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THE EPIDEMIOLOGY STATUS OF PESTE DES PETITS RUMINANT AMONG SMALL RUMINANTS IN SIERRA LEONE: A REVIEW

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ABSTRACT

Peste des Petits Ruminants (PPR) is a highly contagious transboundary viral disease affecting goats and sheep, which are critical to rural livelihoods in Sierra Leone. Despite their economic and nutritional importance, small ruminant productivity is hindered by recurring PPR outbreaks. This review aims to assess the current epidemiological status of PPR in Sierra Leone, focusing on its diagnosis, distribution, risk factors, control efforts, and socio-economic impact, to inform strategies for disease management and eradication. A narrative literature review was conducted using articles from PubMed, Google Scholar, FAO, and WOAH databases between January and May 2025. Studies selected included case reports, outbreak investigations, and reviews focusing on PPR in Sierra Leone from 2009 to 2025. PPR is endemic in Sierra Leone with confirmed outbreaks in districts such as Makeni, Moyamba, and Kenema. Diagnostic approaches have evolved from clinical observations to laboratory confirmations using ELISA and PCR. Major risk factors include uncontrolled animal movement, cross-border trade, seasonal changes, and poor husbandry practices. Even though vaccination campaigns using the Nigeria/75/1 strain have been implemented, challenges such as vaccine shortages, low farmer awareness, and inadequate veterinary infrastructure persist. Peste des Petits Ruminants poses a significant economic and food security threat in Sierra Leone. Effective control requires a multisectoral approach combining mass vaccination, farmer education, surveillance, and regional cooperation. Strengthening veterinary systems is critical to achieving the global PPR eradication goal by 2030 and ensuring sustainable livestock development in the country.

Keywords: Peste des Petits Ruminants, small ruminants, goats, sheep, epidemiology.

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INTRODUCTION

Sheep and goats are the main small ruminant species in Sierra Leone [1], [2]. These animals play a critical role in the welfare of smallholder livestock farmers, contributing significantly to livelihoods, creating employment, and reducing malnutrition and inequality, particularly in disadvantaged rural communities [1], [3]. Small ruminants contribute considerably to cash income and nutrition of smallholder livestock farmers in many countries, including Sierra Leone [1], [4]. A major constraint to the productivity of small ruminants in Sierra Leone is Peste des petits ruminants (PPR) [1], [5].

Peste des petits ruminants (PPR) is a highly contagious transboundary viral disease primarily affecting small ruminants like sheep and goats [6], [7]. It is caused by the peste des petits ruminants virus (PPRV) [5], [8]. PPR is known for its high morbidity and mortality rates, which can reach 100% and over 90%, respectively, in naive herds [4], [8], [9]. The disease is considered economically important and is widely distributed across areas, including Sub-Saharan Africa, the Middle East, the Arabian Peninsula, and the Indian subcontinent [8], [10]. The PPR virus belongs to the genus Morbillivirus, within the Paramyxoviridae family, and is related to rinderpest virus, human measles, and canine distemper [5], [6].

The virus is extremely infectious and can be spread by exposure to infected fomites or by direct contact between healthy animals and the secretions and/or excretions of infected animals [11]. The nucleoprotein (N) and fusion protein (F) genes have been sequenced, revealing four genetically different lineages, while PPRV is a single serotype [12]. The majority of lineages I and II are located in West and Central Africa; lineage III is mostly found in Yemen, Oman, and East Africa; and lineage IV is distributed throughout the Arabian Peninsula, the Middle East, southern Asia, and, more recently, several African areas [13]

PPR is endemic to Sierra Leone, especially in areas where animals are extensively reared, and its outbreaks are common among goats and sheep in the country [1], [4].

Peste des petits ruminants (PPR) poses a significant threat to livestock production in Sierra Leone [12], [14]. Given that small ruminants contribute considerably to the cash income and nutrition of smallholder farmers, PPR directly threatens their livelihoods and is identified as a major constraint on the livestock industry in the region,

The objective of this review is to understand and highlight the significant negative economic impact of PPR on goat and sheep farmers in Sierra Leone, detailing its effects on household income, asset loss, food security, and the broader potential of the livestock sector, which is essential for informing control and eradication efforts.

METHODS

Literature searches were conducted in PubMed, Semantic Scholars, Research Gate, and Google Scholar. Further search was done using Google Search and the official websites of FAO and WOAH (https://www.fao.org and https://www.woah.org). This was done by careful review of articles and other policy documents that address PPR epidemiology in Sierra Leone. The search terms used were ("Peste des Petits Ruminants" OR "PPR" OR "caprine morbillivirus") AND (goat* OR sheep OR "small ruminants" OR livestock) AND ("Sierra Leone"). All searches were carried out between January

and June 2025. The title and abstract of each article were first reviewed to determine their eligibility. For eligible articles, full text was subsequently reviewed, while non-eligible articles were excluded.

Eligible articles were those published about Peste des Petits Ruminants in sheep and goats in Sierra Leone within the last 16 years (2009–2025), and published in English. Only articles concerning case reports, reviews, outbreaks, risk factors, economic losses, control measures, and prevalence of Peste des Petits Ruminants in Sierra Leone were considered relevant. Articles were excluded if they had a geographical focus other than Sierra Leone or focused on a different disease. Editorials, letters to the editor, opinions, or commentaries without original data were also excluded. Extracted data from eligible articles included were clinical signs, diagnosis, distribution, risk factors, economic losses, control, prevention, and challenges of Peste des Petits Ruminants in Sierra Leone.

Diagnosis

Based on the reviewed studies, diagnosing Peste des petits ruminants (PPR) in Sierra Leone has evolved, involving clinical observation, syndromic surveillance, and increasingly, laboratory confirmation [1], [2], [4], [12]. Historically, inadequate veterinary infrastructure and diagnostic capacity in Sierra Leone prevented the confirmation of PPR outbreaks [5]. In rural areas where laboratory confirmation is not routinely available, the reporting of PPR is often based on observed clinical signs [2]. Syndromic surveillance reports in districts in a study in Koinadugu were based solely on observable signs consistent with PPR virus (PPRV) infection in sheep and goats, classifying these as "suspected" but not "confirmed" cases [2].

However, the presence of PPRV in Sierra Leone has been confirmed through laboratory methods [12]. Specific instances of laboratory-based diagnosis mentioned in the reviewed studies include: In 2009, blood and serum samples were collected from goats and sheep with suspected PPR outbreaks around Makeni and analysed at the Teko Central Veterinary Laboratory in Makeni, [12]. In 2011, pathological and swab samples were collected from goats during a suspected PPR outbreak in Moyamba, southwestern and diagnosed at Njala University [14]. In 2023, an outbreak investigation among goats and sheep in Kenema District and the laboratory confirmation done at the CVL [15].

Serological tests performed in the reviewed studies were mostly the Enzyme-Linked Immunosorbent Assay (ELISA) for PPR diagnosis [12], [15]. Specifically, a commercial ELISA kit (BDSL, Ayrshire, UK) was used in a 2009 study and a blocking Enzyme-Linked Immunosorbent Assay (bELISA) AU-PANVAC kit was used in a 2023 outbreak investigation [12], [15].

Molecular diagnostic methods have been used in the diagnosis and characterization of Peste des petits ruminants (PPR) in Sierra Leone [15]. While clinical findings can lead to an indicative diagnosis in endemic areas, laboratory confirmation using techniques like molecular methods is considered key for confirming PPR infection [15], [16]. Conventional PCR was used for laboratory confirmation of the PPR virus in goats and sheep during an outbreak investigation in Kenema District in March 2023. PCR amplification was used in an April 2009 study to amplify a 351-bp segment of the N gene using the NP3/NP4 primer pair from RNA extracted from blood samples collected around Makeni in central Sierra Leone [12]. Reverse Transcription-PCR (RT-PCR) was used in December 2011 to analyze RNA extracted from pathological and swab samples collected from goats during a suspected PPR outbreak in Moyamba,

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southwestern Sierra Leone. Phylogenetic analysis of the amplicons generated from positive tissue samples revealed the presence of viral RNA [14]

Occurrence and Distribution of PPR in Sierra Leone

Based on the reviewed literature, Peste des petits ruminants (PPR) is a significant and widespread disease in Sierra Leone [1], [4], [5], [12], [14], [15]. Peste des petits ruminants (PPR) is considered endemic to Sierra Leone, and outbreaks of the disease are common among goats and sheep in the country, particularly in areas where animals are extensively reared [15], [17]. Historically, inadequate veterinary infrastructure and diagnostic capacity in Sierra Leone, exacerbated by the civil war, prevented the confirmation of PPR outbreaks across the country before 2009 [12].

Despite past challenges, the presence of PPR virus (PPRV) has been confirmed in various parts of Sierra Leone through laboratory methods, including northern Sierra Leone, around Makeni and Kabala, where blood and serum samples collected during suspected PPR outbreaks in April 2009 confirmed the presence of PPRV through real-time RT-PCR and Serologic testing by ELISA [12].

In Moyamba District, southern Sierra Leone, a suspected PPR outbreak in December 2011 led to the collection of pathological and swab samples from goats, and analysis using RT-PCR confirmed the presence of viral RNA [14]. A survey regarding small ruminant production against PPR was also conducted in Moyamba District, which is known to have the second highest goat herd in the Southern Province, noted the presence of the disease [18].

In Kenema District, eastern Sierra Leone, PPR outbreaks are common, specifically Tongo Field, where goats were affected by PPR based on blood samples analyzed using the ELISA technique [1]. An outbreak investigation in Benduma village, Kenema District, in March 2023 confirmed PPRV in sick goats and sheep through clinical observations, serology (bELISA), and molecular diagnostic methods (conventional PCR) [15]

In Koinadugu District, Northern Province, syndromic surveillance reports from 2011–2012 indicated that the most common syndrome reported was consistent with PPR in goats, where PPR cases were reported from eight of the 11 chiefdoms in the district [2]. In summary, PPR is widespread across Sierra Leone, affecting northern, southern, and eastern districts, with confirmed outbreaks and evidence of circulation of lineage II of the virus in multiple locations [5], [12], [14].

This table presents an overview of selected studies on PPR in Sierra Leone, detailing the publication source, date, authors, prevalence or incidence data (where available), and key findings related to the disease's epidemiology, diagnostic approaches, farmer perceptions, and socio-economic impact.

Table 1. Summary of Key PPR Studies in Sierra Leone (2012–2025)

Reference ID	Publication Date	PPR Prevalence/Incidence	Key Findings
Bangura (Turay) et al. [19]	April 2022	PPR is identified as a priority disease in the surveillance system.	PPR is prioritized in the IADSR system; however, clinical diagnoses are used without laboratory confirmation. Inappropriate drug use is common due to limited diagnostic capacity; calls for veterinary system improvement

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Conteh et al. [3]

March 2020 Based on farmer perception. PPR is described as economically devastating, identified as endemic in Moyamba District

Dundon et al. [14]

January 2018 Focused on sequencing. First full genome sequence of PPRV in Sierra Leone (Moyamba District, 2011); virus belongs to lineage II.

Mustapha et al. [15]

October 2023 Outbreak investigation PPR outbreak confirmed in Kenema District by clinical signs, serology, and PCR detection of PPRV RNA. Goats were affected more than sheep; supports needed for lab confirmation and improved biosecurity

Kallon et al. [17]

February 2025 96.3% of farmers described PPR as severe High farmer awareness of clinical signs and transmission routes; low vaccine coverage due to mistrust, poor knowledge, and limited access to information.

Konteh et al. [20]

August 2023 Focuses on surveillance infrastructure. PPR prioritized in surveillance; however, inconsistent reporting and lack of lab capacity limit effectiveness; laboratory upgrades recommended.

Munir et al. [12]

January 2012 80% seropositive (ELISA); 87% RT-PCR positive. First laboratory confirmation of PPRV presence in Sierra Leone (2009); samples clustered in lineage II.

Mustapha et al. [4]

December 2022 68.6% of farmers reported PPR in their flocks. Widespread farmer-reported PPR outbreaks, lack of vaccination, and uncontrolled animal movement were identified as control barriers.

Suluku et al. [1]

November 2022 66.7% of farmers reported PPR affecting goats. PPR is the main constraint in goat production; it significantly affects farmers' income and ability to meet essential needs.

Suluku et al. [18]

July 2018 50–90% herd loss reported in outbreaks. PPR is seen as an existential threat to goat herds; outbreaks have devastating socio-economic impacts on rural communities.

Sundufu et al. [2]

November 2014 Incidence: 42/1000; Case fatality: 48% (syndromic). PPR was the most reported syndrome in Koinadugu (2011–12); a 2011 vaccination campaign helped suppress outbreaks.

Risk factors

Based on the reviewed articles, several factors contribute to the risk and spread of Peste des petits ruminants (PPR) in Sierra Leone. The inherent contagiousness and transboundary nature of PPR, known to be a highly infectious and contagious transboundary viral disease of small ruminants, is a contributing factor, and controlling its spread requires integrated strategies [2].

The spread of PPRV outbreaks has long been related to increased animal movement for commercial and trade purposes [1]. Uncontrolled movement of animals along borderlines is

identified as a main source of PPR outbreaks, specifically, the popular cross-border ruminants' market at Gbindi in Falaba District, bordering Guinea, is considered likely to introduce the disease into the country [1]. Importation of improved breeds without involving Ministry of Agriculture and Food Security (MAFS) has been identified as one of the risk factors. This may sometimes lead to the importation of potentially sick animals. The country also does not have operational quarantine facilities for holding imported animals before release, further exposing it to the introduction of transboundary animal disease. Other social, cultural, and economic activities contributing to the spread include cultural festivals, transhumance, and nomadic customs [1]. According to Suluku, (2022) PPR outbreaks in the country can be related to the changes in husbandry practices. The unhygienic conditions sometimes associated with the extensive management system in the dry season might contribute to PPR outbreaks [4].

Seasonal, climatic, and environmental changes have been related to the spread of PPRV outbreaks [21]. The seasonal nature of the outbreak (wet or dry season) increases the risk of death, mainly in goats. Data from Koinadugu district indicates a higher PPR incidence during the dry season (November to April) compared to the rainy season [2].

PPR disease is often poorly understood among farmers in most parts of the country, with conditions diagnosed based on related clinical signs and frequent animal death rather than laboratory confirmation [15]. These factors, combined with inadequate veterinary infrastructure and diagnostic capacity, have contributed to PPR being a significant and widespread constraint on small ruminant production in Sierra Leone [12], [18].

Control and Prevention

The control and prevention strategy for Peste des petits ruminants (PPR) in Sierra Leone primarily focus on vaccination, improved husbandry practices, surveillance, and addressing farmer knowledge gaps, with a long-term goal of eradication [22].

Pest des petits ruminants is being targeted by international organizations for global eradication to be eradicated by 2030 [14]. Therefore, controlling its spread requires integrated strategies [2], [17].

Controlling PPR spread requires an integrated control plan that includes ongoing surveillance efforts and mass vaccination [2]. An official vaccination program based on the Nigeria/75/1 strain was launched in 2011 following PPR outbreaks in 2009 [2]. During the 2011-2012 vaccination campaign in Koinadugu, nine of the eleven chiefdoms participated, including six of the eight chiefdoms reporting PPR cases [2]. Since then, massive vaccination campaigns have been ongoing in all the districts across the country [20].

Routine surveillance is an important tool to protect the health of animals, because it allows for containment strategies to be developed and implemented [12]. Although clinical findings may lead to an indicative diagnosis, laboratory confirmation is key for confirmation of the PPR infection [15], [19], [20].

Control challenges

Based on the literature searched, controlling Peste des petits ruminants (PPR) in Sierra Leone faces several significant challenges [14]. The

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disease is virulent and deadly nature, causes high morbidity and mortality up to 100% and over 90% in naïve herds, respectively, and this makes control difficult once introduced [15].

Uncontrolled movement of animals along borderlines is identified as a main source of PPR outbreaks, hence a major challenge to control the disease in the country [1], [4]. Introduction of foreign animals into herds without quarantine measures is a risk factor identified by farmers, suggesting this practice is a challenge to control [1]. Although vaccination campaigns have been launched and the Nigeria 75/1 strain vaccine is used, the unavailability of vaccines and drugs is the principal problem hindering disease control programmes in some communities [2], [4]. Lack of resources to carry out pre and post vaccination Sero-monitoring to know the effectiveness of vaccination is a challenge. The country has also not carried out risk assessment to carry out disease control activities based on risk assessment. Risk mapping would allow the country prudently to utilize the meagre resources available for effective control of PPR.

Economic Impact of PPR in Sierra Leone

Based on the provided sources, Peste des petits ruminants (PPR) has a significant negative economic impact in Sierra Leone, as mentioned by the authors. It is identified as a main disease that causes greater economic loss and mortality among all diseases listed in the studied area [3], [5], [18]. The high morbidity (up to 100%) and mortality (over 90% in naïve herds) associated with PPR can lower the flock's production and population, and the reduction in flock size and production has a detrimental impact on food security [15].

Small ruminant production contributes significantly to income generation. PPR disease directly affects this income source and ability to handle emergencies, hindering this enterprise [1]. High mortality rates, reported between 50-100% annually in different parts of the country, including Tongo Field, represent a loss of valuable animal assets [1]. Syndromic surveillance also reported a case fatality rate of 47.4% for PPR cases, with 785 deaths out of 1656 reported cases in one district [2].

Diseased animals lose weight and by-product quality, which leads to a reduced market value. Farmers incur additional veterinary service expenses in the supportive treatment of sick animals. The death of farm animals can lead to a shortage of animal protein on the market, in communities, and in households [1].

The significant loss of animals detrimentally impacts the livelihoods of rural women and youth, who are major keepers of small ruminants. Overall, PPR represents a significant economic burden through direct animal losses, reduced income and asset value, increased costs, negative impacts on food security, and hindrance to the broader livestock sector and national development [3].

Conclusion

Peste des Petits Ruminants (PPR) remains a significant constraint to small ruminant production in Sierra Leone, with confirmed endemic presence across many districts. The disease's high morbidity and mortality, widespread occurrence, and persistent outbreaks, particularly in goats, have led to substantial economic losses, reduced household income, and compromised food security for smallholder farmers. Diagnostic and surveillance efforts have improved over time, but challenges such as inadequate veterinary infrastructure, uncontrolled animal movements, seasonal outbreaks, and limited vaccine access continue to undermine effective control.

Recommendations

To mitigate the impact of PPR, there is an urgent need to:

Strengthen laboratory diagnostic and surveillance systems for early detection and confirmation.

Carry out risk assessment and prepare a risk map for specific control actions based on the risk map

Expand and sustain strategic vaccination campaigns, ensuring adequate coverage and vaccine availability.

Provide funds for pre and post vaccination sero-monitoring to measure the effectiveness of vaccination campaigns.

Operationalize quarantine facilities at specific nodes along movement routes for observation of animals before release into new areas

Enforce animal movement control and quarantine measures, particularly in border regions.

Enhance farmer education and awareness on PPR prevention, symptoms, and reporting practices.

Improve veterinary service delivery and infrastructure to support control and eradication strategies.

Authors' Contribution

EIM, AFS, ABR, JS and JL conceptualized the work. EIM prepared the draft manuscript. All authors have read and approved the final manuscript.

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Table 1: Participants' Socio-demographic characteristics

Gender	**Frequency**	**Percent**
Female	16	88.89%
Male	2	11.1%
Age		
18years-30years	2	11.1%
31years-40years	10	55.6%
41years – 50years	5	27.8%
>50 years	1	5.5%
Designation/cadre		
Reproductive health(RH/HIV counsellor)	10	55.5%
SECHN/HIV Counsellor	7	38.9%
OTHER CADRES(CHO,CHA,MCH AIDE,NURSING AIDE)	0	5.5%
Length of service		
>5years	11	61.11%
3years	3	16.67%
4years	2	11.11%
5years	2	11.11%
Type of health facility		
Community Health Centre	13	72.22%
District Health Management Team/HIV Program	1	5.56%
Secondary hospital	3	16.67%
Tertiary hospital	1	5.56%
Highest level of education		
Certificate	13	72.22%
Diploma	5	27.8%
Degree	0	0%
Masters/Phd	0	100%
Pin-coded staff?		
Yes	1	5.56%
No	17	94.44%

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Table 2

Simplicity				
Indicators	**Score**	**maximum score**	**Score percent**	**Rank**
Instructions and guidelines for completing the HIV Surveillance system and reporting forms are easy to understand	5	60	8.3	Good
The system has standard case definitions and algorithms for HIV/AIDS	5	60	8.3	Good
The case definition/algorithm for HIV is easy to use and understanding the functionality of the HIV Surveillance system is easy	4	60	6.7	Good
Report forms are available. And surveillance data is easily managed	4	60	6.7	Good
Forms for reporting HIV surveillance data are easy to complete.	3	60	5.0	Average
The system has partners/organizations supporting the facility, district, and National	3	60	5.0	Good
Data collection is not time-consuming and only takes one hour to do so	3	60	5.0	Average
Transmitting data to the central level is easy	3	60	5.0	Good
Follow-up of cases is easy	3	60	5.0	
ARV drugs and HIV/AIDS test kits are available in a health facility to confirm diagnosis	3	60	5.0	Poor
Staff received training and training courses are performed frequently	4	60	6.7	Average
The system is responsive to suggestions.	4	60	6.7	Good
Implementation status (Overall Score)	44	60	73.3	73.3%(Good)

Table 3

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Flexibility

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Indicators	Score	maximum score	Score percent	Rank
The system is flexible and is part of the Integrated disease surveillance system (IDSR)	5	25	20	Good
The system can accommodate changes in case definition	3	25	12	Good
The existing surveillance reporting system is well adapted to reporting all HIV surveillance in this region. The system can accommodate any changes in reporting method	2	25	8	Good
The system can integrate the surveillance of other disease/HIV surveillance and response within the existing Surveillance system easily adapts to changes in technology (e.g. paper-based to electronic-based reporting)	5	25	20	Good
The system can accommodate data changes with minimum cost and efforts	5	25	20	Good
Implementation status (Overall Score)	20	25	80	80%(Good)

Table 4

Acceptability				
Indicators	**Score**	**Maximum score**	**Score percent**	**Rank**
Fellow health personnel in this facility show interest in HIV surveillance activities / Willing to continue to participate in the HIV/AIDS surveillance system	5	25	20	Good

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The system appreciates effort of staff for doing the job effectively. My contributions and inputs to the existing HIV Surveillance system are considered valuable.	4	25	16	Good
I am satisfied with my involvement in the HIV surveillance activities in this facility	5	25	20	Good
The existing HIV surveillance system protects users' privacy and confidentiality / The system acceptable to users	5	25	20	Good
All actions regarding HIV surveillance are adequately supported by the health facility management and Suggestions/comments about improving the system are considered by the program	5	25	20	Good
Implementation status (Overall Score)	24	25	96	96%(Good)

Table 5

Stability				
Indicators	**Score**	**Maximum score**	**Score percent**	**Rank**
The system is stable after sponsors withdraw their support	2	40	5	Poor
The system does require time to manage the data	3	40	7.5	Good
The system was not interrupted during the COVID-19 pandemic	3	40	7.5	Good
The system has dedicated staff for data collection,, Analysis and Reporting	4	40	10	Poor

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The system data is manually collected and submitted to a higher level/The existing HIV Surveillance system has always been reliable when reporting HIV surveillance data.	5	40	12.5	Good
The system protects patient privacy/ data confidentiality	4	40	10	Good
The system receives feedback from a higher level after reports are submitted	3	40	7.5	Good
Resources provided for HIV surveillance and response activities in this region/facility are sufficient/ There was no stockout of test kits/ARV drugs in the facility/	2	40	5	Average
Implementation status(Overall Score)	26	40	65	65%(Average)

Table 6

Representativeness				
Indicators	**Score**	**Maximum Score**	**Score percent**	**Rank**
The system capture all pregnant women attending the facility	3	30	10	Good
Surveillance/DHIS data covers public facilities including government and NGOs providing HIV services	3	30	10	
Private, NGO and Faith based NGO do not report HIV surveillance data to DHMT/National AIDS control program	2	30	6.7	

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The system is collecting sufficient information regarding pregnant women seeking HIV care this include age and sex of cases along with their residential areas at private, NGO and Faith based clinics	3	30	10	Poor
Implementation status (Overall Score)	11	30	36.7	36.0% (Poor)

Table 7

Usefulness				
Indicators	**Score**	**maximum score**	**Score percent**	**Rank**
HIV surveillance and response within the Surveillance system has enabled achievement of the surveillance objectives in the past one year in this district(Provide estimates of the HIV magnitude, incidence, prevalence, and mortality)	4	35	11.4	Good
Transmitting information to the next level had access to reporting tools motor vehicles, motorcycles, and cellphones	2	35	5.7	Good
HIV surveillance data has informed program implementation for prevention and control of the disease in the past one year in this district & Action taken by authorities to improve the performance of the HIV surveillance system	4	35	11.4	Good
Data Analysis done and feedback given to the responsible people	2	35	5.7	Good
Data collection and reporting done weekly and monthly by health facility staff	3	35	8.6	Good
Data generated on HIV testing, supply of HIV test kits and drug supply is used for resource planning, care and control by partners for informed decision making	4	35	11.4	Good

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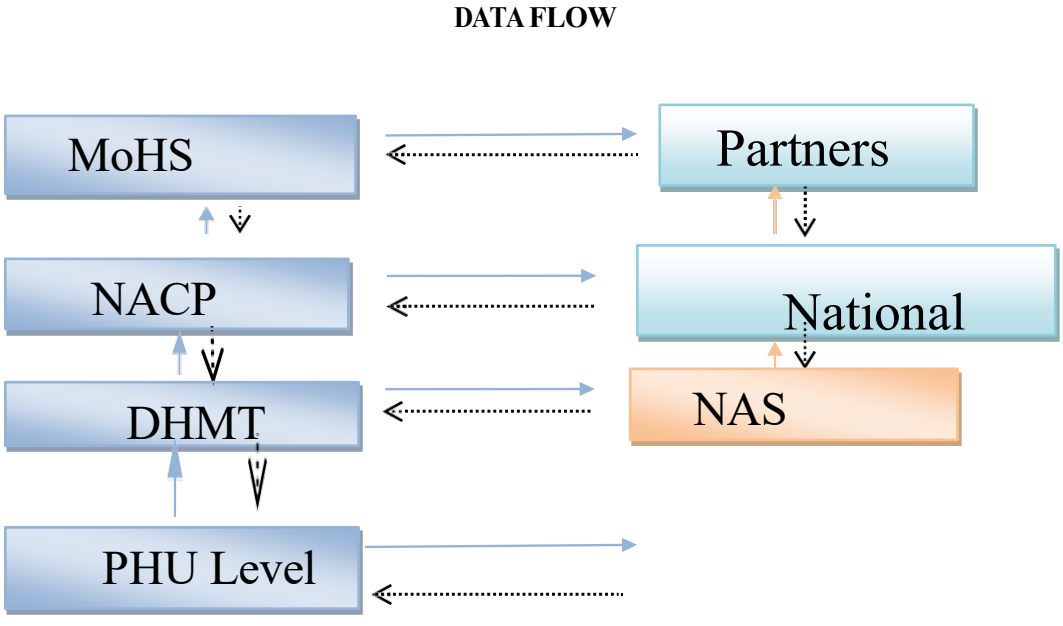
The system is useful and data are used to assess the impact of interventions	4	35	11.4	Good
Implementation status/Overall Score)	23	35	65.7	65.7%(Average)

Figure 1: Trend of HIV cases among pregnant women seeking ANC/PMTCT services in Western area Urban, 2022

11.1 HIV SURVEILLANCE SYSTEM DATA FLOW



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Feedback

Adapted from the Consolidated Guidelines on HIV Prevention, Diagnosis, Treatment and Care in Sierra Leone