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benefits. However, analysis and consideration of the PHI in vaccine policy decision-making can differ significantly across assessing bodies. This review provides an overview of different elements that contribute to the extensive PHI considered for three vaccine examples implemented in national immunization programs. **Methods:** A scoping review of three pediatric, adolescent and adult vaccines (meningococcal serogroup B, human papillomavirus and herpes zoster) was conducted to assess whether and which elements of the PHI have been explored and considered by National Immunisation Task Advisory Groups and Health Technology Assessment Bodies. Their meeting minutes and public summary documents were reviewed, as well as relevant published evidence with focus on the PHI analysis for vaccination. **Results:** Six categories, each spanning distinctive elements considered in the PHI analysis were identified: (1) morbidity, mortality, and disability; (2) herd-immunity and disease control; (3) summary measures of the quality of life capturing impact of the disease on the patient, surrounding families and wider networks; (4) costs related to morbidity/mortality/disability for the patient, households, healthcare-system and society; (5) social severity preferences; and (6) considerations of discounting. **Conclusions:** Elements considered in the PHI analysis are broad, ranging from morbidity to social severity preferences as well as discounting of costs and health benefits. This range, including the significant impact of vaccination beyond the vaccinated, shows the need for a different value assessment framework for vaccines than that for therapeutic drugs. By capturing the comprehensive and distinctive benefits associated with vaccination, the extensive PHI analysis allows decision makers to infer about vaccine impact in a real-world setting on their population of interest. It provides relevant insights, which will help them in optimizing vaccination schedules in their jurisdictions.

PIN31 THE EPIDEMIOLOGY AND COST OF DENGUE DISEASE IN THAILAND: A SYSTEMATIC LITERATURE REVIEW

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Objectives: Dengue is a public health concern in tropical and subtropical regions, that is endemic in Thailand and reported in all four regions: Northern, Central, North-Eastern and Southern. This study aimed to systematically review published and publicly available data on the epidemiology and costs associated with dengue to better characterize the burden of dengue in Thailand and to ascertain the most robust data to parameterise cost-effectiveness evaluations for dengue in Thailand. **Methods:** Two separate comprehensive electronic searches for epidemiology and costs were conducted using Embase, Medline and Evidence Based Medicines Review Database. Epidemiology articles published from 2011-2019 and cost articles published from 2009-2019 in English and Thai were included. Reports from the National Ministry of Public Health and grey literature sources from the same time periods were also reviewed. Following the PICO process, articles reporting incidence, seroprevalence, serotype distribution, expansion factor as well as direct and indirect costs were included. NIH and NHS tools were used to assess the quality of studies. **Results:** 30 published articles fulfilled the inclusion criteria. 13 reported dengue incidence with variation by age and region. The highest incidence was observed in individuals under 14 years (203.7/100,000 in 2015). No national seroprevalence survey was identified however 11 regional/provincial cross-sectional studies of dengue seroprevalence were retrieved. 13 studies reported serotype distribution with circulating serotypes varying by year and region. 2 studies reported expansion factor data. 4 studies reported cost of illness data for three Thai provinces; with most studies reporting direct medical and non-medical costs and indirect costs. **Conclusions:** Heterogeneity in methodological approaches for published epidemiological articles make it challenging to compare between studies. Evidence on the cost of dengue is limited, nevertheless the data collected in this review can be used to inform researchers choice of appropriate model parameters for future dengue virus health economic modelling.

PIN32 DISEASE BURDEN OF HEPATITIS C INFECTION AMONG THE GENERAL POPULATION IN ASIA: A SYSTEMATIC REVIEW

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Objectives: To estimate the disease burden of hepatitis C virus (HCV) infection among the general population in Asia. **Methods:** Original studies on the estimates of HCV-related burden among the general population in Asia countries published from 2018 to 2020 were retrieved from Medline and Embase. Study characteristics and outcomes including seroprevalence/sex- and age-specific seroprevalence, incidence and mortality were extracted. Separated analysis among pregnant women, blood donor, health-check examinee, community and other general populations were conducted. Outcomes were compared between countries and populations. **Results:** Of 1,142 studies identified, 29 unique studies considering seroprevalence/sex- and age-specific seroprevalence (n=25/8), incidence (n=4) and mortality (n=1) were included. Seroprevalence were available in 15 countries: from 0.02%

(Bangladesh) to 51.36% (China) among blood donor (n=10); from 0.36% (China) to 3.60% (India) among community (n=8); 0.50% (Georgia) among pregnant women (n=1); 0.60% (South Korea) among health-check examinee (n=1) and from 0.30% (India) to 20.30% (Mongolia) among other general populations (n=10). Sex- and age-specific seroprevalence were available in 7 countries: seroprevalence in male was found to be higher than in female in Thailand (1.30% vs. 0.90%), Indian (4.00% vs. 3.20%) and China (0.43% vs. 0.33%); but lower than in female in South Korea (0.54% vs. 0.66%); seroprevalence was found to increase with age in South Korea, China and Thailand but decrease in older age group in India and Pakistan. Incidence rates (per 100,000 person-years) were available in China (15.21% among blood donor; 2.29%-3.03% among the general population) and Japan (0.40% among blood donor). All-cause mortality in HCV-infected patients were only available in Taiwan (9.81% in mean 6.6-year follow up). **Conclusions:** Clinical burden researches are mainly conducted for specific countries in Asia and varied across different countries and different populations. Anti-HCV seroprevalence varies widely among sex and age groups and sex- and age-specific data on HCV-related burden are limited.

PIN33 PUBLIC HEALTH BEHAVIOUR CHANGES DURING THE COVID-19 OUTBREAK IN CHINA: A COMPARISON IN DIFFERENT RISK GROUPS

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Objectives: The objective is to assess general public's preventive behaviours in response to the outbreak and its difference in populations at different risk levels **Methods:** A cross-sectional survey was conducted during February 2020. Self-administered questionnaires were distributed among general population via online platform. The risk level of participants was defined as follows: low risk (no family member, relative or friend suspected or contracted with COVID-19), moderate risk (having family member, relative or friend suspected with COVID-19 or unknown), high risk (having family member, relative or friend contracted with COVID-19). The ANOVA test was used for the comparison. **Results:** A total of 1,729 participants were included in the analysis, covering 28 provinces and representing the regional severity of the epidemic. The study showed the proportion of participants taking substantial preventive measures increased dramatically from 18% to 52%, when the human-to-human transmission nature of COVID-19 was declared. And from February onwards, all participants took preventive measures. The mean time spent on learning epidemic information was significantly different among the 3 groups (low risk=1.93 h, moderate risk=2.27 h, high risk=2.38 h, p value<0.001). There were also significant differences in the way the 3 groups consulted online platforms to manage their health, specifically in terms of virus prevention, checking disease symptoms and managing their mental health respectively: high risk (78%, 68%, 41%), moderate risk (76%, 65%, 39%), low risk (64%, 46%, 26%) (p values<0.001). The result showed that 98% participants from high risk group were willing to take COVID-19 vaccine if it is available, followed by 97% from moderate risk and 92% from low risk. A significant difference in future COVID-19 vaccination was observed among groups (p value<0.001). **Conclusions:** The timely adoption of adequate preventive measures in general population played an important role in containing the spread of COVID-19. The population with higher risk exposure was more engaged in anti-virus activities.

PIN34 EFFECTS OF METEOROLOGICAL FACTORS ON THE DAILY DOMESTIC NEW CASES OF CORONAVIRUS DISEASE (COVID-19) IN ASIAN COUNTRIES: A MULTI-COUNTRY GENERALIZED ADDITIVE MODELING ANALYSIS

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Objectives: Since the first case of novel coronavirus-caused pneumonia was identified in December 2019, the number of new cases has been increasingly reported across China and the world. Therefore, this study investigated the associations of meteorological factors with the daily new cases of coronavirus disease (COVID-19) in nine Asian cities. **Methods:** Pearson correlation and generalized additive modeling were performed to assess the relationships between daily new COVID-19 cases and meteorological factors (daily average temperature and relative humidity). **Results:** The Pearson correlation showed that daily new confirmed cases of COVID-19 were found to be correlated with the average temperature and relative humidity. Moreover, generalized additive modeling analysis showed that generally, the number of daily new cases was positively associated with both average temperature and relative humidity. However, the results were inconsistent across cities and lagged time, which suggested a greater odds that the meteorological factors were unlikely to greatly influence the COVID-19 epidemic. **Conclusions:** The associations between meteorological factors and the number of COVID-19 daily cases are inconsistent across cities and time. Large-scale public health measures are still required before vaccine is available.