

cost-utility analyses. Descriptive data from eligible publications were screened and summarized by reviewers, who also perform an assessment of the quality of each study. We described studied vaccines, their geographic distribution, author affiliation, funding sources, quality and results.

Results. There were 379/5,546 articles examining the cost-effectiveness of vaccines published in the CEA registry between 1980 and 2017. The United States ($n = 121$), Canada ($n = 36$), the Netherlands (30), and the UK ($n = 29$) were the largest publishers, accounting for 57% of total publications. Overall, publications covered 12 therapeutic categories of vaccines, with HPV vaccine-related articles accounting for the largest proportion of articles (25%; $n = 94$). While the majority of study authors reported academic affiliations ($n = 300$), most studies were funded by industry ($n = 120$) and government ($n = 94$). Most studies reported favorable findings, and 16% of articles ($n = 60$) reported cost-savings against comparator interventions. The median ICER of all vaccine cost-effectiveness analyses was approximately \$22,182 USD/quality-adjusted life year. The mean quality rating of all vaccine articles was 4.7/7, and was consistent across funding sources and vaccine type.

Conclusion. The publication of cost-utility analyses of vaccines has steadily increased over time. Given the impact of these studies on clinical practice and public health policy, more trained researchers and peer-review processes are needed to utilize this information, especially in jurisdictions that do not have a formal health technology assessment process for vaccines.

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2472. The Impact of State Medicaid Policies on Adult Vaccination Post Affordable Care Act Implementation

Alexandra Bhatti, JD, MPH; Public Health Law Program, Centers for Disease Control and Prevention, Atlanta, Georgia

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Background. Medicaid rules permit each state to determine which adult vaccines will be covered, the cost-sharing policy for adult vaccination services, provider reimbursement policy, and the settings where vaccines may be administered. Aside from coverage and cost-sharing policy variability across the country, provider reimbursement remains a large challenge to adult immunization services. Evidence shows that pregnant women with Medicaid insurance have lower rates of Tdap vaccination than those women who are privately insured. This study investigates the differences in policies in both fee for service and managed care arrangements post ACA implementation.

Methods. (1) Statutory and regulatory codes of all 50 states and DC were collected and relevant laws were analyzed and coded based on characteristics of the provisions. (2) Attorney identified and reviewed all publicly available material relating to benefit coverage, cost-sharing, and payment for adult vaccination under Medicaid from all 50 states and DC. (3) PHLP attorney conducted interviews of state Medicaid Directors. Questions addressed coverage, cost-sharing, and reimbursement policies in FFS and MCO arrangements and examined what factors influence policy design in and how immunizations are promoted thru Medicaid.

Results. Due to ACA, 32 states and D.C. implemented an expansion and 19 haven't. Those adults who now receive insurance via expansion have access to all ACIP adult vaccinations with no cost-sharing. 14 of these states and one non expansion state cover all Medicaid enrollees. There are 35 states and DC that have traditionally enrolled Medicaid adults where coverage may not exist or cost-sharing does exist. Payment also varies and in many cases reimbursement falls below the private sector payment resulting in providers who are unwilling to take a financial loss on providing vaccinations and facilities not receiving payment for vaccination services.

Conclusion. Many factors may impact adult immunizations some occur before a patient has the opportunity to choose to vaccinate. Sometimes providers are taking financial losses by vaccinating. Coverage and cost-sharing barriers still exist for non-expansion adults. Results from this study can help inform Medicaid policies and provide Medicaid programs insight into other policies around the country.

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2473. How Does Acquiring a Vaccine-Preventable Disease Impact Parental and Physician Responses to Vaccine Hesitancy?

Kate Allan, MSW, RSW¹; Barbara Fallon, PhD²; Jonathon Maguire, MD, MSc² and Dat Tran, MD, MS³; ¹Factor-Inwentash Faculty of Social Work, University of Toronto, Toronto, ON, Canada, ²St. Michael's Hospital, University of Toronto, Toronto, ON, Canada, ³Public Health Division, Oregon Health Authority, Portland, Oregon

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Background. Vaccine hesitancy poses an urgent threat to public health. This study aims to determine the frequency of children diagnosed with vaccine-preventable diseases (VPDs) accompanied by parental vaccine hesitancy, how physicians counsel parents of these children, and parents' intentions to vaccinate thereafter.

Methods. A one-time survey was sent to pediatricians and pediatric subspecialists through the Canadian Paediatric Surveillance Program (CPSP).

Results. In total, 925 pediatricians responded to the survey. 196 (21%) reported having seen a patient in the preceding 12 months who was diagnosed with a VPD whereby the patient or a sibling was not vaccinated or vaccination was delayed by parental choice. The most commonly diagnosed VPDs were pertussis (31%), varicella (27%), and pneumococcal disease (10%). The vast majority (94%) of pediatricians

indicated that the VPDs were not acquired outside of Canada. The child's vaccination status against the VPD prior to contracting the VPD was reported as follows: 81% (156/192) had no immunization and 19% had delayed immunization. When asked about intervention strategies, 23% (41/181) of respondents reported that they had used a formal strategy or structured approach to discuss vaccination with the vaccine-hesitant parent(s) prior to the patient contracting a VPD. 57% (101/178) reported that a formal strategy was used after the patient contracted the VPD. Respondents indicated that their impression was that 35% (64/183) of vaccine-hesitant parents would not vaccinate in the future; 33% (60/183) of respondents were unsure. 79% (147/186) of respondents reported that they were aware of existing tools to manage vaccine hesitancy (e.g., Canadian Paediatric Society Practice Point Working with vaccine-hesitant parents). Of those who were aware of existing tools, 69% (100/145) had used the tools.

Conclusion. Pediatricians frequently encounter children with VPDs whose parents are vaccine hesitant. A substantial number of Canadian pediatricians are either unaware of existing tools to address vaccine hesitancy or are not using them. It was the pediatricians' impression that a significant proportion of vaccine-hesitant parents would not vaccinate in the future despite their children having acquired a VPD.

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2474. Early Feedback From a Pilot of a Cognitive Computing System to Analyze Immunization Data

Sarah Ball, MPH, ScD¹; Marija Stanojevic, ME, BE²; Cindi Knighton, BS³; William Campbell, MPH¹; Alison Thaug, MBA¹; Alison Fisher, MPH³; Alexandra Bhatti, JD, MPH³; Yoonjae Kang, MPH²; Pam Srivastava, MS³; Fang Zhou, PhD²; Zoran Obradovic, PhD² and Stacie Greby, DVM, MPH³; ¹Abt Associates, Cambridge, Massachusetts, ²Temple University, Philadelphia, Pennsylvania, ³Centers for Disease Control and Prevention, Atlanta, Georgia

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Background. Immunization programs maintain and improve vaccination coverage to prevent diseases. Immunization program text data provide contextual information necessary to better understand vaccine coverage. However, text data analysis can be labor intensive. Cognitive computing systems address this challenge by systematically processing large volumes of text data.

Methods. Publicly available data were used. Formal data were gathered using scrapers and parsers to extract information from immunization-related websites, journals, and legislation. Informal data were collected via a social media search platform, Sysomos, from Twitter feeds. All data were preprocessed to remove irrelevant text. Existing algorithms analyzed data and retrieved the most closely related words or paragraphs and produced similarity scores for queries. Additionally, Word2vec and Glove algorithms were used to assess similarity and frequency of occurrence between queried and retrieved information.

Results. The system searches by query, date, and jurisdiction. A query can range from a single word to a whole document. The system understands similarities between words, sentences, paragraphs, and documents and retrieves text based on similarities to the query. Results are supplemented by similarity scores, dates, jurisdictions, web-links, and usernames (where applicable). Similarity scores allow for quantitative analysis on text data.

Conclusion. The pilot cognitive computing system used algorithms to quickly search formal and informal immunization text data, creating a well-rounded system. The formal data can help identify program activities associated with changes in vaccination coverage. The informal data can help assess information being shared through social media during an outbreak or other emergency. The system will stay relevant as long as new data are continuously incorporated to update the algorithms.

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2475. Hepatitis B Vaccination Coverage Amongst Asian-American Adults: A Population-Based Study of the Role of Race and Gender

Mohamed Elsaid, MPH, ALM, LEED-GA^{1,2}; Navaneeth Narayanan, PharmD, BCPS²; Rachel NeMoyer, MD² and Vinod Rustgi, MD, MBA¹; ¹Gastroenterology, Rutgers Robert Wood Johnson School of Medicine, New Brunswick, New Jersey, ²Epidemiology, Rutgers School of Public Health, Piscataway, New Jersey

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Background. An estimated 257 million individuals are living with hepatitis B Virus (HBV) worldwide. While the aggregate rate of HBV infection has been firmly decreasing in the United States, Asian males continue to experience the highest risk of infection. This study aims to investigate the racial and gender disparities in HBV vaccination coverage among Asian American adults using the 2012–2015 National Health Interview Survey (NHIS).

Methods. The study sample included 125,399 adults aged 18 to 85 who participated in the 2012–2015 NHIS. The main outcome was HBV vaccination status. Race/ethnicity was categorized into White-non-Hispanics, Black-non-Hispanics, Hispanics, Other, Asian-Indian, Chinese, Filipino, and Other-Asian (Korean, Vietnamese, Japanese, and other Asian subgroups). Complex survey methods were applied to all models to provide statistical estimates that are representative of US adults. Multivariable logistic regression models adjusting for age, education, region of residence, survey year, health insurance access, chronic liver disease, influenza vaccination, marital, employment and health status were fit to examine the associations between gender, race/ethnicity and HBV vaccinations status.