

## **COMPARISON OF SYPHILIS DISTRIBUTION IN SEX-WORKERS OF INDIA AND UKRAINE**

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**Introduction:** Syphilis is a sexually transmitted disease (STD) caused by *Treponema pallidum*, which can also be transmitted via accidental direct inoculation, transplacental during pregnancy and rarely via blood transfusion. The annual mortality rate per 100,000 people from syphilis in Ukraine on average is 2.9% a year. For men, the health burden of syphilis in Ukraine, as measured in years of healthy life lost per 100,000 men, peaks at age 65-69. Women are harmed at the highest rate from syphilis in Ukraine at age 1-4 years, whereas, it was least harmful to women at age 10-14. **Aim:** To compare the distribution and prevalence of syphilis in sex workers of India and Ukraine. **Methods and materials:** Literature analysis based on the recent data from different authors, clinical examination of patients, microscopic examination, statistical analyses. Epidemiological investigative tools including surveillance and descriptive studies were used to understand the distribution, analytical studies were used to explore the causes. **Results:** According to a study, the prevalence of syphilis was 11.89% among female sex workers attending clinics in Karnataka State in southern India. The treatment coverage was high at 81.17%. Similarly, a study of female sex workers in twin cities of India with a prevalence of 10.1% and another study in India showed syphilis prevalence of 11% in women, 15.7% were infected with syphilis in a study among sex workers of Ukraine. A low prevalence (8%) of syphilis infection among female sex workers was documented in Colombia. The prevalence of syphilis among FSW have been reported in other regions like Vietnam (10.7%), China (9.5%) 16 and Thailand (9%) 17. The study results a sensitivity of 99.8% and specificity 98.4% and were done using the national protocol. **Conclusions:** Achieving good treatment coverage helps reducing syphilis incidence, but screening and treatment are important public health strategies for prevention and control of syphilis in female sex workers. Female sex workers should be screened biannually for syphilis along with HIV in ICTC (Integrated Testing and Counselling Centres) in India.

## **ANALYSIS BIOLOGICAL ACTIVITY INDICATORS OF QUINOLINE AND PYRROLE-[1,2-A]QUINOLINE DERIVATIVES BY CHEMOINFORMATICS METHODS**

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For conducting a computer experiment was used new software tool called QuS (read as "k'us", abbrev QSAR Server). One of it's tasks is to integrate and coordinate the work of other software that performs individual stages of analysis. This development consists of two parts: user interface in form of a webpage and a web-server [Zavgorodniy, 2015]. Program management (web-server) is carried out through a webpage where are located necessary tools and the results of the analysis are displayed. This software development is written in the programming language Object Pascal (Web-Server) and JavaScript (User Interface) using Ready-made classes and libraries (Ararat Synapse, LCLBase, SynEdit) with open source code. To perform individual stages of QSAR analysis were used different software tools such as: PaDEL-Descriptor, McQSAR and some others. Verification of the correctness of the program was carried out by conducting QSAR analysis based on existing QSAR results analysis from