Systematic Literature Review of Health Utility Values in Adult Patients with Post-traumatic Stress Disorder

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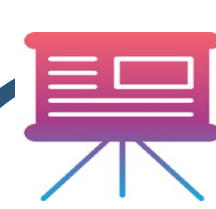
Pharmaco Evidence

Conclusion

The findings of this SLR highlighted varied HUVs in PTSD. Geographic, treatment, and ICU stay differences offer insights for clinicians and policymakers, stressing the need for nuanced approaches to assess quality of life.

Background

- Post-traumatic stress disorder (PTSD) is a debilitating mental health disorder that develops after a traumatic event[1]
- Health utility values (HUVs) are vital parameters in model-based economic and health technology assessment (HTA) evaluations[2]
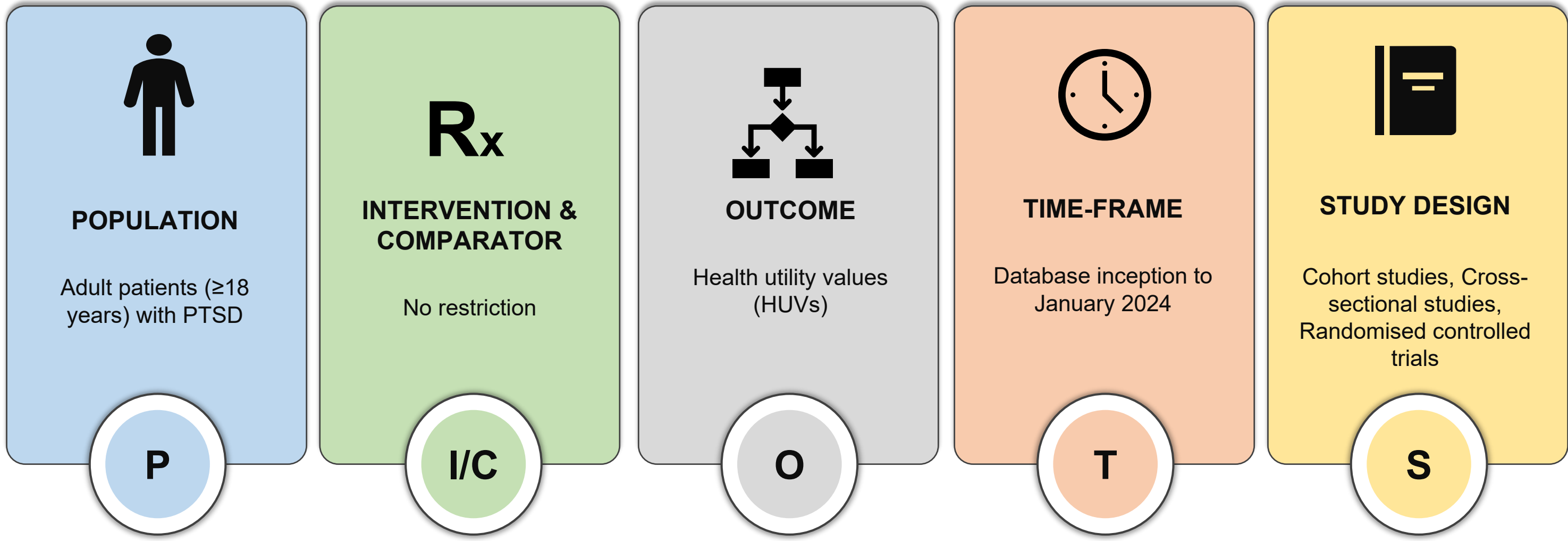
Objective

- The current systematic literature review (SLR) aimed to identify and summarize HUVs in PTSD

Methodology

- This review followed the standard methodology for conducting SLR as per guidelines provided by the National Institute for Health and Care Excellence (NICE)
- Key biomedical databases (EMBASE®, PubMed) were searched from database inception to January 2024 to identify relevant evidence reporting HUVs in PTSD patients
- **Figure 1** presents the prespecified eligibility criteria for this SLR
- Search terms included different combinations of PTSD along with utility terms
- Each publication was reviewed by two independent reviewers and disagreements were resolved by a third reviewer

Figure 1: Prespecified PICOS eligibility criteria for selection of evidence

P — POPULATION	Rx — INTERVENTION & COMPARATOR	O — OUTCOME	T — TIME-FRAME	S — STUDY DESIGN
Adult patients (≥18 years) with PTSD	No restriction	Health utility values (HUVs)	Database inception to January 2024	Cohort studies, Cross-sectional studies, Randomised controlled trials

PTSD: Post-traumatic stress disorder

Results

- Seven of 2,380 screened publications (Europe=4, USA=2, USA/UK=1) were included **(Figure 2)**
- The sample size ranged from 73 to 324 patients
- Six studies used the EuroQol 5-dimensional (EQ-5D) instrument to assess utility values, while one study used the time trade-off (TTO), standard gamble (SG), and visual analog scale (VAS)
- Compared to TTO (0.66) and VAS (0.64), the utility values derived using SG (0.87) were higher due to risk aversion[8]
- Significantly lower HUVs were reported for psychotherapy vs. sertraline and treatment response vs. non-response (p<0.001 for both comparisons)[3]
- Across Europe, PTSD patients exhibited worse outcomes compared to non-PTSD patients at different follow-up time points, with significant findings reported at 24 months (mean EQ-5D scores: 0.56 vs. 0.87, p<0.001; mean health utility index mark 3 scores (HUI3): 0.51 vs. 0.83, p<0.001)[6]
- The symptoms indicative of PTSD were associated with a mean HUI3 utility loss of 0.33 and 0.24, and EQ-5D utility loss of 0.32 and 0.23 in non-hospitalized and hospitalized patients, respectively[6]

Figure 2: PRISMA diagram for the screening process
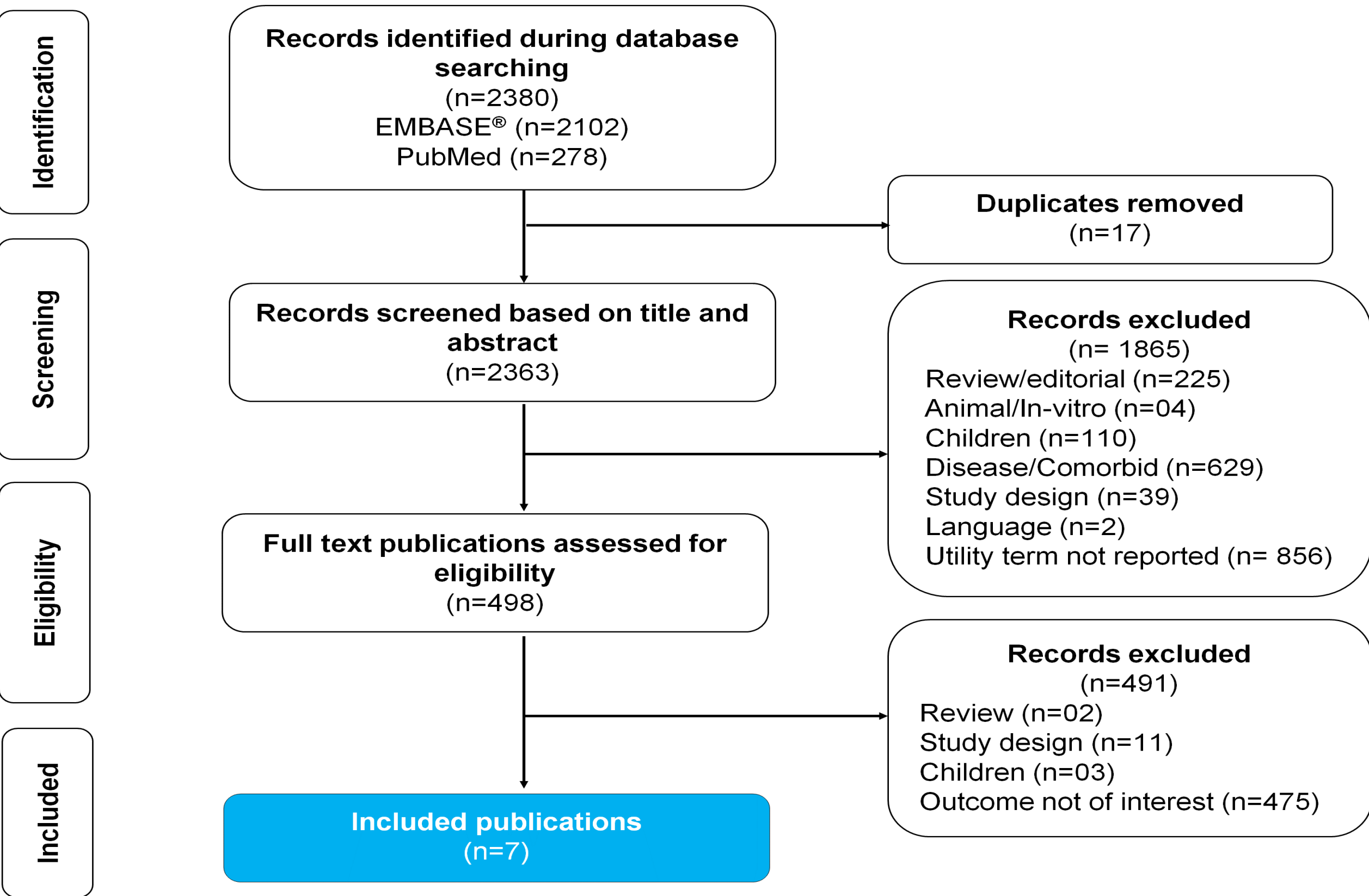
Results (Cont'd.)

- Moreover, patients with an intensive care unit (ICU) stay ≥7 days developed PTSD symptoms more often and reported significantly lower median utility scores compared to patients with an ICU stay of <7 days (0.78 vs. 0.81, p<0.001)[5]
- The mean HUV of PTSD patients was higher in the USA compared to the UK (0.627 vs.0.482)[9]
- **Table 1** gives an overview of the included studies

Table 1: List of included studies

Study name	Sample size	PTSD Diagnosis	Utility scores
Le 2013[3]	200	Currently diagnosed PTSD	Baseline mean (SD) EQ-5D, D1: 0.630 (0.191); MM-OC: 0.682 (0.239)# MD, psychotherapy vs. sertraline (D1): 0.144, p<0.001; MM-OC: 0.180, p<0.001 MD, choice-arm vs. no choice arm* (D1): 0.064, p=0.08; MM-OC: 0.089, p<0.05 MD, responders vs. non-responders (D1): 0.255, p<0.001; MM-OC: 0.295, p<0.001
Vlegel 2022[4]	Probable PTSD: 187 Non-probable PTSD: 2873	Probable PTSD vs. non-probable PTSD (post-injury)	Mean (SD) EQ-5D utility: 0.44 (0.33) vs. 0.77 (0.23) Mean (SD) EQ-5D VAS: 54.9 (22.4) vs. 73.2 (18.3)
Kersten 2020[5]	Overall PTSD: 324 ICU stays <7days: 185 ICU stays ≥7 days: 139	PTSD patients with ICU stay of <7 days vs. ICU stay ≥7 days	Median EQ-5D score: 0.78 vs. 0.81
Haagsma 2012[6]	PTSD symptoms (IES-score ≥35, n=73) No PTSD symptoms (IES-score <35, n=1708)	PTSD vs. non-PTSD (post-injury)	Mean (SD) EQ-5D: 0.56 (0.26) vs. 0.87 (0.15) Mean (SD) HUI3: 0.51 (0.26) vs. 0.83 (0.24)
Kruithof 2020[7]	NR	PTSD vs. no PTSD	Mean EQ-5D-3L scores, Week 1: 0.36 vs. 0.51; 1 month: 0.41 vs. 0.63; 3 months: 0.53 vs. 0.75; 6 months: 0.55 vs. 0.80; 12 months: 0.55 vs. 0.82; 24 months: 0.53 vs. 0.82
Doctor 2011[8]	184	Chronic PTSD	Mean SG: 0.87 Mean TTO: 0.66 Mean VAS: 0.64
Hvidberg 2023[9]	NR	PTSD	Mean EQ-5D-3L (UK): 0.482 Mean EQ-5D-3L (USA): 0.627

EQ-5D-3L: EuroQol 5-dimensional 3-Level; HSUVs: Health-state utility values; HUI3: Health utilities index mark 3 scores; ICU: Intensive care unit; MD: Mean difference; NR: Not reported; PTSD: Post-traumatic stress disorder; SD: Standard deviation; SG: Standard gamble; TTO: Time trade-off; UK: United Kingdom; USA: The United States of America; VAS: Visual analog scale
*In the choice arm, patients chose their preferred treatment either prolonged exposure therapy or sertraline
#D1 and MM-OC were the US general population-based models

Disclosure

AS, GK, SA, PR, and BS, the authors, declare that they have no conflict of interest

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