

Objectives: Discrete choice experiments (DCEs) are robust stated-preference methods frequently used to estimate maximum acceptable risk (MAR) as a secondary outcome. However, DCEs provide sample-level estimates and explaining preference heterogeneity for MARs based on participant characteristics can be difficult. The study objective was to compare the capability of a DCE and a probabilistic threshold technique (PTT) to identify preference heterogeneity among MARs for preventive rheumatoid arthritis (RA) treatment. **Methods:** Participants from 3 countries (United Kingdom (UK), Germany, and Romania, n = 2959) completed a DCE and PTT in random order. Participants made choices between treatments that reduced chance of developing RA but increased chance of three risks (mild and serious side effects, serious infection). For the PTT, interval regressions estimated MARs that accounted for age, education, numeracy, literacy, and RA family history. For the DCE, random parameters logit (RPL) models were used to calculate MARs for subgroups in which heterogeneity was identified in the PTT. **Results:** The PTT identified preference heterogeneity for numeracy, literacy, and family history. Regarding these characteristics, the PTT identified statistically significantly different MARs ($p < 0.05$) for at least one risk in at least two countries. The DCE identified preference heterogeneity for the chance of serious infection between UK participants with low vs. high numeracy ($p < 0.05$). Using the DCE, no statistically different MARs were identified for other combinations of participant characteristics, risks, or countries. **Conclusions:** The PTT identified preference heterogeneity in MARs for more participant characteristics by directly incorporating participant characteristics in the regression model. When attempting to estimate MARs, PTT may partially overcome challenges with stratified DCE models, particularly if analyses such as latent class analysis are not feasible or desirable. Further research is needed to confirm the findings in this case studies and to explore which method most accurately identify true underlying preference heterogeneity are needed.

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EVALUATING PREFERENCES AND THE EFFECT OF ALTRUISM ON COVID-19 VACCINE DECISIONS: A DISCRETE CHOICE EXPERIMENT

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Objectives: To elucidate how Americans value COVID-19 vaccine characteristics, and determine whether their willingness to vaccinate is altered by the framing of the vaccination decision as altruistic or not. **Methods:** We conducted a discrete choice experiment (DCE) with Amazon MTurk participants randomized into a control group with standard DCE questions, versus a treatment group with questions framed altruistically. The survey consisted of demographic questions, an altruism index, and a DCE of 12 choice tasks with 3 profiles (Vaccine A, Vaccine B, and No Vaccination). Vaccine attributes included number of doses, efficacy in preventing infection, risk of severe disease, severe side effect type, risk of severe side effect, and subsidy. We estimated preference weights using multinomial logit models, controlling for framing, sex, age, political party, health status, race/ethnicity, and altruism score. **Results:** Sample included 2,014 respondents (control with no framing, n=1,037; altruism framing, n=977). Respondents preferred COVID-19 vaccines with allergic reactions vs neurological disorder as side effects (OR: 1.32; $P < 0.01$), higher efficacy (OR: 1.03; $P < 0.01$), higher subsidies (OR: 1.00; $P < 0.01$), lower risk of side effects (OR: 0.99; $P < 0.01$), and lower risk of severe disease (OR: 0.99; $P < 0.01$). Preferences for single- vs double-dose formulations did not significantly differ ($P > 0.01$). Respondents with higher baseline altruism scores were more likely to prefer vaccination compared to those with lower altruism scores (RR: 1.83; $P < 0.01$). However, framing neither significantly affected preferences for vaccination nor modified the effect of baseline altruism on these preferences for vaccination. **Conclusions:** Preferences were strongest for vaccines with less severe side effects, suggesting that innovators should prioritize COVID-19 vaccines with these characteristics. More altruistic individuals were more likely to vaccinate, but framing did not modulate vaccination decisions, implying its limited nudging effects for vaccination.

Impact of the COVID-19 Pandemic: Healthcare Utilisation and Outcomes

P21

SOCIAL DISTANCING AND TRENDS IN INFLUENZA HOSPITALIZATION DURING THE COVID-19 OUTBREAK: A DIFFERENCE-IN-DIFFERENCE ANALYSIS OF GERMAN CLAIMS DATA

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Objectives: As COVID-19 spread worldwide, indicators of influenza activity in the Northern Hemisphere began to decline by mid-to-late February. In Germany, federal lockdown measures were introduced to contain the outbreak on 22/03/2020 (week

12). We used claims data from AOK PLUS, a regional sickness fund covering around half the population in Saxony and Thuringia (6.2 million inhabitants), to examine the trend of influenza hospitalizations in 2020 compared to 2019. **Methods:** Using data from 01/01/2019 to 31/05/2020 (weeks 1-22), influenza hospitalizations were identified using ICD-10-GM codes J10-J11. We estimated changes in the number of influenza hospitalizations using a "difference-in-differences" model including variables for age group (<18, 18-44, 45-64, 65-79, 80+), gender, week, year, and outbreak status (interaction variable between year 2020 and week 12 or later). Adjusted incidence rate ratios (aIRRs) were estimated using Poisson regression with heteroskedasticity-robust standard errors. **Results:** During weeks 1-22, we observed 5,174 influenza hospitalizations in 2019 and 2020. Influenza hospitalizations in 2020 showed similar trends until week 12 and then showed a relative decline compared to 2019. The average number of influenza hospitalizations per week during weeks 12-22 significantly decreased in 2020 compared to 2019 (1.6 vs. 5.2; aIRR: 0.45; 95% CI: 0.34-0.59; $p < 0.001$). When stratified by age group, all groups except age 18-44 had a similar decrease in average influenza hospitalizations per week in 2020 compared to 2019, with large relative declines in patients age 80+ (2.2 vs. 5.8; aIRR: 0.38; 95% CI: 0.28-0.46; $p < 0.001$) and children <18 (1.8 vs. 8.0; aIRR: 0.38; 95% CI 0.32-0.46; $p < 0.001$). **Conclusions:** The number of influenza hospitalizations saw a relative faster decline in 2020 compared to 2019 after the introduction of federal lockdown measures in Germany, possibly due to the effectiveness of non-pharmaceutical interventions like social distancing and the use of facemasks.

P22

COVID-19 PANDEMIC IMPACTS VOLUME OF EVALUATION & MANAGEMENT (E&M) TELEHEALTH VISITS WITHIN COMMUNITY ONCOLOGY PRACTICES

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Objectives: The USA declared the COVID-19 pandemic a national emergency on 03/13/20. On 03/17/20, CMS expanded telehealth rules, allowing Medicare to cover telehealth visits like regular visits. This study aims to analyze the utilization of Evaluation & Management (E&M) telehealth options in community oncology pre and post pandemic. **Methods:** Deidentified patient visits data were obtained from iKnowMed electronic health records between 01/01/18 to 05/24/2021 from 20 US Oncology practices. A combination of patient MRN and date was used as an identifier to report number of visits for all measures. Patient visits with modifiers -GT, -95, and -GQ were classified as telehealth visits. Visit dates without modifiers were defined as non-telehealth (in-office) visits. E&M visits were defined based on standard CPT codes. **Results:** A total of 5,914,125 unique E&M patient visits were analyzed during the study period. Between Jan-2018 and Mar-2020 (pre-COVID-19), E&M visits rose from 30,000/week to 36,000/week (20%). Fewer than 0.01% of these visits were telehealth. By April 12, 2020, overall E&M visits had dropped 35%, but the telehealth visits had risen to 16%. Since then, the overall E&M visit count remained approximately 5% lower as compared to the pre-COVID-19 trend, and telehealth visits averaged approximately 6% thereafter. Corresponding to the 2nd wave, in Dec-2020 the telehealth proportion rose again to 10%. As of 05/23/2021, telehealth E&M visits represented approximately 5% of the total E&M visits within US Oncology practices. **Conclusions:** This study provides a timeline of how COVID-19 has impacted E&M visits and telehealth utilization among community oncology practices. The pandemic has led to an increase in E&M telehealth visits that may remain post pandemic. Continued research is necessary to monitor telehealth utilization and its impact on the quality of care, provider finances, and future of community oncology considering rising vaccination rates, CDC guidance, and public sentiment.

P23

CHANGE IN HEALTHCARE UTILISATION AND INPATIENT MORTALITY IN PATIENTS HOSPITALISED WITH HEART FAILURE DURING THE CORONAVIRUS PANDEMIC IN ENGLAND: A RETROSPECTIVE CROSS-SECTIONAL STUDY UTILISING HES

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Objectives: This study quantifies change in healthcare utilisation and inpatient mortality of all adult patients hospitalised with Heart Failure in England during three coronavirus national lockdowns compared to the same time period in the previous year. **Methods:** A retrospective cross-sectional study using the Hospital Episode Statistics (HES) database was conducted. All adults admitted to an English hospital with a primary diagnosis of I110 Hypertensive heart disease with (congestive) heart failure, I255 Ischaemic cardiomyopathy, I420 Dilated cardiomyopathy, I429 Cardiomyopathy unspecified, I500 Congestive heart failure, I501 Left ventricular failure and I509 Heart failure unspecified between 1st March 2019 and 28th February 2021 were included. Admissions, bed days and inpatient deaths of patients admitted between 1st March 2020 and 28th February 2021 (during pandemic) was compared with patients admitted between 1st March 2019 and 29th February 2020 (prior to pandemic).

The difference in event count was used to test national changes and a P-value of ≤ 0.05 was used to test significance. **Results:** There were 140,035 heart failure admissions in the observational period, 64,770 during the pandemic and 75,265 prior to the pandemic, all data were analysed. There were reductions in admissions (69,555 vs 80,715, $P < 0.0000000000$), bed days (586,430 vs 753,985, $P = 0.0000000000$) and inpatient deaths (7,650 vs 8,305, $P = 0.0000002154$) during the pandemic. **Conclusions:** There were significantly fewer admissions, bed days and inpatient deaths for patients admitted with heart failure during the coronavirus pandemic. Interpretation of this change is challenging as this may reflect unmet health needs as patients 'put off' seeking care. Further research is required to analyse the change in out of hospital healthcare utilisation, deaths in other settings and to explore potential for excess and latent morbidity and mortality that may result from reduced access to hospital services during the pandemic.

P24 TELEHEALTH ACCESS AND USE BY THE U.S. MEDICARE POPULATION DURING THE PANDEMIC

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Objectives: Telehealth access and reimbursement varied by payer and regionally prior to COVID-19, and its limited availability expanded in response to the pandemic. The health behavioral response by older adults to COVID-19 has varied over time with the geographic spread of the pandemic and affected access and utilization of medical services. The purpose of this paper is to examine changes in access to telemedicine in 2020 in response to the pandemic for the U.S. Medicare population. **Methods:** The first two waves in June and October 2020 of the rapid response survey fielded by the Centers for Medicare and Medicaid Services (CMS) to track and monitor the effects of the pandemic within the U.S. Medicare population. With a panel sample size of 9686 Medicare beneficiaries, the calculated statistics use replicate weights to adjust for the complex survey sample design and balanced repeated replication using Fay's adjustment of 0.3 for variance estimation. **Results:** Nearly 45 percent of the Medicare population reported use of a telehealth appointment between June and October of 2020. The likelihood of using telemedicine increased for those with chronic conditions, such as depression, and for those with higher incomes and education. Medical practices were more likely to encourage telehealth visits for Medicare patients between March and June with 57 percent of the Medicare population reporting that their usual provider offered a telemedicine appointment to replace a regular office visit during the spring and 48 percent reporting the suggested telemedicine replacement from July through October 2020. Overall access to telehealth increased from 60% to 64% but varied by race/ethnicity, gender, Census regions, and rural status. **Conclusions:** Access to telemedicine services expanded for the U.S. Medicare population during the pandemic but usage varied by chronic disease status, socioeconomic and demographic factors, and geography.



Impact of the COVID-19 Pandemic: Investigations in Populations of Interest

P25 IMPACT OF COVID-19 ON THE HEALTH-RELATED QUALITY-OF-LIFE OF PREGNANT AND POSTPARTUM PERSONS

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Objectives: To assess the impact of COVID-19 on health-related quality-of-life (HRQoL) of those who were pregnant or recently pregnant during the pandemic. **Methods:** Individuals who were pregnant any time since January 2020, the beginning of the pandemic, were invited to participate in an online, national US survey (EuroQol grant: 260-2020RA). Respondents were asked to self-report their experiences with COVID-19, to complete the EQ-5D-5L, and other measurements of HRQoL. To estimate the association between COVID-19 infection with the EQ-5D-5L outcomes, we used median regression for the EQ-5D utility and EQ-VAS scores, and ordinal logistic regressions for the EQ-5D-5L health items. Post-stratification weights were used to ensure representation by age, race and US census region. **Results:** Among pregnant or postpartum persons, the median EQ-5D-5L utility score was 0.87 and EQ-VAS was 0.80. The median EQ-5D-5L utility score increased by 0.0058 (95% CI 0.0026, 0.009) for each additional year of age of the respondent. We observed no change in EQ-5D-5L utility measures by maternal age ($\beta = 0.00$; 95% CI -0.09, 0.09). On average, comparing Black pregnant persons to White, EQ-5D-5L utility values were 0.44 points lower, and EQ-5D-VAS scores were 0.31 points lower. Although median EQ-5D-5L utility values were similar for those with and without a diagnosis of COVID-19 (0.87 and 0.88), utility values declined by 0.022 (95% CI -0.040, -0.010) for each unit increase in perceived COVID-19 severity. Similar results were observed for the EQ-5D-VAS scores. When we evaluated EQ-5D-5L items individually, respondents diagnosed with COVID-19 reported more problems related to anxiety/depression compared with those who did not (OR 2.43; 95% CI 1.35, 4.40). No other items were significantly associated with COVID-19. **Conclusions:** We observed lower HRQoL measures associated with severe COVID-19 infection during pregnancy. In particular, problems with anxiety and depression contributed most strongly to lowered HRQoL during pregnancy.



P26 THE PRACTICE OF FACE MASKING AMONG YOUNG ADULTS IN SOUTH INDIA: AN ONLINE CROSS-SECTIONAL SURVEY DURING SECOND WAVE OF COVID-19

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Objectives: COVID-19 pandemic urges the need for respiratory protective equipment like face masks as a public health measure to control the spread of infection. This study aimed to investigate the trends followed in the practice of mask-wearing by the South Indian population amid the second wave of COVID-19 outbreak in 2021. **Methods:** A web-based, online cross-sectional survey was conducted among the young adult population in India in late April 2021. An eight-item questionnaire was designed to assess the social perceptions and attitudes regarding wearing a face mask as a part of universal safety precautions. The social perceptions towards wearing masks were categorized as excellent, good average and poor on a scale (Social Perception Scale -SPS) scored out of 8. The details collected using a pre-designed google form are statistically analyzed using the Chi-square test with a p-value of < 0.05 is considered statistically significant. **Results:** Among the 1283 participants who completed the questionnaire, 57% wore cloth masks followed by 26% wearing N95 masks and 12% wearing surgical masks. Even though the age of the study population varied from 19 – 76 years and with a male preponderance of 56.3% (n = 723), students and recent graduates participated largely in the study (71.8%, n = 922). A mean SPS score of 5.67 ± 1.07 (out of 8) indicates that the social perception of the study population is good. A statistically significant association is observed between the SPS score and the age ($p = 0.003$), type of mask used ($p < 0.001$), and economic background of the study population ($p < 0.001$). Breathing difficulty, communication problems, additional cost incurred and dermatologic issues were commonly reported barriers against mask-wearing. **Conclusions:** Adjunctive public health measures such as mask-wearing are crucial in curbing the COVID-19 transmission. By shaping an appropriate public attitude, policymakers can ensure compliance towards mask-wearing.



P27 VACCINATION COVERAGE TRENDS FOR HEPATITIS B IN INFANTS FROM THE BRAZILIAN AND COLOMBIAN EXPANDED IMMUNIZATION PROGRAM: A REAL-WORLD ANALYSIS OF COVID-19 PANDEMIC IMPACT

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Objectives: COVID-19 pandemic has posed major challenges for healthcare systems and societies worldwide. Mitigation measures and the fear of exposure to COVID-19 might have negatively impacted local health policies, such as pediatric immunization programs strategies. This observational study aims to analyze the vaccination coverage (VC) for hepatitis B in infants in Brazil and Colombia between 2015 to 2020. **Methods:** This is a descriptive analysis using real-world data from the Expanded Immunization Program System from Brazil (SI-PNI) and the Epidemiological Surveillance System from Colombia (SIVIGILA). We calculated the annual variation of VC for hepatitis B in infants from 2015 to 2020 for both countries. **Results:** Overall, Brazilian VC had an average annual decline of 3.6% in the pre-COVID-19 period (2015-2019), reaching the lowest coverage in 2019 (78.57%), while the Colombian VC had an increasing pattern for the same period (0.4% annually), reaching the highest coverage in 2017 (89.3%). In 2020, VC decreased by 19.8% in Brazil, compared with 2019. In Colombia, VC decrease was notably lower (1.0%). **Conclusions:** In Colombia, VC increase might be explained by the implementation of the national plan for hepatitis B elimination in infants during this period. In Brazil, VC coverages for several other infectious diseases have also faced a decrease during the last years, but no formal mitigation activity or plan was yet established. Although both countries showed a reduction of the VC coverage in 2020, the impact was considerably higher in Brazil. These trends could be explained by the distinct health strategies linked to the Expanded Immunization Programs for each country in preparation for the COVID-19 pandemic.



P28 IMPACT OF COVID-19 ON MENTAL HEALTH IN YOUNG ADULTS IN THE UNITED STATES

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Objectives: To assess the impact of COVID-19 pandemic on mental health in young adults in the US. **Methods:** Three waves of online surveys were designed to capture mental health status in the US (EuroQol grant: 84-2020RA): Wave1 (Apr 1st – May 6th, 2020 (n=2,734)), Wave2 (July 4th – Sept 4th, 2020 (n=2,454)), and Wave3 (Jan 10th – Mar 15th, 2021 (n=2,252)) using the EQ-5D-5L to evaluate respondent's health-related quality-of-life (HRQoL) and the Patient Health Questionnaire (PHQ-4) to assess anxiety and depression. The EQ-5D-5L utility, VAS scores and 5 domains were stratified by age, gender, and race/ethnicity. Binary Logistic regressions were used to estimate the associations between anxiety/depression and various covariates. Chi-square tests were conducted for significant differences in mental health outcomes between age groups. **Results:** Most participants were white (68.7%) non-Hispanic

