an analysis of all vaccine cost-effectiveness analyses was approximately $23.3 USD per 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

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Session: 252. Vaccine Policy and Hesitancy
Saturday, October 6, 2018: 12:30 PM

Background. Medicaid rules permit each state to determine which adult vaccines will be reimbursed. A study identified a need to better understand how adult vaccination coverage policies were implemented, and the settings where vaccines may be administered. Aside from coverage and cost-sharing policy variability across the country, provider reimburse-ment remains a large challenge to adult immunization services. Evidence shows that pregnant women with Medicaid insurance have lower rates of Tdap vaccination than those 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 the policies were analyzed and coded based on characteristics of pro-visions. (2) A survey instrument was developed and reviewed by all authors and a material related to benefit coverage, cost-sharing, and payment for adult vaccination under Medicaid from all 50 states and DC. (3) PHLP (Public Health Law Program) state Medicaid Directors were contacted by email, and questions were addressed on cost-sharing reimbursement policies in FFS and MCO arrangements. The data were analyzed for reliability and variables influencing policy design in how immunizations are promoted through Medicaid.

Results. Due to ACA, 32 states and D.C. implemented an expansion and 19 hav-en't. Those adults who now receive insurance via expansion have access to all ACIP recommended vaccines when paid by Medicaid. In general, there is a gap found in cost-sharing policy and the settings where vaccines may be administered. Aside from coverage and cost-sharing policy variability across the country, provider reimburse-ment remains a large challenge to adult immunization services. Evidence shows that pregnant women with Medicaid insurance have lower rates of Tdap vaccination than those who are privately insured. This study investigates the differences in policies in both fee for service and managed care arrangements post ACA implementation

Conclusion. Many factors may impact adult immunizations some occur before a patient has the opportunity to choose to vaccinate. Sometimes providers are taking financial compensation by vaccinating. Cost-sharing and cost-sharing barriers still exist for non-expansion adults. Results from this study can help inform Medicaid policies and provide information for policies and programs to promote better adult immunization rates.

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

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Background. Vaccine hesitancy poses a serious 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 was vaccinated by parental choice. The most commonly diagnosed VPDs were pertussis (31%), varicella (27%), and influenza (19%). The 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 hes-itant parent(s) prior to the patient contracting a VPD. 57% (106/181) were aware of existing tools to manage vaccine hesi-tancy (e.g., Canadian Paediatric Society Practice Point Working with vaccine-hesitant parents). Of those who were aware of existing tools, 69% (100/145) used the tools.

Conclusion. Pediatricians frequently encounter children with VPDs whose par-ents 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

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Background. Immunization programs maintain and improve vaccination coverage to prevent diseases. Immunization program text data provide contextual information for the development of vaccination policy. Text analysis can be labor intensive. Cognitive computing systems address this challenge by systemati-cally processing large volumes of text data.

Methods. Publicly available data were used. Formal data were gathered using scrapers and parsed to extract information from immunization-related websites, journals, and legislation. Informal data were collected via a social media search plat-form, 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 stored similarity scores for queries. Additionally, Word2vec and Doc2vec algorithms were used to assess similarity and frequency of occurrence between queried and retrieved information.

Results. The system searches by query, date, and jurisdiction. The 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 vac-cination 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

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Session: 252. Vaccine Policy and Hesitancy
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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 vac-cination coverage among Asian American adults during the 2012–2015 National Health Interview Survey (NHIS).

Methods. The study sample included 125,399 adults aged 18 to 85 who par-ticipated 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 groups). 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 vac-cination, marital, employment and health status were fit to examine the associations between gender, race/ethnicity and HBV vaccination status.
Results. An estimated 39.66% (95% CI; 38.07%, 41.25%) of Asian adults living in the US received HBV vaccination. Vaccination prevalence among male Asian adults was lower than their female counterparts 38.05% (95% CI; 35.66%, 40.44%) vs. 41.09% (95% CI; 38.96%, 43.21%). Among Asian adults, the adjusted odds ratio (AOR) of HBV vaccination for females was 1.20 (95% CI; 1.04, 1.39) times higher than males. The AORs for receiving the second dose of varicella vaccine were significantly higher when compared with white 1.21 (95% CI; 1.03, 1.41), 1.29 (95% CI; 1.10, 1.51), respectively for Chinese and Filipino Adults. We observed significant gender disparities in HBV vaccination AOR for Asian-Indian and Chinese adults. In both groups, females had higher AOR of HBV vaccination when compared with males, Asian-Indian 1.42 (95% CI; 1.04, 1.94) and Chinese 1.39 (95% CI; 1.07, 1.80).

Conclusion. Among Asian-Indian and Chinese adult residents of the United States, the association between race and HBV vaccination status differs by gender, with males having lower vaccination rates than females. Healthcare resources should be directed to these target populations to improve these rates.

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2476. Impact of the Vaccination Strategy on Varicella Burden Disease in Argentina
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Session: 253. Vaccines for Herpes Zoster Virus
Saturday, October 6, 2018: 12:30 PM

Background. Varicella (VZV) is one of the most frequent exanthematises diseases in childhood. In Argentina, around 150,000–180,000 total cases per year are registered; however, underreport exists and some 400,000 cases are estimated to occur annually. Varicella vaccine (VV) was included in the national immunization schedule (NIS) in 2015, with a 1-dose schedule administered at 15 months of age. The information provided by epidemiological surveillance is essential to evaluate the impact of public health decisions. Our objective was to describe and to compare the epidemiological situation of VZV infections in Argentina in two periods: pre (2010–2014) and post (2015–2017) vaccine introduction in NIS.

Methods. Descriptive study. We compared cases and incidence rates (R) of VZV per 100,000 population (global and disaggregated by age) reported to the National Health Surveillance System; in pre (Pre-VV) and post-vaccination (Post-VV) periods. Data analysis of 2015 was excluded since it was considered a transition year.

Results. Vaccination coverage for 2015 was 44.7%; 74.4% in 2016 and 75.5% in 2017. 282,392 cases of VZV were notified (R = 362,1) in Pre-VV period and 176,995 cases in Post-VV (R = 220.6), with a global incidence rate reduction of 39% (IC 95% 2017. 728,392 cases of VZV were notified (R = 362,1) in Pre-VV period and 176,995 cases in Post-VV (R = 220.6), with a global incidence rate reduction of 39% (IC 95% 51–52).

Conclusion. Three years after the implementation of VZV vaccination strategy, a significant incidence reduction was recorded, especially in children ≤5 years old, despite suboptimal coverage. Improving vaccination coverage will likely reflect a greater impact on the burden of disease.

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2477. Impact of Varicella Vaccination in the United States (US): A Dynamic Model-Based Analysis
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Session: 253. Vaccines for Herpes Zoster Virus
Saturday, October 6, 2018: 12:30 PM

Background. Routine childhood immunization with varicella vaccine was first recommended in the United States in 1995 as a 1-dose regimen for children aged 12–18 months, with updated recommendations in 2006 for a 2-dose regimen (first dose at 12–15 months; second dose at 4–6 years). Our objective was to estimate the impact of the US varicella vaccination program.

Methods. We developed a dynamic transmission model to predict the impact on varicella vaccination on health outcomes in the United States. Vaccine coverage rates were extracted from the US National Immunization Survey (NIS); first dose varicella vaccine coverage went from 12% in 1996 to 91% by 2016 for children 18 months old, and second dose coverage starting in 2006 at 5% increasing by 2016 to 94% for children 5 years old; we assumed that 50% of children with no history of vaccination or infection by age 13 would become vaccinated. Interactions between age groups were empirically characterized, and the model was calibrated using age-specific pre-vaccination varicella incidence data. Vaccine effectiveness was represented via vaccine take and waning immunity estimated from a 10-year trial.

Results. The model projected reductions of varicella incidence in all ages (and ages ≤15 years) of 46% (46%) in 2001, 76% (76%) in 2006, 78% (81%) in 2011, and 89% (93%) in 2016 (Figure 1). The projected reductions in varicella cases and varicella-related hospitalizations and deaths for all ages were 74%, 70%, and 66% by 2006 (one-dose era), respectively, increasing to 89%, 70%, and 69% by 2016 (two dose era), respectively (Figure 2). We estimate that between 1996 and 2016, 71,885,382 cases of varicella were prevented in the United States, together with 178,248 varicella-related hospitalizations and 1,496 deaths.

Conclusion. Our estimates are slightly lower than previously reported US surveillance data which identified a 97.4% (92.9%-97.9%) reduction between 1993–1994 and 2013–2014 in IL, MI, TX, and WV (WER 2016). Likely, this difference is related to under ascertainment of milder cases. This model can be used to estimate the public health benefits of varicella vaccination. The use of a dynamic transmission model does, however, have limitations, including assumptions about age-specific risk and severity of breakthrough disease and the use of a static population.

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