

Barriers and Facilitating Factors to West Nile Virus Personal Prevention

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Questions

- To what extent are people employing personal prevention measures against West Nile virus infection?
- What are possible reasons (barriers) that people are not using personal prevention measures?
- What interventions or activities might increase use of personal prevention measures?

What are people currently doing about WNV?

“When the weather is warm in your area...”

- 34% always/usually use insect repellent
- 34% usually/always check for & remove standing water around household
- 30% usually/always avoid spending time outdoors b/c of mosquitoes
- 21% always/usually wear long sleeves/pants

Porter Novelli Healthstyles Survey, July-Aug 2002

“During this past summer...”

- **45%** of respondents took *some* precaution to avoid mosquito bites
- **31%** used a mosquito repellent containing DEET
- **21%** used Skin-So-Soft or citronella as a repellent
- **16%** replaced/repaired window screens

Survey by Harvard School of Public Health, Nov 2002

What barriers to prevention did we find during fieldwork in Louisiana?

Field research examining barriers to prevention

- July-September 2002
- LA-OPH in collaboration w/ CDC
- 16 focus groups across Louisiana, including:
 - New Orleans, Slidell, Hammond, Monroe, West Monroe, Natchitoches, rural areas near Morgan City and a rural area south of Houma.
 - African-American, white and Native-American residents



Knowledge (and Beliefs)

What do people know about WNV?

Is what people believe about DEET
a barrier?

What do people know about WNV?

Survey by Harvard School of Public Health, Nov 2002

- **92%** know mosquitoes transmit the disease
 - However, 47% of respondents believe can get WNV from drinking infected water
- 53% replied that can contract WNV through contact w/ dead birds

What people know/think about repellent use

- Question which repellents contain DEET:
 - labels say *N,N-diethyl-m-toluamide*
- People know that they *should* use repellent
 - yet most reported **not** having used repellent last time they were outdoors or with regularity the week before the focus group

More ideas about repellent use

- Limited concern about safety or toxicity issues associated with DEET – in Louisiana.
 - **Likely to be very different in other areas.**
 - Question DEET use on children, but concerns generally indistinct
- Commonly cited reasons for not using repellent:
 - *“I just don’t think of it”*
 - *“It’s not convenient when I need it”*
 - Hassle factor of bathing self and kids

Risk Perception:

Not a problem here,
not a problem for me

Are people worried about WNV?

Survey by Harvard School of Public Health, Nov 2002

- ~30% concerned they/someone in family may “get sick from West Nile virus” in the next 12 months

Who is at risk?

- Risk can be perceived as very local
- Risk is influenced by media coverage
 - Some saw 2002 WNV outbreak in Louisiana as primarily “white” b/c of area affected

“...Black people and white people live relatively separate lives here, so they keep saying Covington or somewhere in Mandeville, and I wonder is it just white people dying? ...” African-American Woman in New Orleans

Who is at risk?

- Few identify older people or persons over age 50 as being at higher risk for severe disease
 - most cite concern about children
- Very little knowledge about asymptomatic WNV infection

Financial and Resource Constraints

Resource Issues: *repellent*

- Respondents were quite aware of the cost of the products and where prices were better
- Very few cited the cost of repellent as a problem
 - though some stated *“it could be if you used it all the time”*.

Staying indoors from dusk-dawn

- Resource issues:
 - *Not everyone has air-conditioning*
 - *Small/poor quality housing may guide one's decision to be outdoors (space, temperature)*
 - *Inadequate housing may mean that risk is not entirely reduced indoors*

Social and Cultural Factors

Perceived Efficacy of Prevention

Do people see risk as related to other, perhaps uncontrollable, factors in local environment?

Staying indoors from dusk-dawn

- Outdoors as “social space”
 - *Evening is the reasonable time to be outside in many climates*
 - *Neighborhood and cultural patterns guide people’s use of the outdoors to visit, observe/monitor the area*

“...My neighbors sit out. Nine pm at night and my neighbors are sitting outside. I like my neighborhood because of that.” Woman in New Orleans

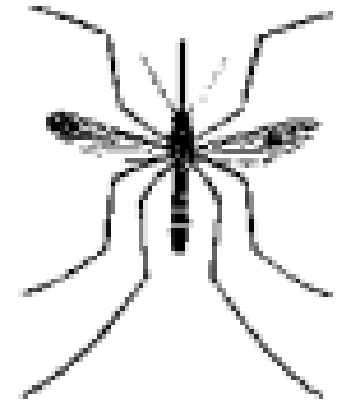
Staying indoors from dusk-dawn

- May conflict w/ physical activity recommendations
- Potentially high social cost to heed this message
 - Baseball games cancelled, HS football
- Potential confusion regarding efficacy of other steps
 - *Isn't repellent enough at night?*

Why is this a problem now?

- Mosquitoes: a threat or a nuisance?
 - shifting definitions
- People ask why mosquitoes are ‘suddenly’ a problem?
 - *“What’s different about the mosquitoes?”*
 - *“This wasn’t a problem when we were coming up.”*

Why is this a problem now?



- WNV seen as a short-term problem, people want to “get back outdoors”
 - paradigm of Emerging Infectious Disease not always meaningful for the general public
- The (not entirely negative) legacy of DDT, especially in the South
 - *any* outbreak of mosquito-borne disease risks being seen as a “failure” of taxpayer-funded service

Who's job is prevention?

- *Who* is responsible for mosquito control often unclear
 - City Hall? Parish?
 - Rarely can residents identify the agency that carried out mosquito control
- Little knowledge in the community about how mosquito control is conducted
 - Perception of biased service delivery can exist as rationale for targeted adulticiding unclear

Understanding Prevention

- Raised question of personal protection as a “compensatory behavior”
 - Complex and complementary nature of mosquito abatement and personal prevention rarely clear or explicit

So, what do we do?

Current educational efforts

- Largely focused on info through news media and electronic sources (Internet), supplemented with print materials.
- Current tendency to treat knowledge as the most important barrier to preventive action.
 - There are gaps, but knowledge isn't enough.



Behavior Change: *Role for Community-Based Prevention Activities*

- Focus groups emphasized need to receive information ‘personally’
 - Not just officials – get people talking, neighbors etc.
- People expect to hear important messages from local sources

“...Well, I figured if it were really important, then our Mayor would have said something.” woman in focus group

Role of Community-Based Prevention

- Ouachita Parish Multi-Service Center – program to assist older residents with screen repair
 - What are resources in local communities to carry out activities like this?

Summary: future of WNV prevention & behavior change?

- Increase targeting
 - Reaching persons over 50
- Take into account the resource and financial barriers to prevention
- Better convey how mosquito control functions
- * Include role of activism
 - Advisory council for Mosquito Control Boards?
 - Advocacy to establish programs where non-existent

Summary: future of WNV prevention & behavior change?

- Work with repellent manufacturers to address convenience issues (?)
- Messages/interventions should stress role for multi-level actions
 - repellent + source reduction + avoiding mosquitoes + mosquito control...
- Establish specific actions in Phased Response Plan tied to surveillance data
- Need for evaluation!

Thank you.



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