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Original Research Article

Prevalence of mpox in Yenagoa local government area, Bayelsa state, Nigeria

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ABSTRACT

Background: A retrospective descriptive epidemiological study analyzed the occurrence of monkeypox (mpox) in Yenagoa local government area (LGA) of Bayelsa state, Nigeria, from 2017 to 2023.
Methods: Data on all suspected and confirmed cases were obtained from the disease surveillance office and analyzed using descriptive statistics, with results presented in tables, frequencies, and percentages.
Results: Yenagoa was identified as a persistent mpox hotspot, with 82 confirmed cases among a population of 798,000, representing a low but continuous prevalence rate of 0.0103%. Annual fluctuations with occasional peaks, particularly in 2022, suggest ongoing localized outbreaks rather than widespread endemicity. Most cases occurred among males (63.8%) and young adults aged 21-40 years, indicating specific demographic vulnerability. The case fatality rate of 1.25% corresponds with the less virulent West African clade. Prevalence varied across wards, with Epie and Atissa showing the highest rates, indicating regional transmission foci. Close human contact emerged as the predominant risk factor, followed by zoonotic exposure.
Conclusions: Seasonal patterns, with peaks between September and October, and uneven spatial distribution highlight the need for enhanced local interventions. Public health recommendations include strengthening routine surveillance, prioritizing high-prevalence wards, improving public awareness and risk communication, implementing targeted vaccination campaigns where feasible, and improving case management and outbreak preparedness for seasonal peaks. The findings underscore the importance of sustained surveillance and community engagement to interrupt transmission and prevent future mpox outbreaks in Yenagoa LGA.

Keywords: Bayelsa state, Epidemiology, Monkeypox, Mpox, Prevalence, Yenagoa

INTRODUCTION

Mpox, previously known as monkeypox, is a zoonotic disease that is caused by the monkeypox virus, an enveloped double stranded DNA virus, of the Orthopoxvirus genus in the poxviridae family.[1,2] The virus was first discovered in 1958 among laboratory monkeys in Copenhagen and was later seen in humans in 1970 in the Democratic Republic of Congo.[3] Presently the disease is endemic in many African countries, especially countries in Central And West Africa.[4,5] From May 2022 there was an outbreak in non-endemic countries such as the United States of America, Asia, the United Kingdom, Europe, Australia, Canada and the Middle East, causing

the World Health Organisation to declare this as Public Health Emergency of International Concern (PHEIC).[3,6] The outbreak was brought under control due to intensive vaccination campaign and effective public education[3] However, another outbreak was reported in 2024. Between January 2022 and June 2024 99,176 confirmed Mpox cases were reported globally with 208 deaths. Democratic Republic of Congo accounted for most of the reported cases in 2024 with 11,984 cases, Burundi 2, 704 cases and Uganda 1,027 cases.[7]

Nigeria reported her first two cases of Mpox in 1971, with one of these being in a four-year-old. The third case was recorded in 1978.[7,8] After this, there were no other cases reported until September 2017, when the country witnessed a re-emergence of the disease.[8] From September 2017 to June 2022 Nigeria recorded 288 confirmed cases of Mpox, with 9 deaths. By 2024, 35 out of the 36 states in Nigeria have recorded confirmed cases of Mpox.[9]

There are two recognised strains of the mpox virus, the West African monkeypox virus clade, associated with milder disease and the Central African monkeypox clade which has been associated with more severe disease.[10] Though the natural reservoir of the virus is still unknown, small mammals like the monkeys and the squirrels are known to be susceptible.[11] The virus can be transmitted to humans by direct contact with the blood, bodily fluids, cutaneous or mucosal lesions of infected animals, including through their bites or scratch.[10] There is also the possibility of human to human transmission, transmission from contaminated environment or from eating inadequately cooked meat of infected animals.[10]

The clinical features of mpox closely resembles that of smallpox, although smallpox is considered generally more severe than Mpox.[10,11] There is a 2-4-day period of early symptoms such as fever and extreme fatigue before the appearance of the rash. The rash first appears as papules, then forming vesicles and eventually becoming pustules. The lesions then umbilicate, dry out and peel off. The entire progression usually spans 2 to 4 weeks depending on the severity of the disease.[11] The virus can be transmitted from an infected individual until all sores have healed and new skin formed. Those most susceptible to the disease and are at higher risk of developing complications are children, pregnant women and immunocompromised individuals.[11]

Though the disease can be recognised clinically, definitive diagnosis can only be made by laboratory confirmation using polymerase chain reaction (PCR), assay, virus isolation by cell culture, enzyme-linked immune sorbent assay (ELISA) and antigen detection tests.[10]

Bayelsa state in southern Nigeria reported its first case of monkeypox in 2017. A previous study showed that 242 Mpox cases were reported in 8 local government areas (LGAs) of Bayelsa state, with majority of the cases coming from Yenagoa, the state capital.[12] There is however limited published data on the epidemiology of the disease in Yenagoa LGA of Bayelsa state. This study aimed to described the epidemiology of the disease in Yenagoa LGA. Three clear objectives were: 1) to estimate the point prevalence of mpox among the population of Yenagoa local government area from 2017-2023; 2) to describe the demographic characteristics (such as age, sex, and occupation) of individuals affected by mpox in Yenagoa from 2017-2023; 3) to identify and assess possible risk factors associated with mpox infection among residents of Yenagoa local government area.

METHODS

This was an epidemiological retrospective study to assess the prevalence of mpox in Yenagoa local government area from 2017 to 2023. The surveillance data on mpox cases in Yenagoa LGA from September 2017 to June 2023 was retrieved from the LGA surveillance records to estimate the cumulative prevalence of mpox among the population of Yenagoa local government area from 2017-2023, to describe the demographic characteristics (such as age, sex, and occupation) of individuals affected by mpox in Yenagoa from 2017-2023 and to identify and assess possible risk factors associated with mpox infection among residents of Yenagoa local government area. A proforma was used to retrieve only data that meets the inclusion criteria from 2017 to 2023. Information addressing the objectives of the study were retrieved from the records of 160 suspected cases and 82 confirmed cases of mpox from 2017 to 2023. Analysis was done with the use of epidemiological statistic, frequencies and percentages. Results were presented in tables, frequency and percentages.

Selection criteria

All suspected and confirmed cases captured in the disease surveillance register of the Yenagoa local government from 2017 to 2023.

Exclusion criteria

Suspected and confirmed cases not captured in the Yenagoa local government disease surveillance register. Suspected and confirmed cases in other local government area of Bayelsa state.

Analysis

Analysis was done with the use of descriptive epidemiological statistics of cumulative prevalence and case fatality rate with results presented in tables, frequencies, and percentages.

Yenagoa is the capital of Bayelsa state in southern Nigeria, located in the Niger-Delta region. The Yenagoa local government area covers an area of about 706 square kilometers and has an estimated population of approximately 798,000 in 2024. Yenagoa lies at coordinates roughly 4°55'29"N latitude and 6°15'51"E longitude.[13] It is situated at the northern part of Bayelsa state and shares boundaries with Ahoada West LGA in Rivers state. The LGA is 70% land and 30% riverine. It is situated within a tropical environment characterized by swamps, mangroves, and tropical rainforests. The terrain includes creeks and tributaries such as the Epie and Ekolo Creeks, contributing to its ecological setting.[13] The region has a tropical climate with heavy rainfall and consistently high temperatures throughout the year. The LGA has 15 political wards, 73 autonomous communities and 294 settlements. Yenagoa LGA has about 114 public and private health facilities. The main occupations of the people include fishing, farming and petty trading.[14] The majority ethnic group in Yenagoa is the Ijaws, with several local dialects spoken such as Epie-Atissa, Ekpetiama, Gbarian, Buseni, and Zarama, alongside English as the official language.[14]

Administratively, Yenagoa LGA is divided into several wards and communities that include Atissa, Epie, Gbarain, Ekpetiama, Biseni, Okordia, Zarama, among others. Yenagoa serves as a commercial and administrative hub with infrastructure such as the Bayelsa International Airport and has cultural and sporting significance in the region.[15] This tropical, semi-urban-to-urban setting with unique ecological factors- including proximity to forest and swamp areas- forms the epidemiological context relevant for studying monkeypox transmission and prevalence in the region.[14]

Ethical consideration

Ethical clearance was obtained from the Bayelsa state ethical review committee.

RESULTS

What is the cumulative prevalence of monkeypox in Yenagoa local government area from 2017 to 2023?

Tables 1 and 2 indicated that the cumulative prevalence of monkeypox in Yenagoa from 2017 to 2023 was approximately 0.0103%. The case fatality rate (CFR) from 2017 to 2023 was 1.25.

Table 1: Cumulative prevalence of monkeypox in Yenagoa from 2017 to 2023.

Population at risk (LGA population)	Total confirmed cases (2017 - 2023)	Cumulative prevalence total confirmed cases/population ×100
798,000	82	(82/798,000) × 100 =0.0103%.
		CP= 0.0103%

Table 2: Key indicators for % suspected and confirmed cases of mpox 2017-2023 Yenagoa LGA.

Year	Suspected	Percentage	Confirmed	Percentage	Death
2017	40	25	24	60	1
2018	13	8	10	77	0
2019	8	5	8	100	0
2020	9	6	1	11	0
2021	10	6	3	30	1
2022	71	44	34	48	0
2023	9	6	2	22	0
Total	160	100	82	51	2

What is the cumulative prevalence of monkeypox by Wards in Yenagoa local government area from 2017 to 2023?

Table 3 below indicated that the cumulative prevalence percentages are very low, consistent with the low overall cumulative prevalence (about 0.0103%) in Yenagoa LGA. The wards Epie 3 and Epie 2 show relatively higher prevalence (0.0316% and 0.0246%, respectively) compared to others. Closely followed by Epie 2 (Ward 5), Epie 1 (Ward 4) and Atissa 3.

What is the sex distribution of suspected cases of monkey pox in Yenagoa local government area from 2017-2023?

Table 4 indicated that across all years, males accounted for 102 out of 160 cases, which is approximately 63.8% of cases, while females accounted for 58 cases or 36.2%. There were 2 deaths among 160 reported cases and both are males, making the overall death rate 1.25%. Year-wise, 2017 and 2021 had the deaths reported (1 death each year), corresponding to 2.5% and 10% case fatality rate in those respective years.

Table 3: Yenagoa confirmed cases by wards from September 2017 to June 2023.

Wards	2017	2018	2019	2020	2021	2022	2023	Total	Cumulative prevalence
Atissa 1	0	1	2	0	1	2	0	6	(6 / 57,000) × 100 ≈0.0105%
Atissa 2	2	0	0	0	0	2	0	4	0.0070%
Atissa 3	5	1	3	0	0	1	0	10	0.0175%
Epie 1	1	2	0	0	0	7	0	10	0.0175%
Epie 2	1	4	1	0	0	6	2	14	0.0246%
Epie 3	3	1	1	1	1	11	0	18	0.0316%
Gbarain1	0	1	0	0	0	1	0	2	0.0035%
Gbarain2	4	0	0	0	0	3	0	7	0.0123%
Gbarain3	0	0	1	0	1	0	0	2	0.0035%
Ekpetiama1	1	0	0	0	0	0	0	1	0.0018%
Ekpetiama2	4	0	0	0	0	1	0	5	0.0088%
Biseni 1	2	0	0	0	0	0	0	2	0.0035%
Biseni 2	1	0	0	0	0	0	0	1	0.0018%
Okordia	0	0	0	0	0	0	0	0	0%
Zarama	0	0	0	0	0	0	0	0	0%

Table 4: Year and sex distribution of suspected cases with deaths from 2017 to 2023 June.

Year	No. of cases reported	Male	%	Female	%	Total deaths	%
2017	40	26	65.0	14	35.0	1	2.5
2018	13	9	69.2	4	30.8	0	0
2019	8	5	62.5	3	37.5	0	0
2020	9	7	77.8	2	22.2	0	0
2021	10	5	50.0	5	50.0	1	10
2022	71	46	64.8	25	35.2	0	0
2023	9	4	44.4	5	55.6	0	0
Total	160	102	63.8	58	36.2	2	1.25

Table 5: Age distribution of confirmed cases of mpox 2017-2023.

Age groups (years)	2017	2018	2019	2020	2021	2022	2023	Total	%
0-10	4	0	1	0	1	4	1	11	13.41
11-20	7	0	1	0	1	0	0	9	10.98
21-30	7	7	2	1	0	9	1	27	32.93
31-40	5	0	4	0	1	16	0	26	31.71
41-50	1	3	0	0	0	5	0	9	10.98
51-60 and above	0	0	0	0	0	0	0	0	0
Total	24	10	8	1	3	34	2	82	100

Table 6: Confirmed cases of mpox by the month and year of incidence.

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2017	0	0	0	0	0	0	0	0	8	11	4	1	24
2018	0	2	0	0	0	1	2	1	4	0	0	0	10
2019	2	2	0	2	1	0	1	0	0	0	0	0	8
2020	0	0	0	1	0	0	0	0	0	0	0	0	1
2021	0	0	0	0	1	0	1	0	1	0	0	0	3
2022	0	2	1	2	1	4	4	6	6	5	2	1	34
2023	0	1	1	0	0	0	0	0	0	0	0	0	2
Total	2	7	2	5	3	5	8	7	19	16	6	2	82

Table 7: Possible risk factors associated with mpox infection among residents of Yenagoa local government area.

Possible risk factors	Frequency (of cases or surveyed individuals)	Percentage
Close contact with infected persons (human-to-human transmission (general)	60	73
Sexual and risky sexual behaviors	1	1
Animal exposure (bush meat, wild animals)	20	24
Immunosuppression (HIV co-infection)	1	1
Lack of awareness/inadequate prevention	10	12

What is the age distribution of confirmed cases of mpox from 2017 to 2023 in Yenagoa local government area?

Table 5 indicates that 21-30 and 31-40 age groups have the highest proportions of confirmed monkeypox cases, together accounting for about 64.6% of all cases. Children aged 0-10 represent about 13.4% of cases. Adolescents and young adults aged 11-20 and middle-aged adults 41-50 each account for roughly 11% of cases. No confirmed cases were reported in the 51-60 and above age group during this period.

What is the distribution of confirmed cases of mpox by the month and year of incidence?

Table 6 indicates that the highest numbers of confirmed cases occurred in September (23.17%) and October (19.51%), suggesting a seasonal peak in these months. Other months with notable cases include July (9.76%), February (8.54%), and August (8.54%). The low numbers in January, March, May, and December indicate fewer cases during those months.

What are possible risk factors associated with mpox infection among residents of Yenagoa local government area?

Table 7 indicates that the dominant risk factor for monkey pox in Yenagoa local government area is close physical contact (73%). Animal exposure (bush meat, wild animals) (24%), and lack of awareness/inadequate prevention (10%). sexual and risky sexual behaviors and immunosuppression (HIV co-infection) were 1% respectively.

DISCUSSION

The surveillance showed that Yenagoa LGA remains a significant hot spot for MPOX outbreak in Nigeria since 2017 when the country experienced a major outbreak of the disease, with more than half of the suspected cases confirmed to have MPOX disease.

The findings for monkeypox (mpox) prevalence in Yenagoa local government area from 2017 to 2023 reveal a cumulative prevalence of approximately 0.0103% in a population of 798,000, based on 82 confirmed cases over this period. The low cumulative prevalence (0.0103%) indicates that monkeypox cases in this population remain relatively rare compared to the total population size. This suggests that while the disease is present, it has not become widespread or endemic at a high level within Yenagoa LGA during these years. However, the presence of confirmed cases every year, with some fluctuations and peaks (e.g., 34 confirmed in 2022), indicates ongoing transmission and occasional outbreaks rather than a one-time incident. The initial suspected mpox outbreak in Bayelsa state (Yenagoa) reported by the NCDC in 2017 highlighted mpox as a relatively rare disease in Nigeria but documented its re-emergence with clusters of cases and ongoing public health investigation and response. The presence of ongoing cases confirmed local, sustained transmission rather than a one-off event, fitting with the finding of persistent, low-level endemicity and occasional peaks.[16] A detailed outbreak investigation of the 2017-2018 human mpox outbreak in Nigeria identified 122 confirmed/probable cases across multiple states, with evidence of both zoonotic and sustained human-to-human transmission of the West African clade. This study emphasized that although mpox remained relatively rare on a national scale, endemic circulation and periodic outbreaks occur, paralleling your interpretation of Yenagoa's data.[17] While the data focuses on low cumulative prevalence (0.0103%) in Yenagoa, some broader Nigerian studies report larger outbreaks with higher case numbers in certain states, indicating heterogeneity in prevalence by region. This shows that Yenagoa's low prevalence aligns with some localities but may contrast with higher-burden areas elsewhere in Nigeria, emphasizing regional variation.[17]

The case fatality rate (CFR) of 1.25% shows that while monkeypox can be serious and potentially fatal, the majority of cases recover. This CFR aligns with what is reported globally for less severe mpox clades circulating outside Central Africa. The West African clade (circulating in Nigeria and West Africa) has a reported CFR around 3.6%, significantly lower than the Central African clade's CFR of about 10.6%.[18] The repeated detection of cases over multiple years reflects challenges in fully preventing transmission, likely influenced by factors such as waning immunity after cessation of smallpox vaccination, close contact transmission, and possible animal reservoirs or environmental exposures.[18] A 2025 systematic review and meta-analysis found that the pooled CFR for confirmed mpox cases in African endemic regions was around 4.18% overall but varies

significantly by geography, clade, time period, and healthcare access. CFR has shown a decreasing trend over time, linked to improved surveillance and care.[19]

The prevalence rates for confirmed mpox cases in all wards are very low, ranging from 0% in some wards (Okordia, Zarama) to a maximum of about 0.032% (Epie 3). This aligns with earlier findings that mpox cases remain relatively rare within the total population of Yenagoa LGA. Some wards such as Epie 3 (0.0316%), Epie 2 (0.0246%), Atissa 3 (0.0175%), and Epie 1 (0.0175%) show comparatively higher prevalence than others. These higher prevalence areas may be foci of transmission or hotspots, possibly due to factors such as denser populations, socio-economic characteristics, occupational exposure, or localized animal reservoirs. Wards like Okordia and Zarama reported zero confirmed cases during this period, suggesting either lower risk, better control, or possible underreporting in these areas. Wards with only 1-2 cases have correspondingly very low prevalence. The public health implication is that the uneven distribution indicates the need for targeted intervention and enhanced surveillance in higher-prevalence wards like Epie 3 and Epie 2. These areas could benefit from focused community awareness, vaccination campaigns, and zoonotic risk reduction measures to prevent further spread. Lower prevalence wards still require sustained monitoring to detect potential emerging cases early. While monkeypox infection is rare across Yenagoa LGA, the data suggests localized areas with relatively higher incidence, highlighting the need for ward-specific public health strategies to control and prevent mpox transmission effectively.[20]

The findings from the demographic data on monkeypox cases in Yenagoa LGA from 2017 to June 2023 reveal important patterns regarding sex distribution and mortality: Males accounted for approximately 63.8% of the reported cases, while females accounted for 36.2%. This suggests that males are disproportionately affected by monkeypox in this area. This pattern is consistent with global observations where males, often due to behavioral, occupational, or social factors, have higher exposure risks.This is consistent with a study that investigated the 2017-18 Mpox outbreak in Nigeria that found approximately 70% of cases were male.[20] National surveillance data show persistent male predominance in reported mpox cases across Nigeria, reflecting social and cultural patterns contributing to exposure risks. The male predominance might reflect differences in activities that increase exposure to the virus, such as more frequent contact with potential animal reservoirs or human-to-human transmission networks. The predominance of male cases indicates targeted public health messaging and interventions may be particularly important for men engaged in high-risk activities.[21] The low but present mortality highlights the importance of continued clinical management and surveillance to prevent fatalities. Understanding the factors driving yearly case fluctuations and sex differences could help guide focused prevention strategies, including community education, vaccination, and early case detection. Overall, these findings emphasize ongoing transmission of monkeypox in Yenagoa LGA with demographic patterns that are useful for tailoring control efforts. The number of reported cases fluctuated each year, with a notable peak in 2022 (71 cases). While males consistently had more cases each year, females saw increased proportions in some years (e.g., 2021 and 2023), suggesting possible shifts in transmission dynamics or reporting.

There were 2 deaths out of 160 suspected cases, yielding an overall case fatality rate (CFR) of 1.25%. Deaths occurred in 2017 (1 death) and 2021 (1 death), constituting 2.5% and 10% CFR for those respective years, showing some variability likely due to differences in case severity or access to care. The relatively low CFR aligns with characteristics of monkeypox clades circulating outside Central Africa, where disease tends to be less severe.[22]

The age distribution of confirmed monkeypox cases in Yenagoa LGA from 2017 to 2023 reveals several important epidemiological insights: predominance in young adults (21-40 years). The majority of cases (about 64.6%) occurred in the 21-30 and 31-40 age groups. This suggests that young adults and middle-aged individuals are the most affected demographic. This could be due to higher levels of social interaction, occupational exposure, or lifestyle behaviors that increase the risk of contact with the virus or infected individuals. Lower cases in children and adolescents: children aged 0-10 years made up roughly 13.4% of cases, and adolescents/young adults aged 11-20 contributed about 11%. While these groups are affected, their proportions are smaller compared to the young adult groups. This might reflect differences in exposure patterns, mobility, or immunity (potentially due to earlier smallpox vaccination in older populations). Possible reason for the peak could be climatic or environmental factors favoring virus survival or increased contact with animal reservoirs during this time. Seasonal human behaviors, such as farming cycles, hunting activities, or social gatherings, that may increase exposure or human-to-human contact or Increased reporting or surveillance activities coinciding with outbreaks in these months. July (9.76%), August (8.54%), February (8.54%), April (6.10%), and June (6.10%) also show moderate case frequencies. These months may correspond to transitional periods where factors facilitating transmission are still present but at somewhat reduced levels compared to the peak months. January, March, May, November, and December consistently show lower case numbers, each contributing less than 8% of total cases, with some months as low as 2-3%. This might indicate a seasonal lull or lower transmission potential during the dry or cooler months, or alternatively reflect limitations in case detection, health-seeking behavior, or reporting during these times. This aligns with a study in Nigeria that indicated that the 2017-2018 study of mpox in Nigerian reported notable clustering of mpox cases in the rainy season (typically April to October), with peaks around September-October. The authors hypothesize that

increased human contact with animal reservoirs during these months and favorable virus survival conditions contribute to seasonal rises. This is consistent with your finding of a late-third quarter/early-fourth quarter peak.[17] While the monthly data aggregates cases over several years, the overall yearly total cases were highest in 2022 (34 cases) which aligns with the monthly data that shows large numbers distributed over many months in 2022. The persistent detection of cases every year, including sporadic months in other years, reflects ongoing endemic transmission with episodic outbreaks rather than a single isolated event.

Findings indicated that the dominant risk factor in Yenagoa is close physical contact (73%), particularly within households and caregiving settings, underscoring the need for prompt case identification, isolation, and community education. Zoonotic exposure (24%) through rodents, primates, or bush meat remains a significant risk, especially in children and hunters, making reduction of risky animal contact essential. Limited awareness (12%) and knowledge gaps contribute to risky behaviors, highlighting the importance of comprehensive education and prevention messaging. Globally, mpox transmission is shaped by human-to-human contact, animal reservoirs, waning immunity since smallpox vaccination ended, and under-recognized routes such as sexual networks in urban populations.[23] Strengthened surveillance, vaccination, and awareness remain critical for prevention and control.[23]

Low reported frequency and percentage suggest limited documentation or underreporting. However, studies from Nigeria show sexual contact, including among men who have sex with men, is a recognized risk factor for mpox in adults. The small value here might reflect social stigma, limited investigation, or less prominence in Yenagoa compared to other factors. Nonetheless, sexual transmission remains an important consideration in adult populations.

Although frequency is low here, research in Nigeria shows HIV-infected individuals have higher mpox susceptibility and potentially more severe disease. The low detected frequency could be due to testing gaps or the relatively small sample surveyed. This factor underscores the need for integrated care of immunocompromised individuals to prevent severe outcomes.

Limitations

Data quality and completeness

As a retrospective study using surveillance records, the data may contain gaps, underreporting, or misclassification errors, which could affect the accuracy of findings.

Limited case detection

Restricted laboratory confirmation and possible under-diagnosis in the community may have led to an underestimation of the true mpox burden.

Restricted scope and generalizability

The study focused only on Yenagoa LGA, so the results may not fully represent mpox patterns across Bayelsa State or Nigeria. Lack of analytical assessment: the use of purely descriptive statistics limited the ability to identify causal relationships or significant risk factors associated with mpox transmission.

Public health implications

Effective control of monkeypox requires strengthened surveillance, vaccination, and community awareness to prevent wider spread. Targeted interventions are essential in higher-prevalence wards (Epie 3 and Epie 2), while sustained monitoring is needed in lower-prevalence areas. Young and middle-aged adults, especially men in high-risk activities, should be prioritized for education and vaccination, with further research into why older adults are less affected. Prompt case identification, isolation, and reduced risky animal contact are critical. Recognizing the September-October peak period allows for intensified awareness, enhanced surveillance, vaccination drives, and research into ecological and behavioral drivers of transmission.

CONCLUSION

Although mpox prevalence in Yenagoa LGA is low, persistent annual cases indicate ongoing local transmission with demographic (young adult males) and geographic (specific wards) disparities. Targeted, data-driven, and community-engaged strategies focusing on surveillance, vaccination, education, and seasonal readiness are essential to limit outbreaks and reduce the burden of mpox in the area.

Recommendations

To effectively control and prevent monkeypox (mpox) transmission in Yenagoa LGA, key strategies include strengthening surveillance systems, implementing targeted vaccination for high-risk groups, and intensifying community awareness campaigns. Health workers should be trained for rapid case identification, isolation, and management, while measures must also address zoonotic transmission risks through safe animal handling practices. Seasonal preparedness, especially before the September to October peak is critical, alongside integration with other public health programs and continuous research to refine interventions.

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