

## Research Article

## Temporal analysis of gonorrhoea prevalence rate in females aged 15-49 in Chipinge district, Zimbabwe

Patronella Nelly Chigugudhlo<sup>1</sup>, Evans Chazireni<sup>2</sup>, Ian Takunda Marufu-Dzangare<sup>3</sup>, Simon Dhleleyeni<sup>4</sup>

<sup>1234</sup>Great Zimbabwe University, Masvingo, Zimbabwe

**Abstract:** This study was carried out to examine the temporal prevalence of gonorrhoea in females aged 15-49 in Chipinge district in Manicaland province of Zimbabwe. A mixed research design involving secondary data and focus group interviews was used in this study. Interview guides were used to collect primary data. The data collected was organized and was presented graphically. Findings from the study revealed that females aged 15 to 49 experienced high prevalence rate of gonorrhoea but the number of gonorrhoea cases was declining over the years. It emerged from the study that risk behaviours such as promiscuity and premarital sexual intercourse, lack of abstinence or appropriate sexual behaviour, commercial sex as well as long distances travelled to the nearest health facility for prevention and early treatments impact were the factors that lead to high levels of gonorrhoea in the district. Research findings also showed that there was generally high number of cases of gonorrhoea drug resistance in the district. There was however a general decline in cases of gonorrhoea drug resistance in the district over the years. Numerous recommendations were made to reduce or even eliminate the burden of gonorrhoea in the district and improve the that livelihoods of people in the region.

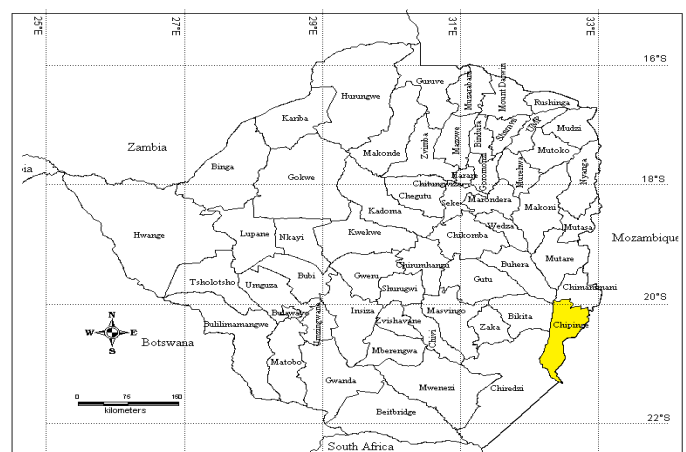
**Keywords:** Gonorrhoea, temporal trend, infectious disease, health, Chipinge

### 1. Introduction

Gonorrhoea is an infectious disease. Communicable or infectious diseases are caused by casual agents that can be transmitted to another human being from an infected person, animal or a source in the environment (Chazireni, 2018). Gonorrhoea is a common sexually transmitted diseases (STDs) caused by bacteria called *Neisseria gonorrhoeae* or gonococcus which is spread through sexual intercourse from one person to another. Genital infections with *Neisseria gonorrhoeae* are key causes of cervicitis and urethritis, as well as pelvic inflammatory disease, ectopic pregnancy, chronic pelvic pain and infertility, among women (Holmes, 1999). Drug resistance for gonorrhoea is a major threat to reducing the impact of sexually transmitted infections worldwide (WHO, 2016). Its rate is extremely high and represents a serious public health concern. The Zimbabwean government in its endeavour to achieve the fight against gonorrhoea infection has taken measures to help prevent the spread of this infection by providing preventive measures and better treatment of this gonorrhoea. These measures include gonorrhoea screening and its treatments and it has been said that the first treatment in gonorrhoea is prevention and is best accomplished by abstaining from sexual activity or having sex only with a mutually monogamous relationship in which neither partner is infected with a sexually transmitted disease. Awareness has been put on the media and pamphlets as a way of letting everyone know the risks of gonorrhoea. This study was undertaken to determine the temporal trends of gonorrhoea among females aged 15-49 (the sexually active cohort) in Chipinge district, Zimbabwe.

### 2. Delimitations of the study

As indicated in the in the introduction, the current study is strictly concerned with finding out the temporal trend of gonorrhoea among females aged 15-49 in Chipinge district of Zimbabwe. According to ZIMSTAT (2014) Chipinge district has a population of 298841. The district is located in Manicaland province. According to the Ministry of health and Child Welfare (2011) Manicaland province is one of the provinces with the highest prevalence rate of infectious diseases in Zimbabwe. Figure 1 gives the location of Chipinge district in Zimbabwe. Chipinge district marks the Eastern border of Zimbabwe with Mozambique. To the west, Sabi River forms the boundary between the district and the districts of Bikita and Chiredzi. Chimanimani district is in the Northern neighbour and in the Southern neighbour is Chiredzi. Chipinge is a



**Figure 1: Location of Chipinge district in Zimbabwe (Adapted from Chazireni and Harmse, 2013 )**

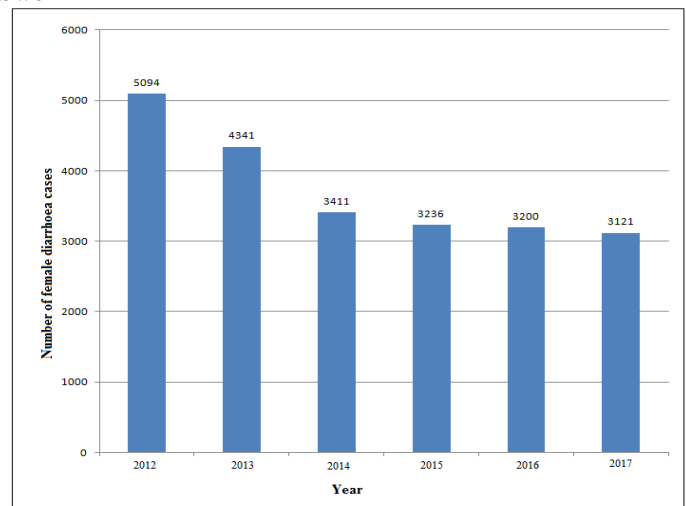
town in Zimbabwe. The district is located in Manicaland province. The district experiences all the agro-ecological regions of Zimbabwe with precipitation ranging from below 450mm to over 1000mm (Musanga, 2009).

### 3. Methodology

To unveil the temporal trends in gonorrhoea prevalence rate among women aged between 15 and 49 secondary data was collected from the records of Chipinge district health facilities. Gonorrhoea data from 2012 to 2017 were collected. Statistical figures of female patients suffering from gonorrhoea were extracted from the health facility data. Data sets were checked for completeness and consistency and there was no missing required information. Permission to carry out the study was obtained from the Ministry of Health and Child Care. To augment the secondary data, data was also obtained through focus group interviews. The interviews were conducted at major health facilities in the district. The focus group interviews were carried out with the health professionals (nurses and environmental health officers) in the district. A mixed methods design was therefore, adopted as the strategy of inquiry. This design uses both quantitative and qualitative approaches. The choice of such a mixed methods approach is beneficial in enhancing the viewing of problems from multiple perspectives to enhance and enrich the meaning of a singular perspective and triangulate results to provide illustrations of context and trends. Respondents' consent was sought and confidentiality was assured and maintained during and after the study.

### 4. Results and Discussions

The purpose of this study was to find out why gonorrhoea is still a significant public health problem in females (15-49) in Chipinge district despite it being curable. In response to one of the objectives of this study, Figure 1 shows that gonorrhoea prevalence rate was decreasing from 2012 to 2017. As depicted in Figure 1, the number of gonorrhoea cases in women aged between 15 and 49 years dropped from 5094 to 3121. The decrease in the cases of gonorrhoea was large during the period from 2012 to 2013 but the decrease was small during the period from 2014 to 2017. The general decrease in the number of gonorrhoea cases can be attributed to awareness campaigns implemented to reduce the prevalence rate of the disease. Although there was a general decrease in the cases of gonorrhoea cases in the district during the period from 2012 to 2017, the disease prevalence rate is high. This high prevalence rate can be attributed to the fact that the southern and eastern parts of Chipinge district consists of many estates and a refugee camp which implies that many spouses do not stay together during most of the year, thereby increasing promiscuity levels.



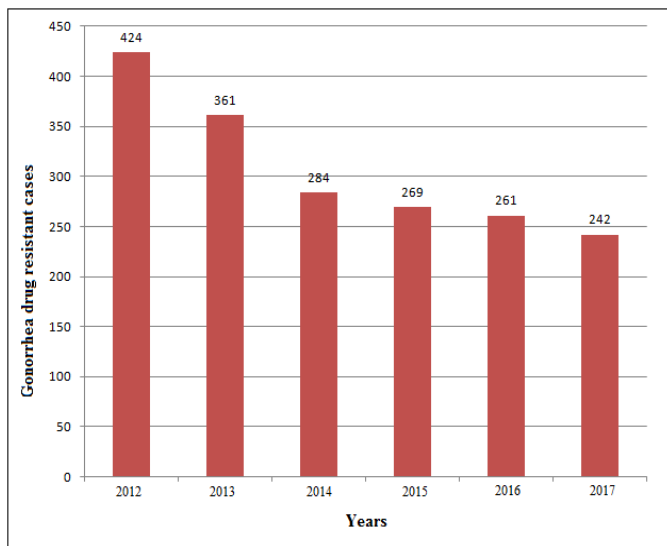
**Figure 1 Number of gonorrhoea cases of females aged between 15 and 49 years from 2012 to 2017**

The views from group discussants did not deviate much from the secondary data presented in Figure 1. Generally, participants in the focus group interviews concurred that the prevalence rate of among women aged between 15 and 49 years was declining over the years. One group discussant succinctly summarised the reasons for the decline in the prevalence rate of gonorrhoea in the district by stating that:

*“Regardless of having knowledge on gonorrhoea, the common risk behaviours such as promiscuity are still high in females aged 15-49 of Chipinge district. Such women are often involved in premarital sex. In addition, awareness about factors leading to gonorrhoea infection was high while adaptation to abstinence or appropriate sexual behaviour was low. Some of the women engage in risk sexual activities as a source of income. Long distances to be travelled to the nearest health facility for prevention and early treatments also impact negatively on efforts to reduce the spreading of the disease.”*

Generally, the findings from this study on the causes of the decline in the prevalence rate of gonorrhoea in the district concur with the findings from the studies by Hill (2012). Hill (2012) argued that promiscuity, low levels of abstinence, low levels of income leading to commercial sex and limited access to of health facilities were the major causes of high prevalence rate of gonorrhoea in Zimbabwe.

It also emerged from the secondary data that there was a problem of drug resistance of the women to gonorrhoea treatment. Secondary data from health facilities is presented in Figure 2. It is depicted in Figure 2 that the number of female patients that were drug resistant to gonorrhoea treatment. In 2012 there was high drug resistant which stood at 424 cases. As depicted in Figure 2, in the following years up to 2017, there was a general decline in the number of cases of drug resistance reaching the lowest value of 261 In 2017. Drug resistant cases were highest in 2012 but showed a continuous decline over the years due to some ignorance in individuals about the management of the gonorrhoea disease problem.



**Figure 2 Drug resistant gonorrhoea cases of females from 2012 to 2015**

The views from group discussants did not also deviate much from the secondary data presented in Figure 2. Participants in the focus group interviews generally acknowledged that, although there was generally high number of cases of gonorrhoea drug resistance in the district, there was a general decline in cases of gonorrhoea drug resistance in the district over the years. One group discussant succinctly summarised the reasons for high drug resistant cases in the district and the reasons for the decline in the cases of drug resistance in the district by stating that:

*“Despite the gradual decrease in drug resistant gonorrhoea cases, generally there is a large number of drug resistant gonorrhoea cases in the district. Such high cases of drug resistant gonorrhoea cases can be attributed to patients who use antibiotics prescribed for someone else or use the antibiotics for another infection which could be out of date and ineffective. Some patients do not complete the full course of antibiotics leading to drug resistant cases. Despite these challenges, sexual and reproductive health education and awareness campaigns are beginning to yield positive results in reducing the gonorrhoea drug resistance cases in Chipinge district”*

The findings from the current study on the drug resistance situation in Chipinge district basically concurs with the findings of Berg (2009) who attributes the high drug resistance on sexually transmitted diseases to failure of patients to stick to drug prescriptions as provided by health professionals.

## 5. Recommendations

Basing on the research findings, the following recommendations were made.

- Gonorrhoea is a dangerous disease; therefore, it is recommended that infected females (15-49) should seek medical attention for early treatment.
- The researchers recommend that health officials should enhance awareness campaigns on gonorrhoea in order to further decrease the prevalence rate or eliminate the disease altogether.

- Infected females should adhere to the drug prescriptions prescribed by health practitioners. Practitioners should also consider following up the infected patients to check on adherence, especially those who are illiterate. Government and Non-governmental organizations should consider assisting females (15-49) with alternative strategies of enhancing livelihoods. For example income generating projects such as poultry and horticulture so as to reduce the number of people who engage in commercial sex.
- The government should invest in opening up more health care service centres in the district as findings from this study indicated that women have challenges in accessing such services hence the continued high cases of gonorrhoea and drug resistance in the district.

## 6. Conclusion

In conclusion, the prevalence of gonorrhoea cases has apparently declined from 2012 to 2018. Despite the decline in the number of cases of gonorrhoea over the years, gonorrhoea infection still remains an enormous burden of morbidity and mortality of females in Chipinge district due to its effects on reproduction and child health. Common risk behaviours such as promiscuity and premarital sexual intercourse, lack of abstinence or appropriate sexual behaviour, commercial sex as well as long distances travelled to the nearest health facility for prevention and early treatments impact negatively on efforts to reduce the spreading of the gonorrhoea. Research findings confirmed that existence of some form of awareness does not necessarily to specific behavioural outcomes because the awareness about factors leading to gonorrhoea transmission was high among many women but adaptation to abstinence or appropriate sexual behaviour was low. Research findings also indicated that there was generally high number of cases of gonorrhoea drug resistance in the district. There was however a general decline in cases of gonorrhoea drug resistance in the district over the years.

## 7. References

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