Commentary

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Socio-cultural and technical gaps in rabies control in the Philippines

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Abstract:

Rabies remains a persistent public health issue in the Philippines, despite the existence of national and local policies and programs aimed at addressing its eradication. The viral disease, which elicits fatality yet is preventable, disproportionately affects rural areas, especially geographically isolated and disadvantaged area due to the junction of socio-cultural and technical challenges. This commentary article explores the myriad of barriers to rabies prevention and control, including poverty, cultural beliefs, limited health literacy, health delivery, and access inequity. However, the implementation of Rabies Act of 2007, which mandates mass vaccination, education, and the establishment of Animal Bite Treatment Centers (ABTCs), has gaps in the implementation that compromises the program's sustainability and effectiveness. Deep-rooted cultural practices and beliefs delay or, more so replace evidence-informed medical practices, while geographic isolation and underfunded healthcare facilities hinder optimal provision of care. Moreover, interagency coordination and fragmented reporting surveillance systems further complicate effective rabies control. To address the gaps, this paper advocates for a culturally tailored and community-centered One Health approach that addresses both social and technical aspects of rabies prevention. Important recommendations include decentralizing ABTCs, sustaining vaccination programs with local government support and funding, integrating rabies education into schools and community outreach, and intensifying through multisectoral collaboration both government and nongovernment institutions. Achieving a rabies-free country requires not only biomedical interventions but also a holistic approach – equitable access to healthcare, trust building in communities, and long-term political commitment. In this manner, regardless of location and socioeconomic status, it ensures that this viral disease will be controlled and prevented.

Keywords:

Control, Philippines, prevention, rabies, sociocultural, technical

Introduction

Rabies, a fatal yet preventable viral disease, remains a public health threat in the Philippines. At present, the Anti-Rabies Act of 2007 is the key existing policy instruments that mandates key activities such as mass dog vaccination, responsible pet ownership, public education and awareness, and the establishment of Animal Bite Treatment Centers (ABTCs).[1] However, it still poses hundreds of fatal cases annually. This continual challenge suggests that gaps in the control measures exist primarily in sociocultural and technical implementation.

In September 2024, a 23% increase in human rabies cases was reported by the Department of Health compared to 2023, with a dreadful 354 deaths by the third quarter.[2] This dramatic fluctuation primarily reflects the gaps of the existing interventions but also proves the magnitude of strength of the virus in specific ecological and social settings and factors that make it persist and spread. Rabies, although preventable through vaccination, continues to be prevalent in communities where poverty, misinformation, and poor access to healthcare services meet.

This commentary will explore the intersecting gaps, particularly poverty,

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traditional beliefs, education and awareness, healthcare services and access, and surveillance inefficiencies. These gaps offer vital perspectives on why rabies control remains fleeting in the country.

Sociocultural Determinants

One of the key sociocultural barriers to effective rabies control in the country is chronic poverty. Impoverished communities, particularly those in geographically isolated and disadvantaged areas (GIDAs) fail to have access to animal and human health services. These settings often have limited or no local ATBC and lack or have no awareness about the availability of Postexposure Prophylaxis (PEP) vaccines and rabies vaccines for animals. Thus, most patients either delay, postpone, or completely avoid seeking medical attention, an action increasing their risk of death because this viral disease is always fatal once the symptoms appear.[3,4]

Beyond structural poverty lies another problem – deep-rooted cultural beliefs and practices that highly influence and shape one's health behavior. In many rural areas, traditional healers and folk remedies are considered their primary course of treatment following a dog bite. Practices such as *tandok* (a form of suctioning believed to remove the virus from a wound) or the application of garlic, oil, or other home remedies are still commonly practiced.[5,6] Even more disturbing is the consumption of raw dog meat (*kilawin*) or the liver or a rabid dog (*tawal)* as a believed cure.[7,8] These wrong practices and beliefs not only delay access to lifesaving PEP but also have ripple effects than lead to more health risks. These odd health behaviors stem not solely from ignorance but are often culturally engraved survival responses developed in settings where formal medical options are perceived as inaccessible, costly, or untrustworthy.

These sociocultural challenges are reinforced by limited access to formal education, especially health education. However, while awareness of the virus as a disease may be relatively widespread, understanding its transmission, prevention, and treatment is often shallow. Individuals with higher education levels are more likely to understand the need for vaccination, avoid traditional treatments, and comply with public health recommendations.[9,10] However, education campaigns often fall short in areas with low literacy rates, creating continued holes of misinformation. Information and education campaign materials about rabies fail to reach or resonate with these people in marginalized areas.

Information is rarely translated into local dialects or fitted to suffice cultural beliefs, and literacy limitations are often to less addressed by the local and national government. This results in the thriving of false information, leading to underreporting of cases and poor adherence to protocols. There is also minimal training for local leaders of these communities, who are key intermediaries between communities and formal health systems.

Technical Barriers

Beyond the sociocultural context of this rabies dilemma, the nation's efforts to eliminate rabies are seriously hampered by technical constraints. Primary among these is the insufficient vaccination coverage of the human and animal population. The World Health Organization (2023) recommends at least 70% vaccination coverage of dogs to interrupt the transmission cycle. While the country struggles to reach this recommendation due to logistic issues, inconsistent vaccine supply, lack of centralized surveillance, and the lack of prioritization of rabies by community and local government units.

Vaccination campaigns are prevalent from government and nongovernment institutions but cater to limited numbers due to budgetary constraints, especially in GIDAs. Moreover, there is a lack of veterinary personnel and little to no existence of mobile veterinary units, making it harder to implement sustained vaccination programs in these areas.[11] In most cases, the responsibility for vaccinating dogs is with their owners, many of whom cannot afford to pay for vaccines or are just simply unaware of the existence of such. This inevitably results in large numbers of unvaccinated or under-vaccinated dogs, especially stray or semi-owned animals that roam freely, which factors into unending rabies transmission.

Moreover, in human vaccinations, Category II bite victim patients are being excluded and may not be eligible for reimbursement under the PhilHealth Animal Bite Health package following PhilHealth Circular No. 15, series of 2012, and DOH guidance.[12] This exclusion leads to out-of-pocket costs or delayed care. Unfortunately, category II patients account for 70%–75% of the total bite cases. In 2018, of 1,156,377 reported animal bite exposure cases in the Philippines, 74.68% were Category II,[13] highlighting the additional critical gap in vaccination coverage and access to affected individuals.

Another limitation is healthcare access, despite the increased existence of ABTCs throughout the country. Most are centralized in urban settings, leaving rural populations inadequately served. Patients in GIDAs may have to travel several hours or days to reach the nearest facility. Financial incapacities can discourage bite victims from seeking care. About 92% of these human rabies cases involve individuals who did not receive or complete their PEP protocol.[1,4]

The Philippines employs multiple, compartmentalized surveillance and reporting systems, such as the Philippine Animal Health Information System for animal rabies and the Epidemic-prone Disease Case Surveillance for human rabies. However, routine animal surveillance in the Philippines has been found to detect < 2% of actual rabies cases. These include underreporting of cases (both in animals and humans) largely due to insufficient access to diagnostic facilities and less awareness, especially in GIDAs. In Oriental Mindoro, only 1%–2% of estimated animal cases were confirmed through laboratory testing, with some municipalities unable to submit any samples for diagnostic testing.[14] Furthermore, in Albay province, routine surveillance detected only 12 confirmed dog rabies cases over 13 months, compared to 49 cases identified through Integrated Bite Case Management during the same period.[15] This depicts that effective surveillance remains a weakness that hinders achieving timely detection and control rabies in the country. This fragmentation leads to great challenges in data sharing, transparency, and collaboration across health sectors, impeding timely and coordinated responses.

In addition, the existing fragmented coordination between key agencies, which often operate in isolation rather than as a unified front under the One Health approach, exacerbates the issue. Moreover, local governments, who are on the frontlines of implementation, struggle with resource constraints and inconsistent program execution.[16] Thus, public health agencies are unable to target interventions, allocate resources, or even identify emerging high-risk areas. Needless to highlight, the implementation of programs and policies implementation differs greatly for each local government. This unfortunately shows the glaring gaps of risks per area, especially in GIDAs and rural compared to urban settings, which remains a key barrier to control and prevention. Addressing these challenges is important to strengthen the Philippines' rabies control initiatives.

Culture and Capacity

The issue of rabies is interplay between cultural practices, systemic barriers, socio-economic constraints, and limitations of implementation. Traditional practices are not simply a matter of belief; however, they are shaped by structural inaccessibility, built environment, and economic challenges. In many rural and geographically isolated areas, formal healthcare services remain inadequate, financially burdensome, and physically equidistant to being underfunded and understaffed.

When there is unavailability of health services or they are perceived unaffordable, people tend to seek what is culturally available and economically viable to them: faith healers, traditional medicines, and culturally ingrained practices. These are deemed not irrational but a response to adapt to the lack of resources and community's experience.

Public health strategies can penetrate these communities; however, resonating in the local context should be greatly considered. Education and awareness don't end at informing rather, they should address the multifaceted reasons for the occurrence of the problem. Similarly, messages that vilify cultural and traditional practices without offering alternatives may tend to alienate the population rather than persuade. This calls to shift messages toward a context-sensitive and empathetic approach. Thus, tailored-fit messaging should be intentionally used to reinforce positive health-seeking behaviors. Interventions should be consulted and integrated by local leaders and stakeholders to ensure that the message is not authoritative but being a rather community goal.

The Need to Go Beyond

The current dilemma of rabies control in the country cannot be singled out by technical interventions. While the expansion of ABTCs, strengthening of vaccine distribution, and effective surveillance are crucial steps, these should be inculcated into the socio-cultural perspective. Public health interventions need to acknowledge key factors such as poverty, cultural beliefs, and political barriers, which are risks of being ineffective no matter how scientifically sound these interventions may be. Without this alignment, interventions will continue to be misunderstood, underutilized, or, worst, rejected by the very communities they are meant to protect.

A deep-rooted understanding of behavioral factors that drives barriers is crucial. Bite victims choosing traditional practices over PEP signifies how cultural beliefs hinder medical care. Gaps in the logistical system reveal a persistent challenge to strengthen equitable vaccine distribution. A community's norms shape people's perception toward the risk of rabies, often leading to underestimating its gravity. These issues highlight the need to further contextualize the need to go beyond the surface-level interventions.

As we continually challenge the status quo with these inquiries into the planning and implementation stages, national institutions and stakeholders should take account and ensure the interventions are not only technically feasible but also socially and culturally sensitive and resonant. As a country envisioning a rabies-free Philippines by 2030, we have a long way to fight in its elimination, which lies not only in scientifically

sound interventions but also in the hearts, homes, and habits of our animals and people.

Conclusion

Rabies in the Philippines is an intersection of social, systemic, and biomedical challenges. The persistence of this zoonotic virus stems from a myriad of sociocultural norms, economic burdens, technical issues, and gaps in public health communication, which affect both humans and animals. Traditional concepts and poverty limit the access to healthcare services, while logistical constraints and insufficient infrastructure hinder essential services like vaccination. This reflects public health efforts' failure to acknowledge the risk in alienating these communities, which are the prime target of these interventions. Thus, it is very crucial that rabies interventions are holistic – not just technically correct but socially resonant with the integration of the local leaders through meaningful dialogue and education to create a shared community goal rippling effect to a strengthened national intervention. Since this is zoonotic in nature, the control must be framed as a One Health approach, scoring its impact on human health, animal health and environment, which makes multi-sectoral collaboration vital, as the implementation of services is devolved in nature, requiring strong efforts of coordination.

However, the national efforts for control and prevention will remain inefficient and ineffective unless the underpinning for this is a holistic understanding of the problem rather than neglect. Acknowledging and addressing the sociocultural and technical barriers must be the center point of the public health strategy to strengthen the course of action for these efforts. We shall continue to move forward with a collective goal to equitable, inclusive, and culturally attuned public health strategies. Only by doing this, the archipelago can hope to continually commit to attaining its long overdue goal of being rabies-free.

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Conflicts of interest

There are no conflicts of interest.

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