Resultant

Safeguarding State Populations with One Health Disease Surveillance

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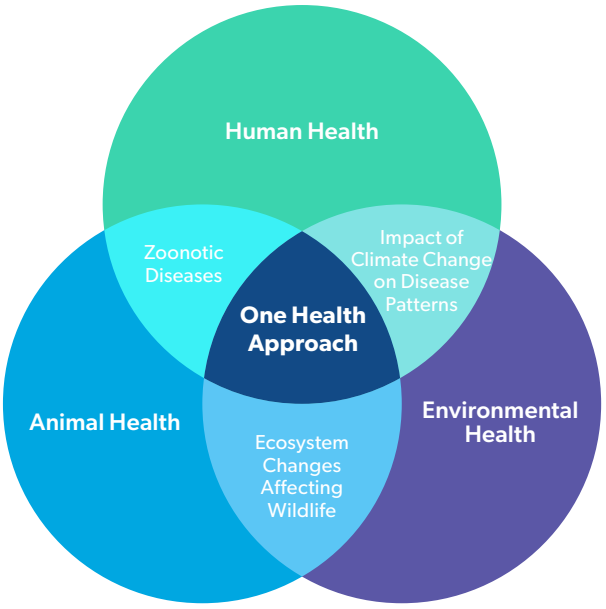
INTRODUCTION

As public health departments work to safeguard communities amid constrained budgets and rising disease threats, the One Health approach offers a powerful solution. By integrating human, animal, and environmental health surveillance, public health officials can streamline operations, reduce redundancies, and enhance preparedness.

> This connected approach equips agencies with timely, actionable insights—leading to better health outcomes and stronger economic resilience for the communities they serve.

As state and local governments face increasing pressure to do more with limited resources, the One Health approach offers a powerful, cost-effective solution. By integrating human, animal, and environmental health surveillance, governments can significantly improve operational efficiency, reduce duplication, and target interventions more effectively. This streamlined approach enhances the state's ability to prevent and respond to health threats while protecting critical economic sectors such as agriculture, trade, and public health.[1]



THE CURRENT CHALLENGES IN DISEASE SURVEILLANCE

Governments face persistent challenges in disease surveillance that undermine their ability to act efficiently and cost-effectively:

Fragmented data systems: Separate tracking systems across human, animal, and environmental sectors lead to redundancy and delayed responses.

Minimal real-time monitoring: Outdated technologies limit proactive interventions and cause escalating costs.

Insufficient collaboration tools: Disconnected agencies can't coordinate responses or share resources effectively.

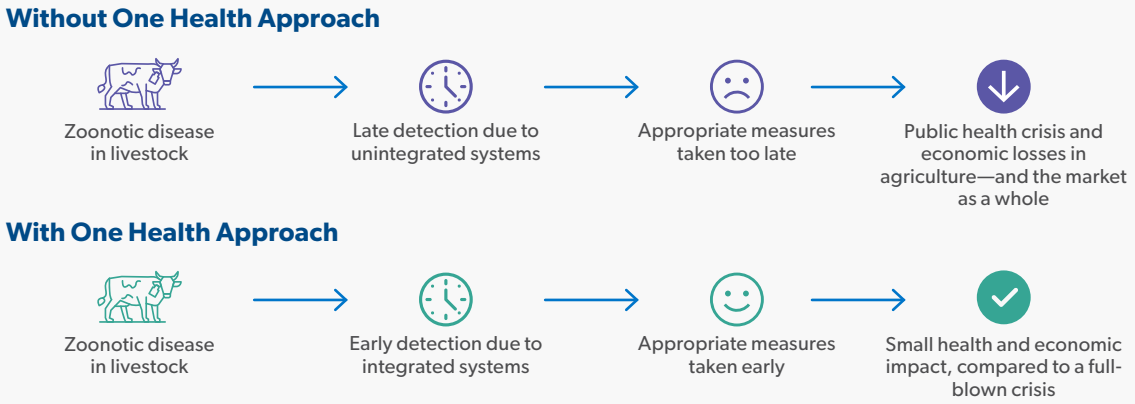
Limited laboratory and diagnostic capacity: Rural areas lack diagnostic infrastructure, skewing data and increasing response costs.[2,3]

Resource constraints: Without integrated strategies, surveillance funding is often inefficiently allocated.[4]

HOW A ONE HEALTH SOLUTION CREATES GOVERNMENT EFFICIENCY

A One Health surveillance system enables public health departments to act faster and more strategically, containing disease threats before they escalate into crises. By aligning disparate data from clinics, veterinary sources, and environmental monitors, public health officials can prioritize interventions and communicate risks more effectively.

Early detection of zoonotic and environmental threats helps public health departments avoid large-scale emergency responses, hospital strain, and community spread. These proactive strategies also strengthen interagency trust and position public health leaders as effective stewards of both population well-being and public resources.



POLICY RECOMMENDATIONS FOR STATE GOVERNMENTS

- **Enhance Data Integration:** Build shared digital platforms across sectors to streamline disease tracking.[5]
- **Increase Funding:** Allocate targeted funds for surveillance infrastructure and skilled workforce development.[4]
- **Strengthen Cross-Sector Collaboration:** Create interagency teams to unify planning and response.[6]
- **Leverage Advanced Technologies:** Use AI, genomics, and remote sensing to improve forecasting and response.[2]
- **Promote Community Engagement:** Include local voices in disease detection and reporting strategies.[7]

WHERE ONE HEALTH APPROACHES IMPROVE EFFICIENCY AND ECONOMIC OUTCOMES

The ongoing H5N1 outbreak illustrates how uncoordinated responses result in massive costs. With more than $1.4 billion in poultry industry losses and egg price spikes exceeding 350%, the economic fallout underscores the need for earlier detection and targeted containment.

A One Health framework enables states to focus limited resources where the data shows the greatest risk. It allows for predictive modeling that prevents overreactions and focuses response where it's most likely to stop transmission—saving time, money, and lives.

By integrating environmental, animal, and human health data, policymakers gain the tools to make smarter, more fiscally responsible decisions—from issuing burn bans to limit respiratory infections, to deploying veterinary interventions in hotspot areas before a human outbreak occurs.

The innovative technology simplifies complex data management and enhances the capacity of state and local agencies to protect communities and proactively address challenges and concerns.

- Cloud infrastructure enables seamless data sharing and access from anywhere—including offline and disconnected areas promoting collaboration across regions and disciplines.
- Mobile capabilities allow on-the-ground workers to input data directly, ensuring timely and accurate reporting.
- Simplified offline data capture functionality empowers users to accurately input data even in areas without connection.
- Data dashboards help visualize trends, outbreaks, and risk factors, empowering decision-makers to act swiftly and effectively.

CONCLUSION

One Health is a public health innovation that drives smarter, more cost-effective government. Investing in integrated surveillance systems today allows public health departments to better manage future risks, protect critical infrastructure, and deliver measurable results to communities.

This approach transforms public health departments into hubs of coordination—breaking down silos, improving early warning systems, and strengthening overall resilience. With One Health, public health officials can lead the charge in building a safer, healthier, and more economically secure future.

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