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**Original article**:

**Seroprevalence of transfusion transmitted infection and utility of blood units in a tertiary care hospital in Central India**

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**ABSTRACT:**

**Introduction:** The magnitude of the TTI [transfusion transmitted infections] varies from country to country depending on TTIs’ loads in that particular population from where blood units are sourced.

**Material and methods:** The study was carried out at the blood bank, Jawaharlal Nehru Medical College, Sawangi (Meghe), Wardha on the data of voluntary and replacement donors from January 2009 to December 2013.

**Results:** among the total blood donors; most of them were males (97.2%) and voluntary donors (76.91%). . Since 2009 total blood donors were noted to be increased, especially in 2013. The overall cumulative sero-prevalence was noted to be highest for HBV (3.2%) followed by HCV (0.98%), HIV (0.92%) and syphilis (0.44%) in decreasing order. The prevalence of HBV, HCV and syphilis was noted to be higher among replacement donors as compared to the voluntary donors while, in HIV, the prevalence was more in voluntary blood donors. This higher prevalence of TTI among voluntary and replacement blood donors was not significant in each year. But when the higher prevalence among replacement blood donors was tested cumulatively for five years; it was observed that prevalence of TTI was significantly higher among replacement blood donors. Blood units utilization index was calculated for each year which range from 89.69% in 2009 to 84.48% in 2013. Most common cause of discard was TTI [86.14] followed by expired products.

**Conclusion**: hence, strict selection of blood donors with the emphasis on getting voluntary donors are highly recommended to ensure the safety of blood.

**Key words:** TTI, HBV, HIV, HCV, Syphilis, Blood donors [voluntary and replacement]