

Early Warning to Action: Digital Infrastructure for Arboviral Disease Response

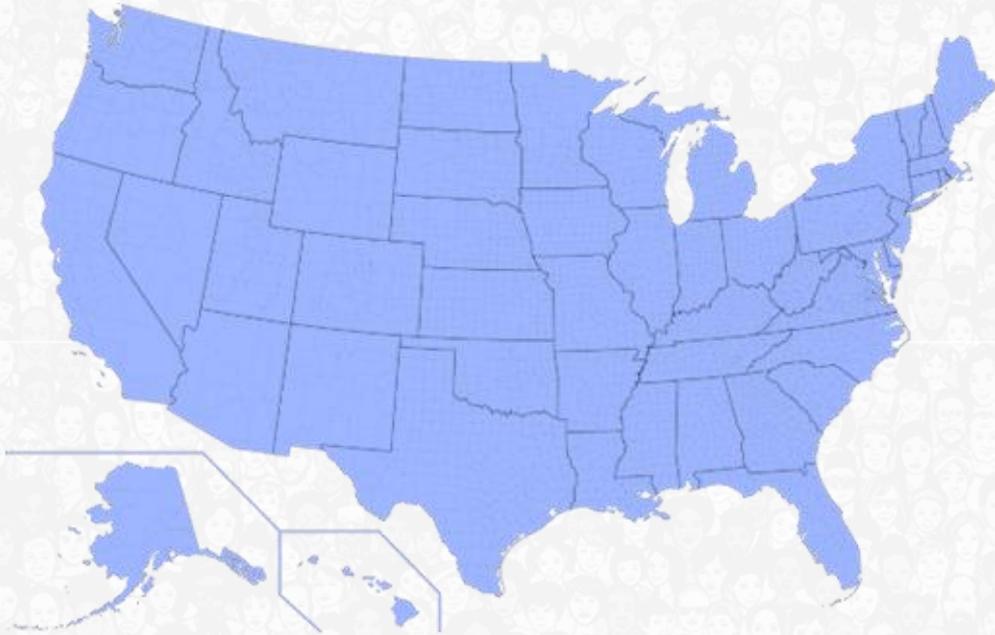
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Gap: Even when we have the **science** *do we have the last mile?*



- **Information Silos**

Data trapped inside agency boundaries.
Collaboration friction.

- **Delays & Lag**

Delayed feeds, lack of real-time situational awareness, stale communication.

- **Fractured Communication**

Public alerting channels are not personalized, multilingual, or connected to protective actions.



PHapp® All Hazard Infrastructure already operating nationwide

- Provides **public health & safety** information to the public from CDC, NWS, USDA, FDA, PHA
- Supports **3,000+** Public Health Jurisdictions
- **SMS, App, Web**
- 50+ Languages
- **All-Hazards** – communicable disease, extreme weather, environmental health...
- **Cross-Jurisdiction** Coordination for data & shared messaging

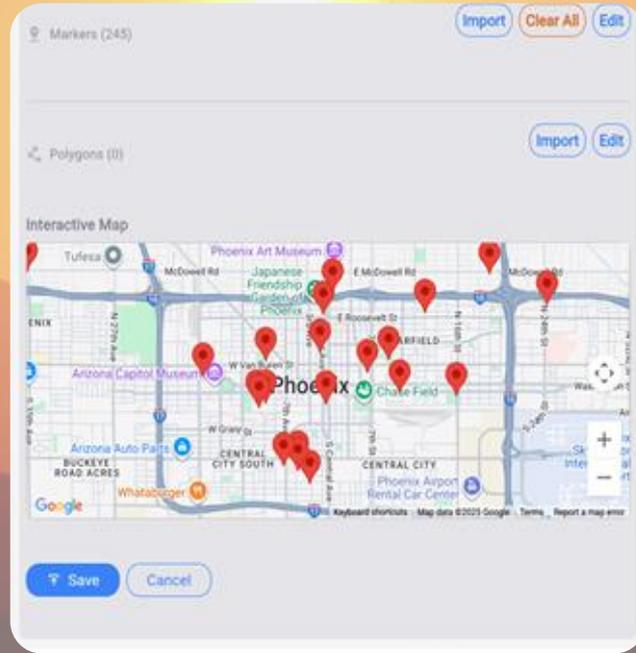
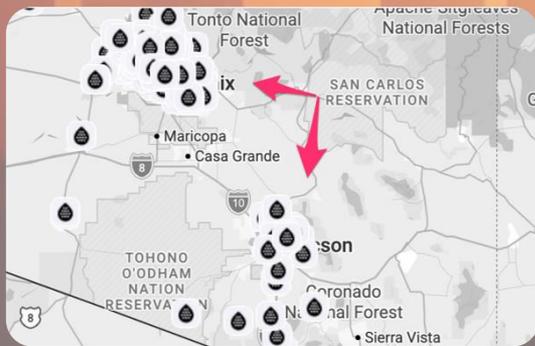
www.ph.app

Free for the public · No Signup · Sustained via cost sharing with public agencies.



Extreme Heat: Agency Experience

- Maintain **real-time maps** per jurisdiction
- Coordinate **shared messaging**, assistance resources etc.
- Real-time, detailed user **engagement data**, sliced by language, and other population **stratification**.



👁 Impressions	18,093K +11%
👤 Reach	2,257K +23%
🗨 Engagement	611K +15%
📧 Alerts Sent	7,448K +3.3%



507-MY-PHAPP

⚠ Extreme Heat Warning • Acme County • Saturday June 15, 6:00 AM–Monday June 17, 8:00PM. Alert Level: High.

1. Find cooling centers

Hot weather tips
2. Stay cool
3. Drink up
4. High risk people
5. Youth outdoor activities
6. Prescription medication

Reply with a Number from the list above to learn more

Reply STOP to stop receiving alerts.

6

507-MY-PHAPP

⚠ Advertencia de calor extremo • Condado de Acme • Sábado 15 de junio, 6:00 a. m. - Lunes 17 de junio, 8:00 p. m. Nivel de alerta: alto.

1. Busca centros de enfriamiento

Consejos para el calor
2. Mantente fresco
3. Bebe suficiente agua
4. Personas de alto riesgo
5. Actividades al aire libre para jóvenes
6. Medicamentos recetados

Responda con un número de la lista anterior para obtener más información.

Responda STOP para dejar de recibir alertas.

6

507-MY-PHAPP

⚠ 极端高温预警 • 阿克米县 • 6月15日星期六上午6:00至6月17日星期一晚上8:00。警报级别：高。

1. 寻找避暑中心

高温天气小贴士
2. 保持凉爽
3. 多喝水
4. 高危人群
5. 青少年户外活动
6. 处方药

请回复上方列表中的一个数字以了解更多信息

回复“STOP”即可停止接收提醒。

6

- ગુજરાતી (Gujarati)
- עברית (Hebrew)
- हिन्दी (Hindi)
- Magyar (Hungarian)
- Italiano (Italian)
- 日本語 (Japanese)
- ಕನ್ನಡ (Kannada)
- ខ្មែរ (Khmer)
- 한국어 (Korean)
- ລາວ (Lao)
- മലയാളം (Malayalam)
- मराठी (Marathi)
- नेपाली (Nepali)
- Norsk (Norwegian)
- فارسی (Persian)
- Polski (Polish)
- Português (Portuguese)
- ਪੰਜਾਬੀ (Punjabi)
- Русский (Russian)
- Español (Spanish)
- Kiswahili (Swahili)

- USE DIFFERENT LANGUAGE
- العربية (Arabic)
 - English (English)
 - Afrikaans (Afrikaans)
 - Shqip (Albanian)
 - አማርኛ (Amharic)
 - Հայերեն (Armenian)
 - বাংলা (Bengali)
 - Български (Bulgarian)
 - မြန်မာဘာသာ (Burmese)
 - Català (Catalan)
 - 简体中文 (Chinese Simplified)
 - 繁體中文 (Chinese Traditional)
 - Hrvatski (Croatian)
 - Čeština (Czech)
 - Dansk (Danish)
 - Nederlands (Dutch)
 - Eesti (Estonian)
 - Suomi (Finnish)
 - Français (French)
 - Deutsch (German)
 - Ελληνικά (Greek)

Extreme Heat: Public Experience

- Get heat alerts in **50+ languages**
- **Precautions** and resources
- Risk factors such as **prescription medication interaction**

PHapp

🚨 Extreme Heat Warning

📍 For Acme County
📻 By Acme City NWS

📶 High 🌡 Weather

🕒 Starts in 3 hours
Ends in 2 days

📍 Find cooling centers
View Map • Get Ride Assistance

💡 Hot weather tips

- Stay Cool
- Drink Up
- High Risk People
- Youth outdoor activities
- Prescription Medication

PHapp

🚨 Advertencia de calor extremo

📍 Para el condado de Acme
📻 Por Acme City NWS

📶 Alto 🌡 Clima extremo

🕒 3小时后开始
两天后结束

📍 Encuentre centros de enfriamiento
Ver mapa • Obtener asistencia de viaje

💡 Consejos para el clima cálido

- Mantente fresco
- Beberse todo
- Personas de alto riesgo
- Actividades al aire libre para jóvenes

PHapp

🚨 极端高温警告

📍 阿克米县
📻 阿克米城国家气象局

📶 高风险 🌡 极端天气

🕒 3小时后开始
两天后结束

📍 寻找避暑中心
查看地图 • 获取乘车协助

💡 炎热天气小贴士

- 保持冷静
- 喝光
- 高危人群
- 青少年户外活动
- 处方药

<https://www.wpc.ncep.naa.gov/heatrisk/>

Extreme Heat: Public Experience

- Find nearby **cooling centers**, single unified view **across jurisdictions**
- Get **free ride** assistance
- Review **Heat Risk** maps

PHapp

Extreme Heat Warning
For Acme County
By Acme City NWS

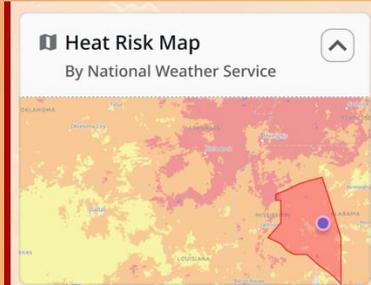
High Weather

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Find cooling centers
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Hot weather tips

- Stay Cool
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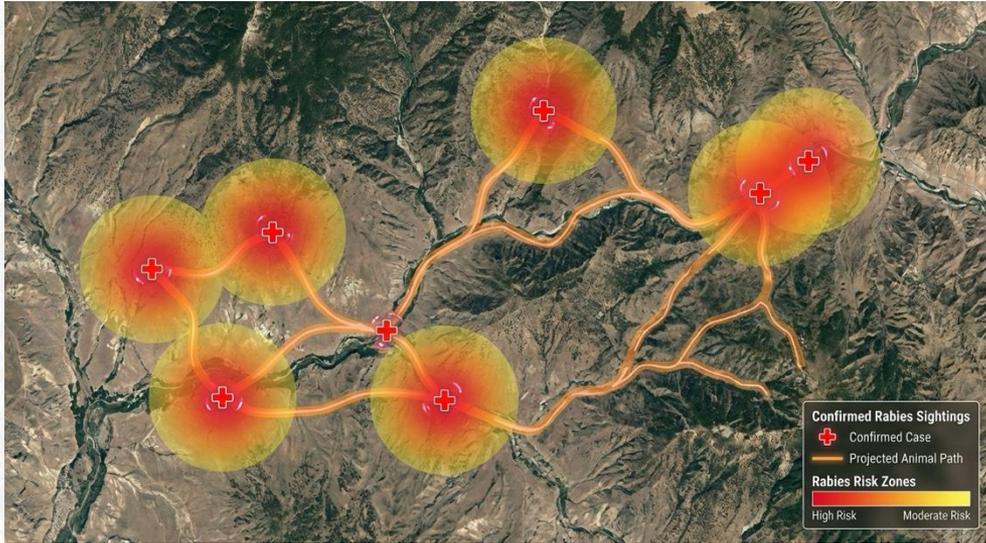
Heat Relief Resources

Lincoln Family Downtown YMCA
Extreme Heat Hydration Station

Request Ride Directions



Rabies: Regional early warning & coordination (in progress)



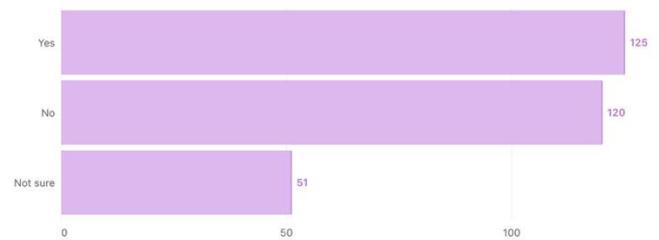
- Shared collab space across jurisdictions and agencies
- AI-assisted data normalization & management
- Integrated user reporting (moderated), testing, data flows
- Pre-approved templates for public notification in 50+ languages
- Public education: Precautions, interventions, prophylaxes



Statewide Survey: Arboviral Qs (in progress)

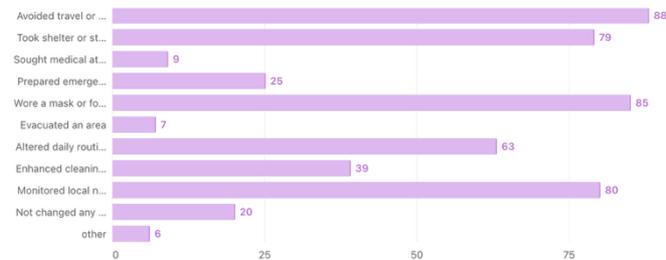
10 Have you ever changed your actions in response to information provided in the app related to health or weather emergencies?

296 out of 296 people answered this question.



11 If yes, what did you change? Check all that apply

176 out of 296 people answered this question.



26 What new features would you like to see in the app concerning mosquito and tick-borne diseases?

296 out of 296 people answered this question.

Highest ranked

- #1 Track level of transmission of diseases carried by ticks and mosquitoes in your area
- #2 Track number of mosquitoes and ticks in your area
- #3 Tips on reducing ticks and mosquitoes in your area and avoiding getting bitten
- #4 Tips on avoiding getting sick and knowing what symptoms to look for
- #5 Forecast increases of mosquitoes and ticks 1 week ahead of time
- #6 Forecast increases of mosquitoes and ticks 1 month ahead of time

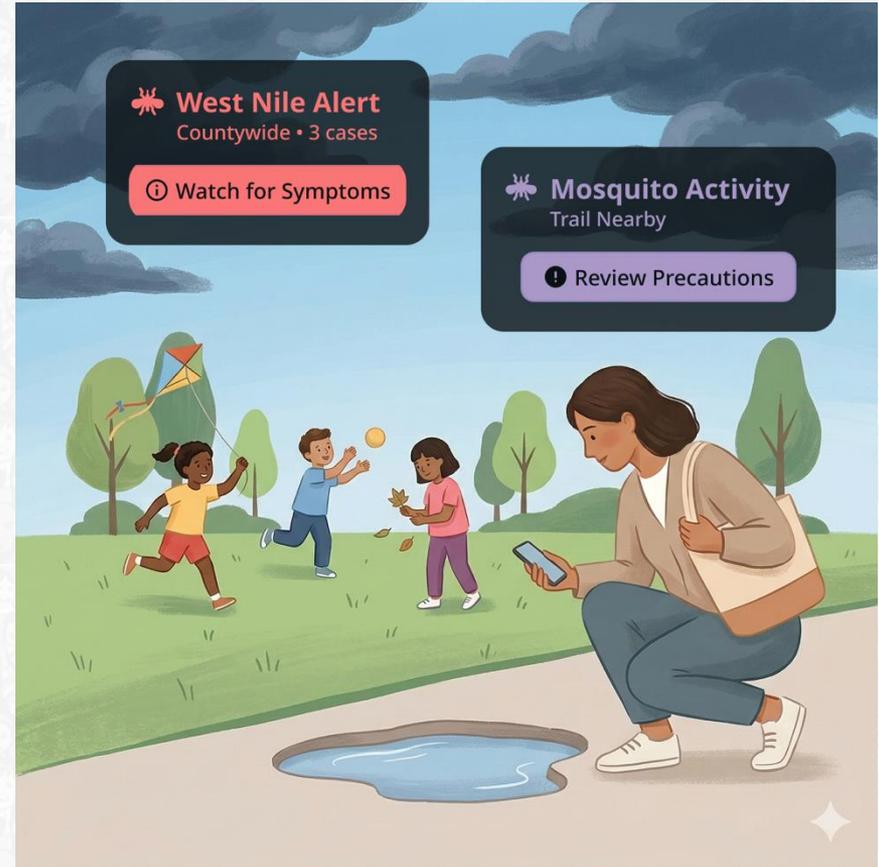
Applying Global Scale Infrastructure to Arboviral Disease

Integrating **regional** signals

- mosquito **surveillance**
- **climate** predictors
- human **case data**
- **environmental** risk indicators

Enabling

- vector risk **forecasting**
- cross-agency **alerts**
- localized prevention **guidance**
- Community education & **engagement**



Opportunity Ahead

- **Integration** with other surveillance sources
- National/Worldwide vector risk **early warning, monitoring & forecasting**
- Shared **cross-jurisdiction alert infrastructure**
- Public **education** & personalized guidance in **multiple languages**



<https://www.cdc.gov/mosquitoes/php/arboNET/index.html>



Wehealth® Forum is a collaborative community for our partners, public officials, scientists, medical professionals, researchers, technologists and other experts dedicated to strengthening global health and safety. Members are invited to participate in research projects, collaborate with academic institutions and public health departments, and contribute to solutions that make a real-world impact.

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