



Global and Regional Economic Burden of Herpes Simplex Virus Infection



Chaiyakunapruk N¹, Lee S², Kulchaitanaroaj P³, Rayanakorn A⁴, Looker K⁵, Hutubessy R⁶, Mello B⁶, Gottlieb S⁶

¹University of Utah, UT, USA, ²Monash University Malaysia, Bandar Sunway, Malaysia, ³The University of Iowa, IA, USA, ⁴Chiang Mai University, Chiang Mai, Thailand, ⁵University of Bristol, Bristol, UK, ⁶World Health Organization, Geneva, Switzerland

OBJECTIVES:

To estimate the global economic impact of HSV-2 and HSV-1 infection among adults aged 15-49 years, pregnant women and neonates, and human immunodeficiency virus (HIV) infection attributable to HSV-2.

METHODS:

- Existing epidemiological data disaggregated to country level data for HSV-2 and HSV-1 for
 - genital ulcer disease
 - HSV attributable to HIV infection
 - neonatal herpes
- Healthcare resource utilization data and unit costs were obtained from systematic reviews
- Supplemented with 19 expert interviews of all 6 WHO regions
- Burden at country levels calculated using societal perspective and aggregated to regional levels and presented as Int\$

RESULTS:

Table 1: Economic burden due to HSV-2 globally and by WHO region

WHO region	GUD	Pregnancy	Neonatal	HIV
African	2,030,117,006	28,440,999	1,080,462	219,360,971
Americas	3,283,610,267	1,557,262,596	3,698,866	78,484,879
Eastern Mediterranean	1,216,630,838	102,793,528	614,349	795,820
Europe	1,337,673,214	652,768,748	1,839,842	40,805,103
South East Asia	888,653,204	216,862,211	183,874	5,562,370
Western Pacific	4,374,049,588	1,206,599,031	1,766,489	7,818,471
Total	13,130,734,117	3,764,727,112	9,183,882	352,827,615

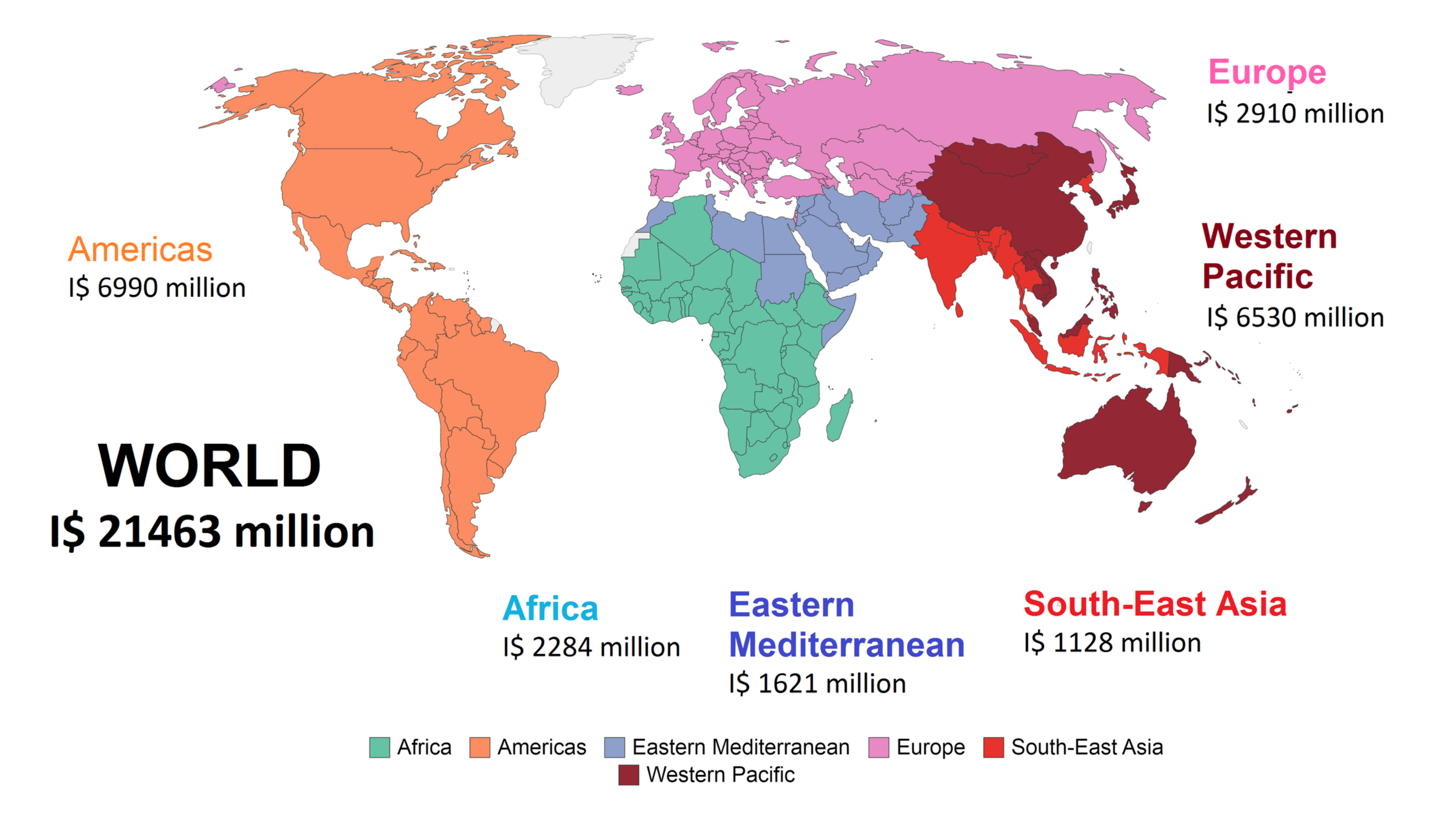


Figure 1: Economic burden due to HSV globally, by WHO region in 2016

Table 2: Economic burden due to HSV-1 globally and by WHO region

WHO region	GUD	Pregnancy	Neonatal	HIV
African	2,030,117,006	28,440,999	1,085,466	219,360,971
Americas	3,597,343,845	3,259,241,345	9,654,615	78,484,879
Eastern Mediterranean	1,429,917,969	185,658,220	864,645	795,820
Europe	1,533,815,911	1,313,074,614	3,935,325	40,805,103
South East Asia	888,653,204	232,730,940	234,160	5,562,370
Western Pacific	4,393,777,221	2,106,996,628	3,532,000	7,818,471
Total	13,873,625,155	7,126,142,744	19,306,210	352,827,615

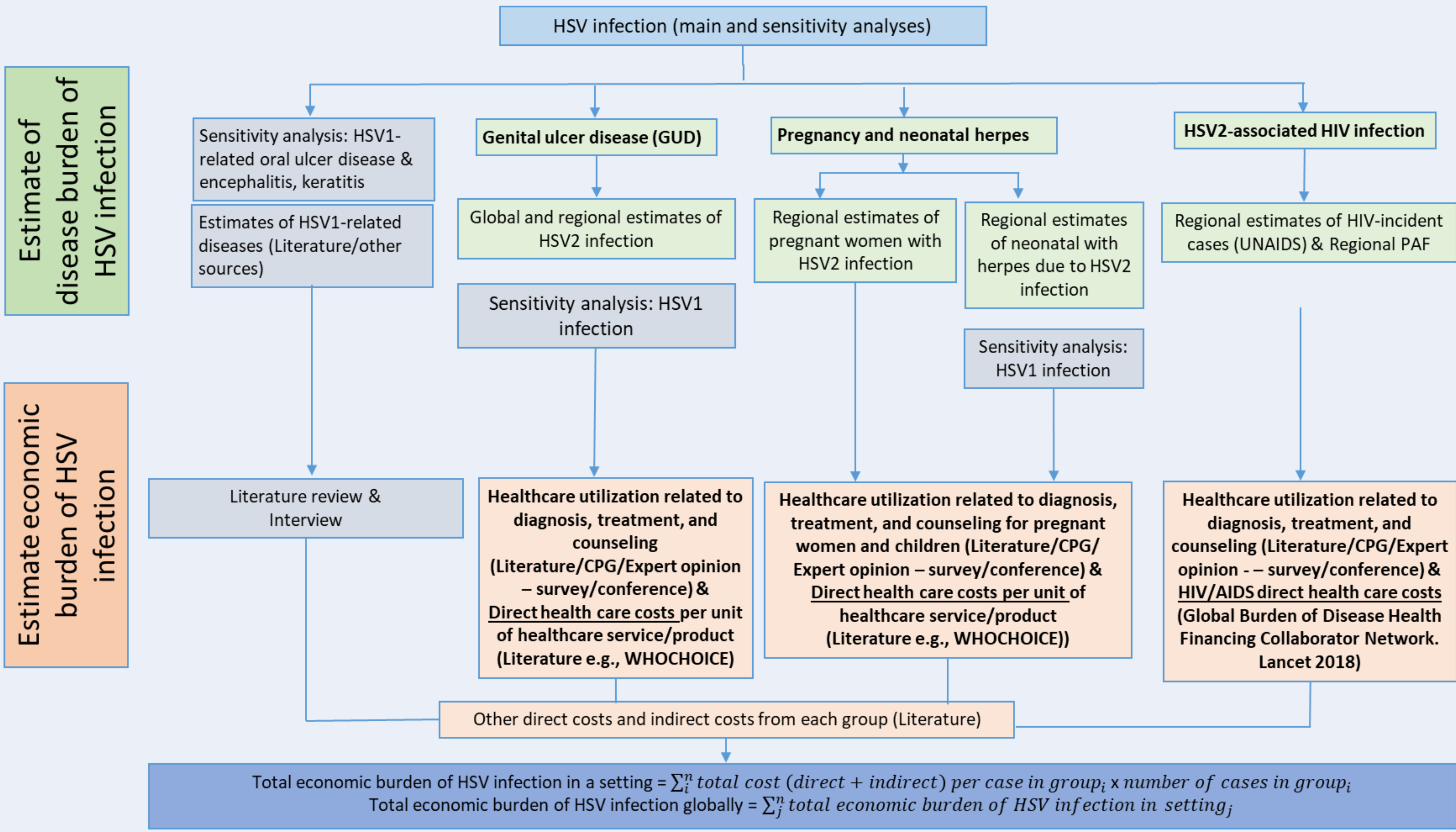
- Major economic burden was from the Americas and Western Pacific regions combined, accounting for almost two-thirds of the global burden (Int\$13.5 billion)

CONCLUSION:

- First study to estimate the economic burden of HSV globally.
- Economic burden of HSV are enormous
- Highlights the huge public health challenge which can be alleviated by the introduction of a HSV vaccine
- Crucial that targeted policies to accelerate the vaccine development is introduced.

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Framework on how economic burden was calculated