining adequate dermatologic care.

