The association between antibiotics for acne and subsequent infection sequelae and antimicrobial resistance: A systematic review
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Background: Antimicrobial resistance (AMR) is a major global health priority and antibiotics are the leading contributor to increasing AMR. Acne is highly prevalent and antibiotics are widely prescribed for acne. Average antibiotic use for acne ranges from a few months to many years. The dominant role antibiotics play in the treatment of healthy people with acne leads to questions about associations with AMR. Aim: To systematically search for and synthesize evidence around whether long-term oral antibiotic use in the treatment of acne in those over 8 years of age contributes to increased risk of infection or other outcomes suggestive of AMR. Method: We searched the following databases: Embase, MEDLINE, Cochrane and Web of Science using strategies developed with a librarian. Search ran in March 2019 and data back to database inclusion. Inclusion criteria: RCT, cohort or case-control studies investigating oral antibiotics for minimum of 28 days compared to those with acne not treated with oral antibiotics or the general population. Primary outcome: antibiotic treatment failure or infection caused by a resistant organism. Data extraction and bias assessment using ROBINS-I were undertaken by three reviewers with medical and epidemiological training. Results: 6096 abstracts and titles were screened for eligibility, 73 full text papers were reviewed and seven studies were included comprising one RCT, five cohort studies and one case-control study. Due to heterogeneity it was not possible to perform meta-analysis. Four studies investigated changes to flora (total across studies n=141,20-60) and three susceptibility of infection (total across studies n=35,109,34-623) including pharyngitis and respiratory infections. Studies had mixed findings and most had a serious or critical bias risk. Conclusion: The relationship between long-term antibiotics for acne and infectious or respiratory infections. Studies had mixed findings and most had a serious or critical bias risk.

Estimation of cutaneous squamous cell carcinoma incidence attributable to arsenic in U.S. water supplies
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Arsenic in water supplies potentially exposes millions of people to increased disease risk worldwide. Despite strengthened regulation, arsenic concentrations commonly found in U.S. water supplies may increase the incidence of cutaneous squamous cell carcinoma (cSCC). We estimated cSCC incidence attributable to arsenic in water supplies among U.S. non-Hispanic whites, a demographic with disproportionately high skin cancer incidence. We determined the number of people exposed to various concentrations of arsenic in water supplies by analyzing three datasets: urine samples from the National Health and Nutrition Examination Survey (2015–2016), public water supply data from the Environmental Protection Agency (2008–2011), and population data from the U.S. Census Bureau. We estimated that prevalence and sensitive scales and triggering factors of cutaneous sensory symptoms are associated with both gender and type of skin disorders. Taken together, these results demonstrate that prevalence, sensitive scales and triggering factors of cutaneous sensory symptoms are associated with gender and type of skin disorders. Conclusion: Prevalence, triggering factors and symptoms of cutaneous sensation vary with gender and skin disorders.

Factors associated with late initiation of adjuvant radiotherapy in Merkel cell carcinoma
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Introduction: Merkel Cell Carcinoma (MCC) is a rare skin malignancy with risk for locoregional recurrence and metastasis after definitive surgery. Several retrospective studies have suggested a survival benefit to be associated with the use of adjuvant radiotherapy (RT) after primary surgical resection and adjuvant RT is considered standard of care for high risk patients. Ideally, adjuvant RT should be initiated promptly after resection as delays in adjuvant therapy may allow tumor to re-grow. Methods: We examined 4,615 cases of MCC in the National Cancer Database (NCDB). Patients that were diagnosed at age ≥18, pathologic stage 1, and pathologic stage 2 were included. Patients with nodal involvement, no surgery, or palliative radiation were excluded. Patients who started RT more than 42 days after definitive surgery were considered to have received late adjuvant RT. Results: Factors associated with later initiation of adjuvant RT included a primary tumor site of the upper limbs and shoulder vs. the head and neck (OR 0.73; 95% CI: 0.54-0.98, p=0.041), tumor size of 1-2 cm vs. tumor size <1 cm (OR 0.69; 95% CI: 0.50-0.94, p=0.020), a tumor size >2 cm vs. tumor size <1 cm (OR 0.67; 95% CI: 0.48-0.91, p=0.018), and lymphovascular invasion (OR 0.70; 95% CI: 0.52-0.92, p=0.012). Discussion: An understanding of factors associated with a greater time interval following primary resection to initiation of adjuvant RT may shed light on how timeliness of RT initiation is prioritized for patients. Longitudinal treatment planning systems that allow clinicians to initiate adjuvant radiation treatment earlier in patients with more severe disease.

Implementing a teledermatology patient-facing mobile application in the VA
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Enhancing access to care is a general problem for health care and understanding how technological interventions are successfully implemented is increasingly important in a digital health care world. To identify key factors for implementing a teledermatology app in a large healthcare system, we report preliminary qualitative findings from evaluation of a patient-facing app that is being deployed by the U.S. Department of Veterans Affairs (VA) to provide dermatology care. The app allows patients to follow up with dermatologists remotely and is currently available at all VA medical centers. The VA app was developed in collaboration with the VA Health care System, San Francisco, California, United States, 5 Duke University School of Medicine, Durham, North Carolina, United States and 6 Durham Veteran Affairs Health Care Center, Durham, North Carolina, United States

Do less satisfied patients utilize more healthcare resources? A population study among U.S. adults with psoriasis
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How satisfied patients feel with healthcare utilization is rarely studied in adults with skin diseases. Healthcare utilization, such as hospitalizations, accounts for one-third of the annual economic burden of psoriasis. We sought to determine the impact of patient satisfaction on healthcare utilization among U.S. adult patients with psoriasis. One way that patient satisfaction is measured is through evaluation of patients’ perception of patient-provider communication. We performed a cross-sectional study using the Medical Expenditure Panel Survey (MEPS) from 2000-2017. Among 10,011,316 (weighted) U.S. adults (>18 years) with psoriasis reported during the 18-year period, 428,786 (4%) reported low patient satisfaction. Low patient satisfaction was measured using emergency room (ER) visit and overnight inpatient hospitalization frequencies. We adjusted for socio-demographic characteristics, skin diseases, healthcare utilization, and symptoms of cutaneous sensation. Conclusion: The association between antibiotics for acne and subsequent infection sequelae and antimicrobial resistance: A systematic review. The association between antibiotics for acne and subsequent infection sequelae and antimicrobial resistance: A systematic review.