complicações de pneumonia devido à DTRI-VSR, hospitalizações (assumidas conservadoramente apenas às DTRI-VSR) e mortes em um período de três anos. A cobertura vacinal para uma dose única considerada no modelo foi de 30% a 70%. Os dados demográficos são valores específicos do Brasil (2024) provenientes das Nações Unidas. Os dados epidemiológicos foram recuperados de banco de dados público (FluNet) e complementados por revisão sistemática da literatura. A eficácia da vacina foi obtida do estudo clínico de fase 3 AReSVi-006 (NCT04886596).

Resultados: No Brasil, a coorte incluiu 33.859.754 adultos ≥ 60 anos. Na ausência de vacinação, o modelo projetou 6.641.784 casos de DRA-VSR (3.480.113 de DTRS-VSR e 3.161.671 de DTRI- VSR), 243.205 casos de pneumonia, 264.214 hospitalizações e 25.083 mortes por VSR em três anos. Com a cobertura aumentando de 30% para 70%, o modelo projetou que a vacinação pode prevenir de 780.189 a 1.820.442 casos de DRA-VSR (264.146 a 616.341 de DTRS-VSR e 516.043 a 1.204.101 de DTRI-VSR), 39.696 a 92.623 casos de pneumonia, 43.125 a 100.624 hospitalizações e 4.094 a 9.553 mortes por VSR. O número necessário para vacinar para prevenir um caso de DRA-VSR e um caso de DTRI-VSR foi estimado em 13 e 20, respectivamente.

Conclusões: Os resultados revelam que aproximadamente 20% da população brasileira com idade ≥ 60 anos está em risco de infecção por VSR nos próximos três anos, e a carga ao sistema de saúde é substancial. A prevenção por meio da vacinação com RSVPreF3 tem o potencial de produzir consideráveis benefícios, reduzindo a morbidade, a utilização de serviços de saúde e a mortalidade associadas às infecções por VSR.

Palavras-chave: Vírus Sincicial Respiratório, Vacina VSR Adjuvantada, ≥ 60 anos.

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RELATIONSHIPS BETWEEN MORBIDITY AND MORTALITY FROM MPOX AND THE HUMAN DEVELOPMENT INDEX (HDI) GLOBALLY DURING 2022-2024 EPIDEMICS

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Introduction: Multiple aspects of the epidemics of mpox during 2022-2024 have been explored, including clinical features, diagnostic aspects, therapies and vaccines. However, socioeconomic aspects have been poorly assessed in terms of the epidemiologically associated factors. No studies have been published on the relationships between the human development index (HDI) and the morbidity and mortality from Mpox.

Methods: An ecological study for 104 countries was done using HDI data that were obtained from the United Nations Development Program (UNDP), and the cases, calculating the incidence rates (cases per 100,000 pop.), from the U.S. Centers for Disease Control (CDC) and the World Health Organization (WHO). Also, mortality rates (cases per 100,000 pop.) and case fatality rates (deaths per 100 cases, %CFR) were calculated. The annual variation of the variables was assessed, and non-linear regression models (exponential) were done at Stata/MP® v.14.0.

Results: The non-linear regression models revealed significant findings. The relationship between epidemiological factors and HDI was found to be significant. During this epidemic, a higher incidence was observed in countries with high HDI ($r2 = 0.4132$; $p < 0.0001$), while mortality rates were significantly lower in these countries ($r2 = 0.1317$; $p = 0.0007$). Conversely, the case fatality rate (%CFR) was significantly higher in countries with lower HDI ($r2 = 0.1595$; $p = 0.0001$).

Discussion/conclusions: These findings underscore the significant influence of socioeconomic indicators such as the HDI on the Mpox incidence and mortality rates and on %CFR globally, particularly in endemic countries. Despite the epidemics of 2022-2024, Mpox remains a neglected condition worldwide, with a resurgence in countries like the Democratic Republic of Congo in 2023-2024. Therefore, the need for further studies on multiple epidemiological factors of Mpox is paramount.

Keywords: Mpox, Epidemics, Human Development, Global, Surveillance.

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RELATIONSHIPS BETWEEN MORBIDITY FROM MPOX AND INTERNATIONAL TOURISM GLOBALLY DURING 2022-2024 EPIDEMICS

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Introduction: Multiple aspects of the Mpox epidemics during 2022-2024 have been explored, including clinical features, diagnostic aspects, therapies, and vaccines. However, socioeconomic aspects have been poorly assessed regarding the