



EPIDEMIOLOGY

## VALIDATION OF MEDICAL SERVICE INSURANCE CLAIMS AS A SURROGATE FOR ASCERTAINING VITILIGO CASES

*M Bell<sup>(1)</sup> - H Lui<sup>(1)</sup> - T Lee<sup>(1)</sup> - Y Zhou<sup>(1)</sup> - C Han<sup>(1)</sup> - S Kalia<sup>(1)</sup>*

*University Of British Columbia, Department Of Dermatology And Skin Science, Vancouver, Canada<sup>(1)</sup>*

**Background and Objective:** Using health insurance claims to indirectly study medical conditions is becoming more common. To our knowledge the epidemiology of vitiligo has not been previously validated using health insurance claims data. Therefore, our purpose is to develop a method for vitiligo ascertainment using health administrative data.

**Methods:** This study assessed the validity of vitiligo cases defined based on billing claims to British Columbia's universal health insurance program (Medical Services Plan, MSP), versus vitiligo as documented via direct individual medical chart review. We reviewed the medical records of 606 patients with a diagnostic code for "dyschromia" (ICD-9: 709) from January 1, 2016 – December 31, 2016. Claims-based algorithms combining ICD-9 diagnostic code 709 with treatment-specific data were tested to identify vitiligo patients.

**Results:** Based on the chart reviews, 204 (33.7%) patients were confirmed to have a vitiligo diagnosis. The highest performing algorithm included patients prescribed either tacrolimus, pimecrolimus, or phototherapy without benzoyl peroxide, and demonstrated a sensitivity, specificity, PPV, and NPV of 86.8% (95% CI: 82.1-91.4), 92.5% (90.0-95.1), 85.5% (80.7-90.3), 93.2% (90.8-95.7), respectively.

**Conclusion:** Insurance claims data can be used to indirectly ascertain vitiligo for epidemiologic purposes.

