

INPLASY PROTOCOL

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INTRODUCTION

Review question / Objective: To investigate the acceptability of HPV vaccine among

Improve acceptability of HPV vaccine among men who have sex with men according to the correlated factors: a systematic review and meta-analysis

Zhao, Y¹; Du, TY²; Weng, WJ³; Zhang, M⁴; Li, J⁵; Gao, Y⁶; Liu, CE⁷; Huang, XJ⁸.

Review question / Objective: To investigate the acceptability of HPV vaccine among men who have sex with men (MSM) and factors associated with the acceptability.

Condition being studied: It is proved that national HPV vaccination program for MSM is feasibility and cost-effective. It is hypothesized that only with at least 70% uptake rate of HPV vaccine can a similar prevention effect be observed in the MSM. It is 17.2% in 2014 that the uptake rate is among MSM aged 18–26 years in the USA. Although the rate has increased, the coverage in 2017 (37.6%) is quite far from the 2020 target of the Healthy People (80%). To improve the coverage of the HPV vaccine among MSM, it's necessary to know about the acceptability of the vaccine and to investigate the factors that affect the acceptance of vaccine.

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METHODS

Search strategy: We searched the electronic databases using the combination of the key words: (“gay”, “MSM”, “Bisexual Men” or “men who have sex with men”) and (“human papillomavirus vaccine” “human papillomavirus vaccination” “HPV vaccine” or “HPV vaccination”) and (“Acceptance” “acceptability” “attitudes” or “Perceptions”).

Participant or population: Men who have sex with men.

Intervention: We included cross-sectional studies.

Comparator: People who are more willing to be vaccinated and people who are not willing to be vaccinated.

Study designs to be included: cross-sectional studies.

Eligibility criteria: (1) quantitative original studies; (2) investigate the MSM population; (3) the results include the acceptability or factors influencing the acceptability such as sociodemographic characteristics, Behavioral risk indicators and etc.

Information sources: PubMed, Web of Science, EMBASE and the references of the included studies.

Main outcome(s): HPV vaccine acceptability among MSM which can be rates or scales was the primary outcome. We take the factors associated with HPV vaccine acceptance as the secondary result.

Quality assessment / Risk of bias analysis: The quality evaluation tool for cross-sectional study recommended by Agency for Healthcare Research and Quality (AHRQ) was a checklist with 11 items, which was used to assess the quality of eligible studies. Heterogeneity was assessed statistically using I² index and I² measurement. Multiple individual studies were considered to have heterogeneity when I² > 50% or H > 1.5.

Strategy of data synthesis: We chose random effects model to aggregate SMDs and ORs on the condition of I² > 50%. Otherwise, we used the fixed effects model.

Subgroup analysis: We did not set subgroup.

Sensibility analysis: We conducted sensitivity analysis to assess the robustness of the meta-analyses. We mainly compared results, research quality and experimental design of all included studies.

Language: We searched studies written in English.

Country(ies) involved: China.

Keywords: Human papilloma virus vaccine, men who have sex with men, acceptability.

Contributions of each author:

Author 1 - Yang Zhao - Zhao Y. and Du T.Y. identified articles and extracted data from articles which meet the inclusion criteria. Weng, W.J. and Zhao Y. performed the statistical analysis. Zhao, Y. drafted the manuscript.

Author 2 - Tianyi Du - Du,T.Y. and Zhao,Y. identified articles and extracted data from articles which meet the inclusion criteria.

Author 3 - Wenjia Weng - Weng, W.J. and Zhao Y. performed the statistical analysis.

Author 4 - Ming Zhang - Revised the article and gave constructive comments.

Author 5 - Juan Li - Revised the article and gave constructive comments.

Author 6 - Yanqing Gao - Revised the article and gave constructive comments.

Author 7 - Cuie Liu - Liu, C.E. and Huang X.J. conceived the research protocol and provided fund support.

Author 8 - Xiaojie Huang - Liu, C.E. and Huang X.J. conceived the research protocol and provided fund support. Liu,C.E. and Huang,X.J. contribute equally to this work.