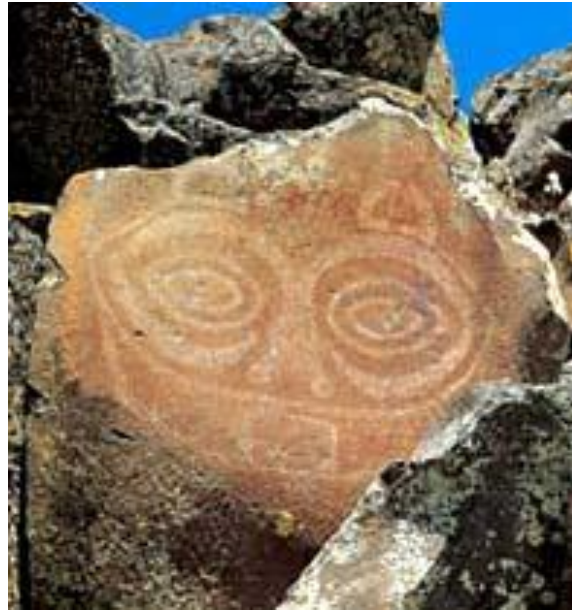


Hearing Health in Northwest American Indian Communities



Center for Healthy Communities
OHSU Prevention Research Center
William Martin, William Lambert, Linda Howarth,
Yongbing Shi, Susan Griest, and Thomas Becker

Healthy People 2010 Objectives

- 28-13 Increase access to hearing rehabilitation services and adaptive devices
- 28-14 Increase proportion of persons having a hearing examination on schedule
- 28-15 Increase referrals for evaluation and treatment
- 28-16 Increase use of ear protection devices and practices
- 28-17 Reduce NIHL in under 17 years age
- 28-18 Reduce HL in noise-exposed adults

Tribal populations are 2 to 4 times more likely to have hearing loss*

- Otitis media
- Occupational exposures
 - Construction
 - Agriculture
 - Timber and fishing
 - Military
- Recreational exposures
 - Firearms
 - Boats
 - Amplified music

*NHANES

Challenges

- Federal agencies and tribal health services do not provide hearing services
- Unique social and cultural settings
- Remote locations

Solutions

- CBPR!
- Simultaneous efforts at primary, secondary, and tertiary levels of prevention

Partnerships

DEVELOP RESEARCH AGENDA

NPAIHB

Devers Eye Institute
OR Hearing Res Inst
I.H.S.
OR Public Health
Papa Ola Lökahi

CONDUCT PREVENTION RESEARCH

Vision Impairment
Prevention (VIP)
and
Hearing Health
Project

BUILD CAPACITY

Community Screening Infrastructure Improvement
Summer Institutes Grand Rounds In-service Trainings
School-Based Education Telemedicine

UTILIZE COMMUNITY STRENGTHS

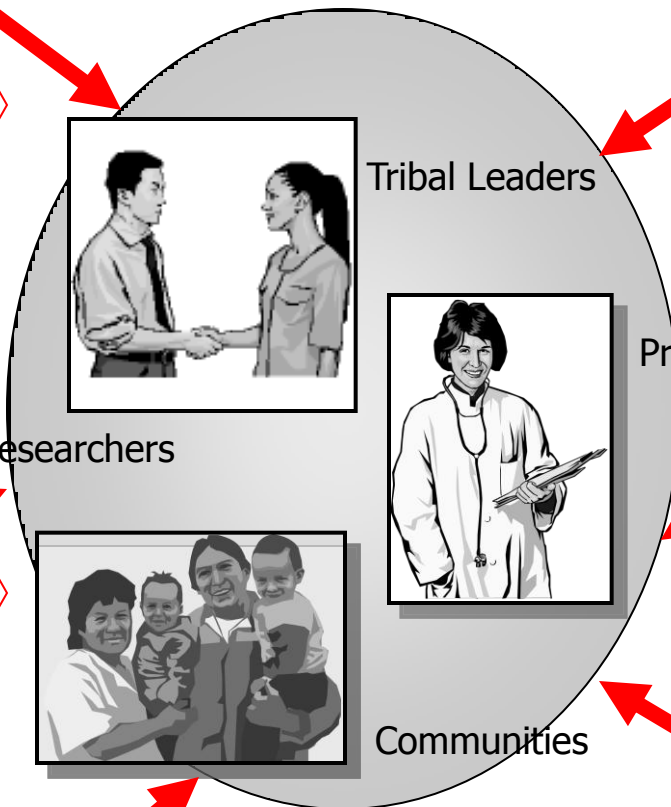
Observational knowledge
Respect for elders
Protection of children
Native pride
Storytelling

DISSEMINATE

Newsletters
Web Site
Journal Publications
Grand Rounds
Clinician Updates
Symposia

EVALUATE

Effectiveness
Efficacy



Community Survey

- BRFSS module (10 questions, interview format)
- n = 232 adult tribal members (65% response rate)
- Provider-diagnosed hearing loss = 18% (24% male > 13% female)
- Self-reported tinnitus = 33% (male = female)
- Associated with age and noise exposure (OR 8.3 HL, 2.2 tinnitus)
- 8% hearing aid use

Spontaneous Action

- Tribal Council initiated
- In response to survey results
- Designed flyer
- 5,000 ear plugs donated from 3M
- Mandated distribution at all fireworks stands licensed to tribal members



Enjoy your fireworks but save your hearing

Did you know?...

- Noise from fireworks can cause permanent hearing loss and ringing in the ears?
- An evening of fun can result in damage to your ears that will last a lifetime.

For more information about noise and hearing loss see the Dangerous Decibels website (www.dangerousdecibels.org) or contact the Suquamish Health Services (360-394-8468).

Sponsored by Oregon Health & Science University
Dangerous Decibels Program and Prevention
Research Center, funded by the Centers for Disease Control and Prevention



Ear Plugs are provided by **3M** 3M Occupational Health & Environmental Safety Division

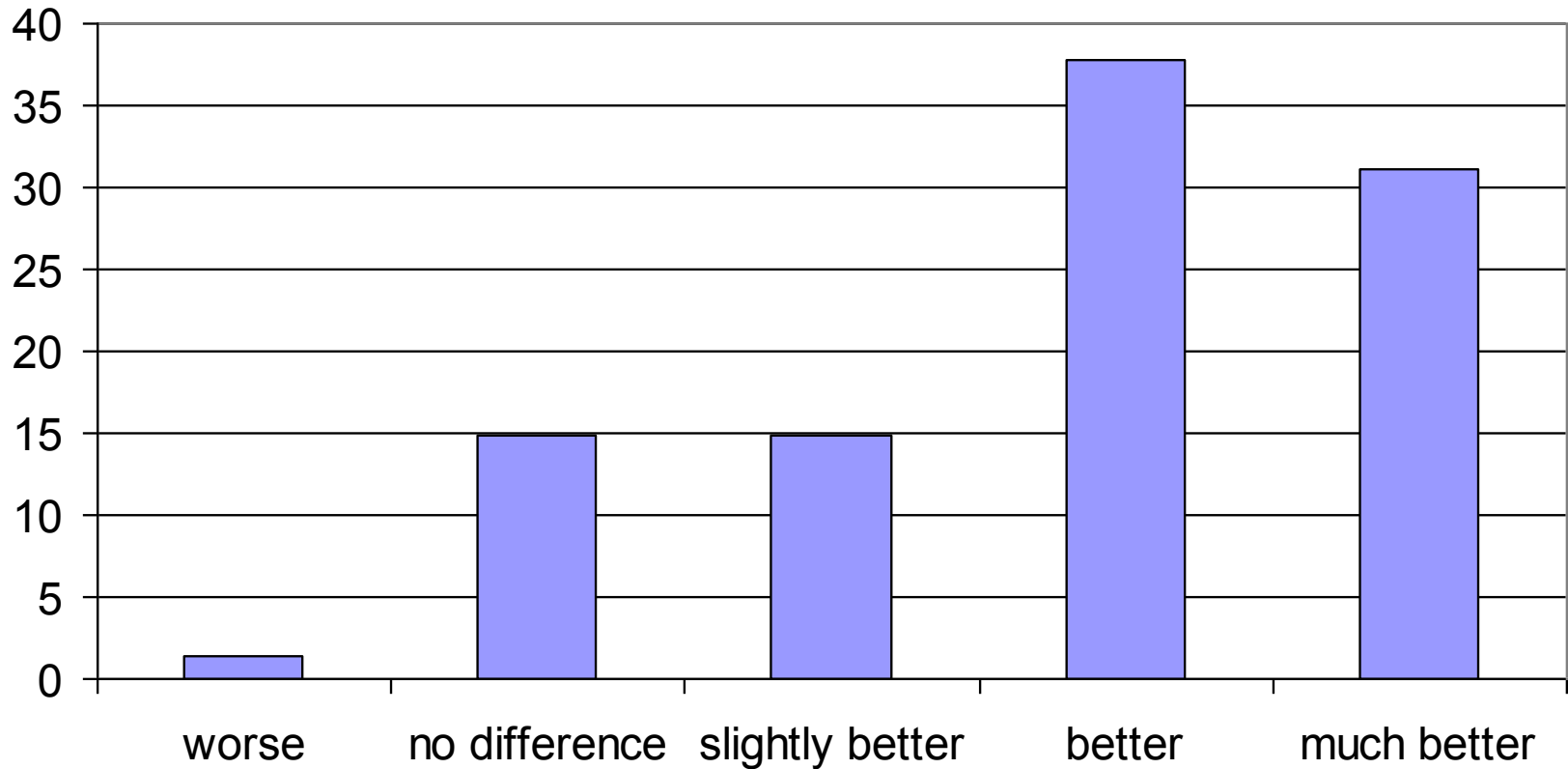
Screening and Intervention

- >150 adults screened
- 84 tribal members
- 36 (43%) NIHL
- 23 would benefit from assistive devices
- 28 fitted with hearing aids
- Baseline and 6-mo QOL assessment
- Tribe will maintain hearing aids in the long-term

Screening results: Urban setting

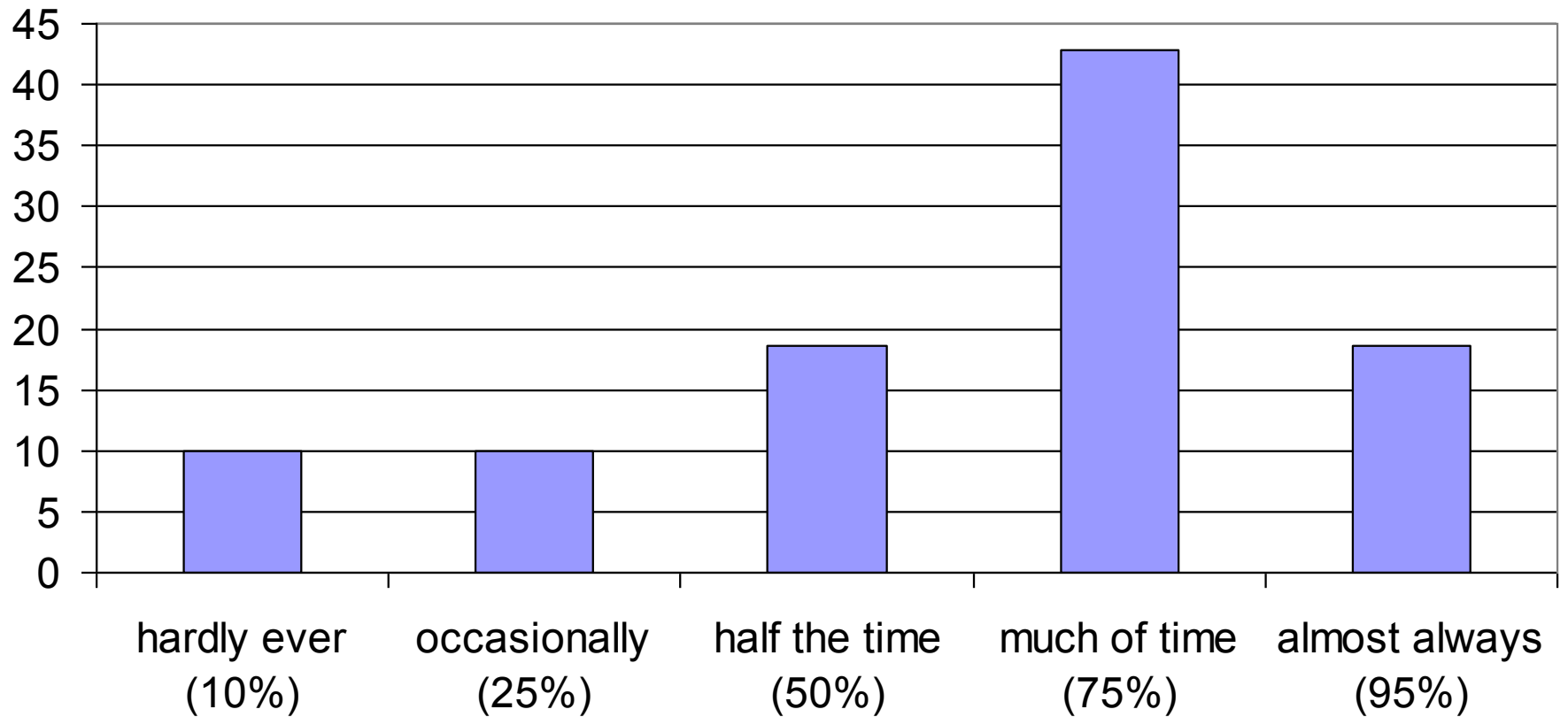
- 230 screened
- 205 tribal members
- 106 require medical follow-up and possible amplification
- Follow-up at 6 months

% reported change in with amplification - across all problems listed
(N = 74 problems)



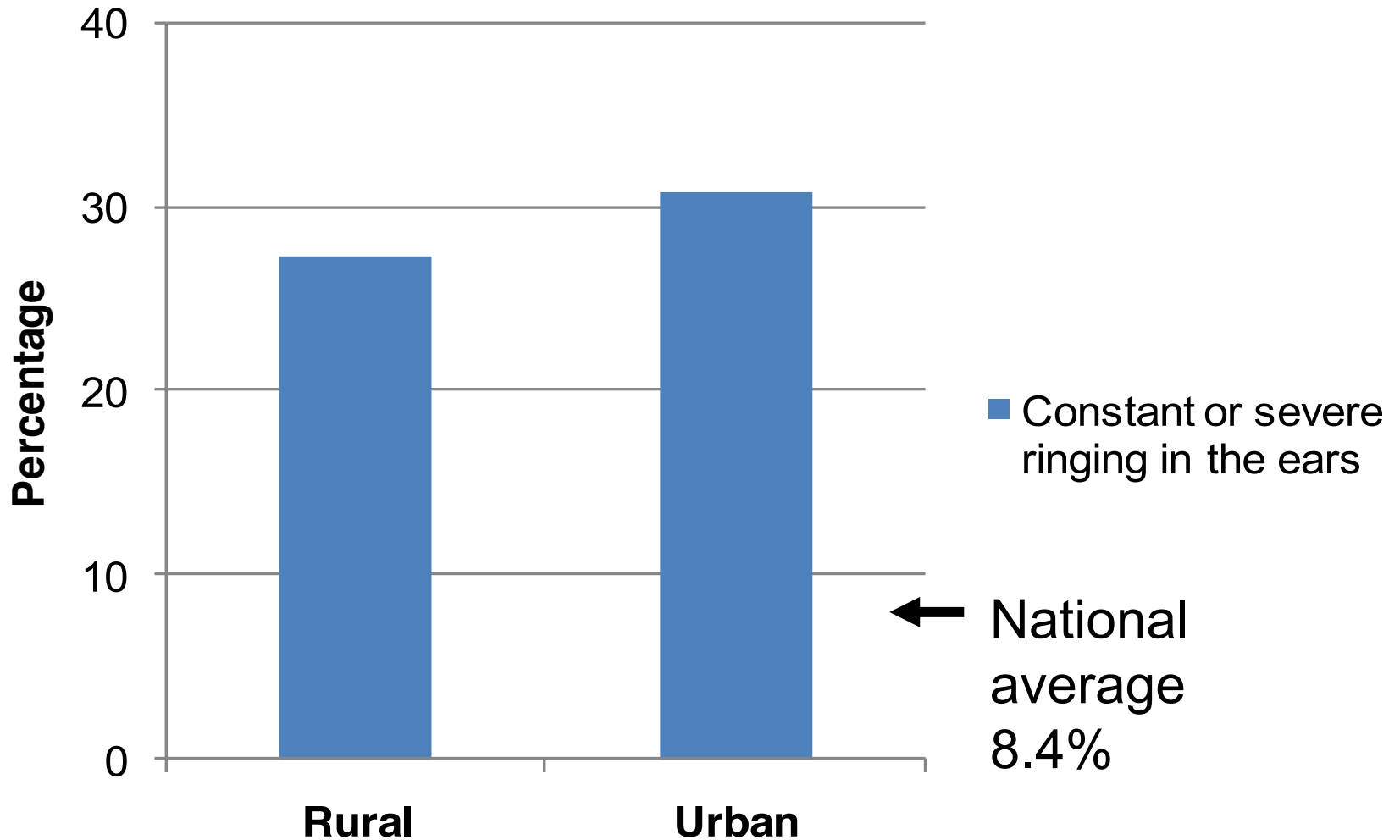
not using aids or trying to understand wife from another room

Final hearing ability with amplification - across all problems listed
(N=70 problems)

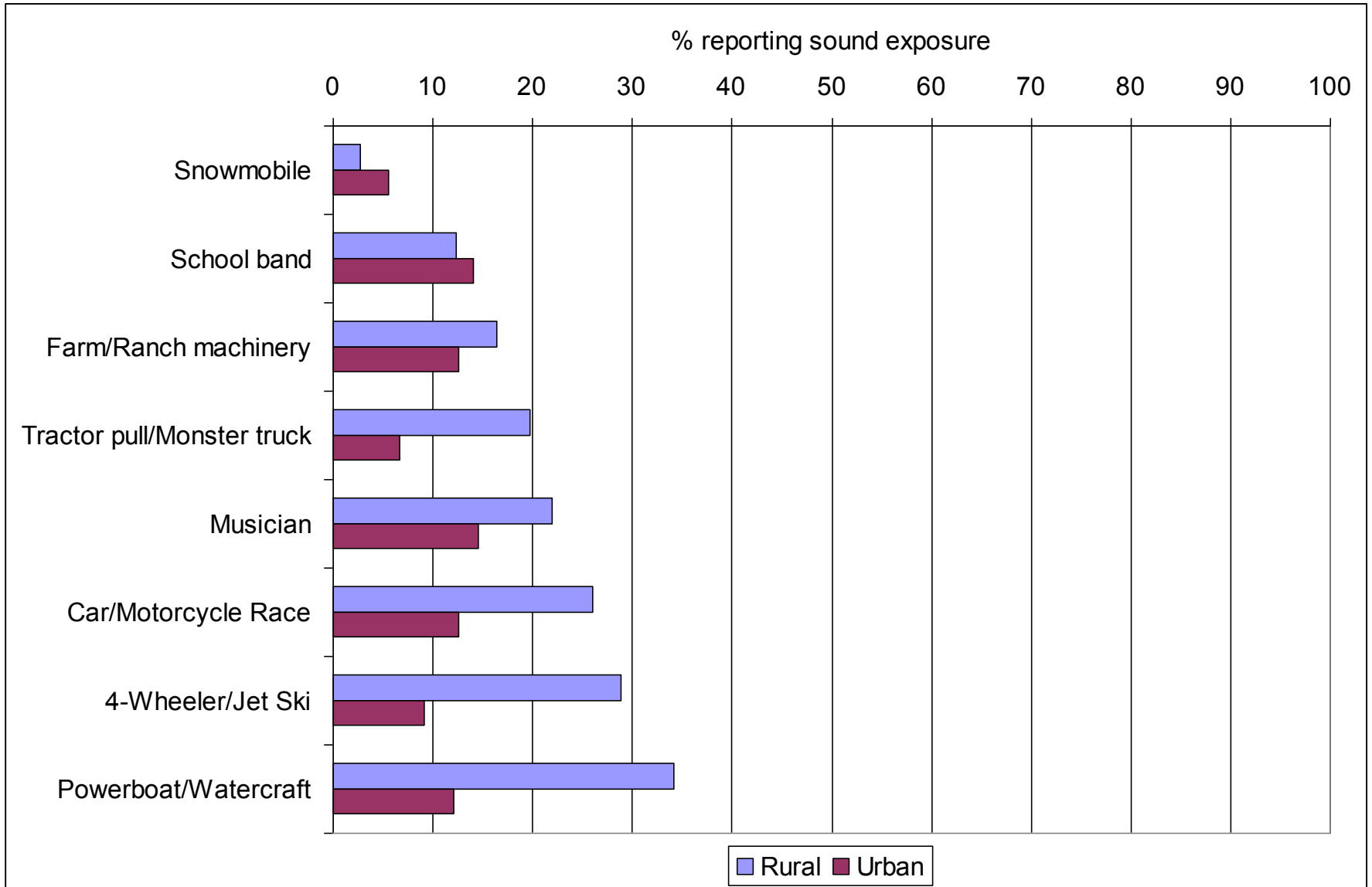


not using aids or trying to understand wife from another room

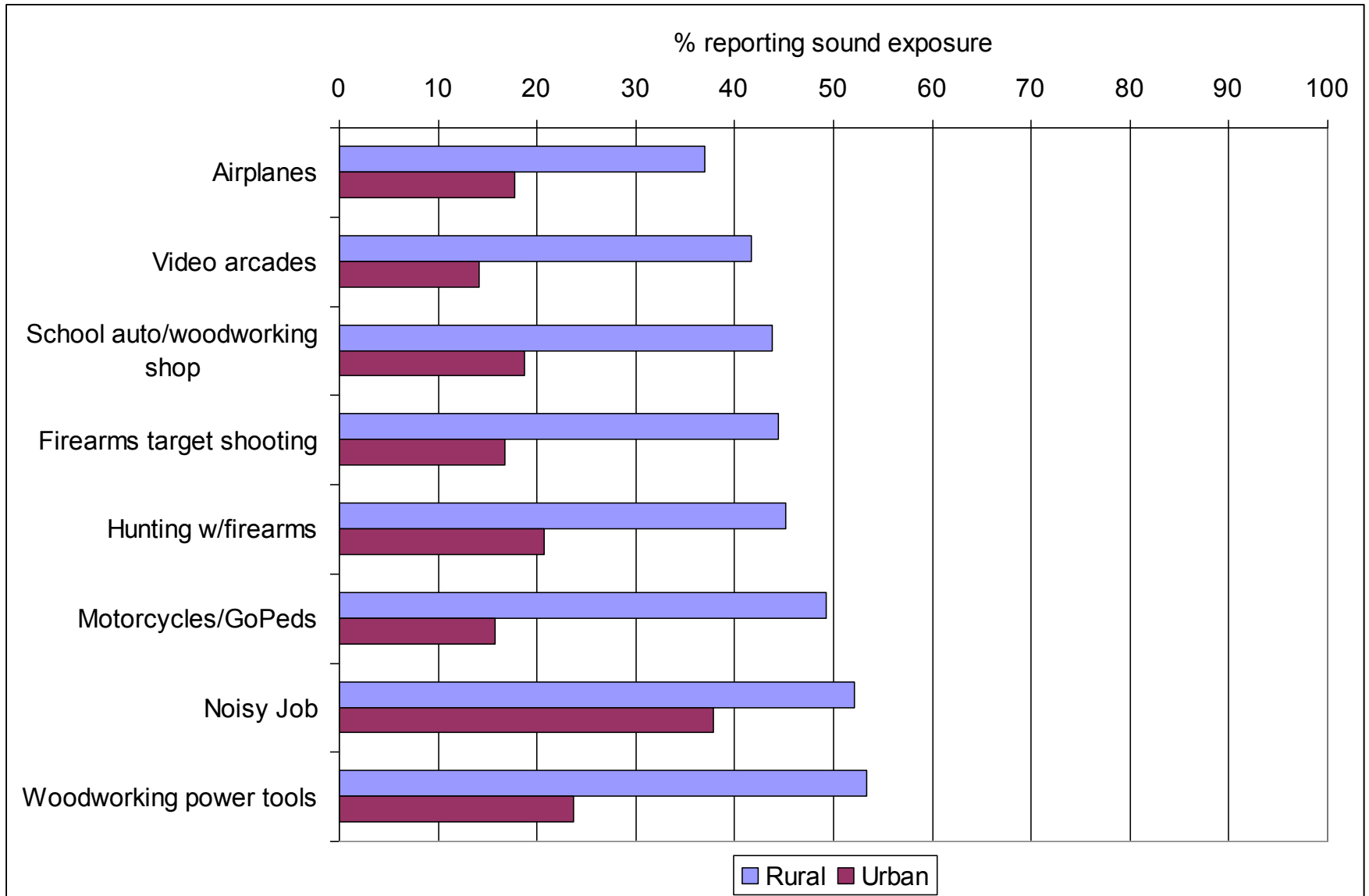
Percentage of American Indians reporting constant or severe ringing in the ear



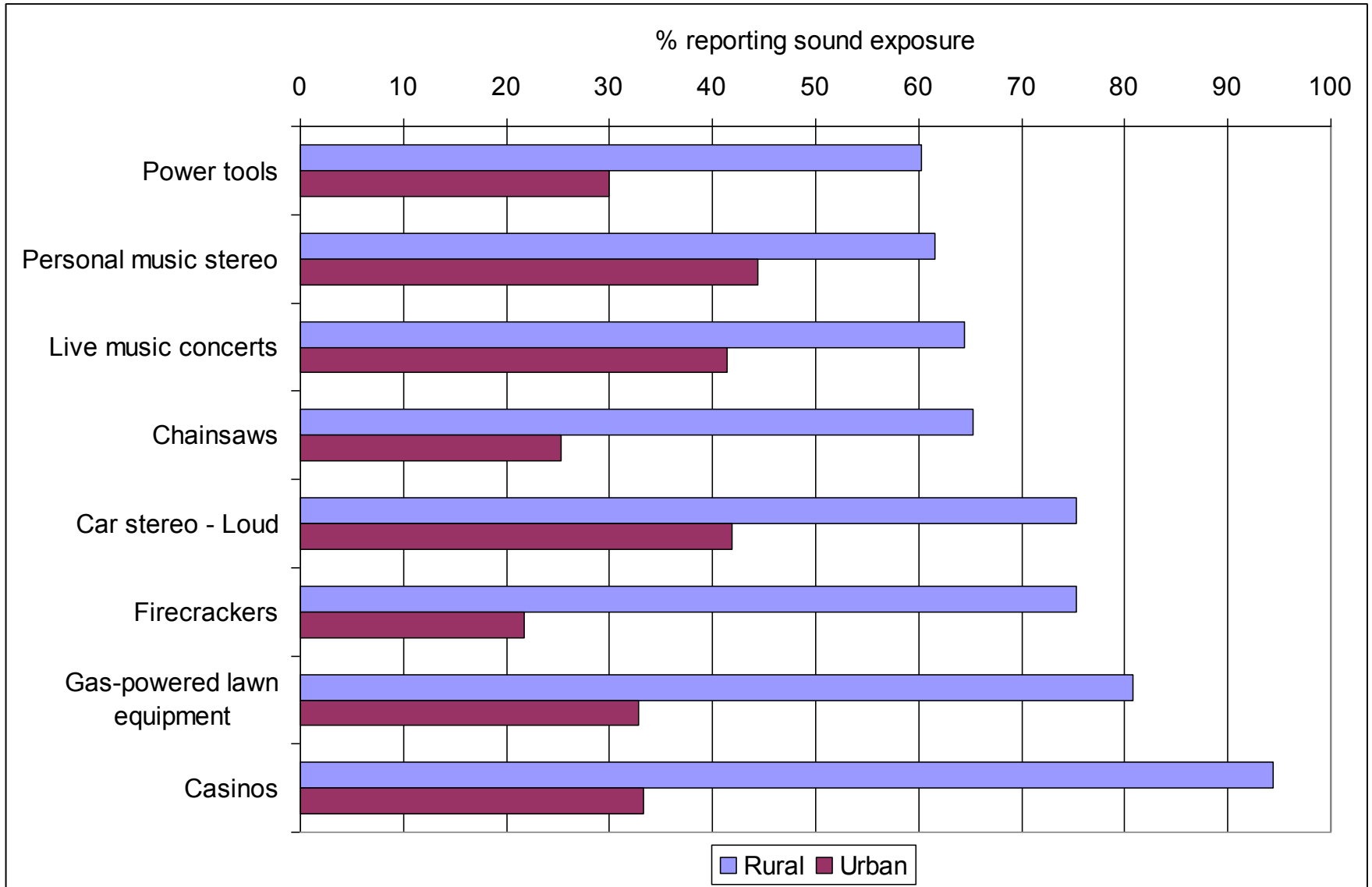
Northwest AI reported sound exposures



Northwest AI reported sound exposures



Northwest AI reported sound exposures



Prevention Education



DD's educational messages address 3 questions:

1. What are sources of dangerous sounds?
2. What are consequences of exposure?
3. How do I protect myself?

Classroom

- Interactive
- Based in biology of hearing & physics of sound
- Peer-educators
- Meets State science and math competencies



Web-Based Learning

- Interactive
- Motivational
- Based in biology
- 3 simple strategies:
 - “Walk away”
 - “Turn it down”
 - “Protect your ears”
- Supports live classroom presentation
- Stands alone

Dangerous Decibels

www.dangerousdecibels.org

- Participants
 - Museum 600,000/yr
 - Science Festivals 250,000/year
 - Classrooms 3,000/year
- Educator training
 - museum outreach educators
 - high school students
 - public school teachers
 - school nurses
 - audiologists



- Educator Training Workshops in Canada and New Zealand
- Recently adopted to be delivered in all schools in New Zealand

How Loud is Your Music?



www.dangerousdecibels.org

... as a way to acquire data on the
... individuals. Hopefully, Jolene will
... reduced hearing loss awareness and

... changing knowledge, attitudes and
... prevention.

... awareness about hearing health.
... listening behaviors of portable mu

... ps, especially for peer education.
... Jolene may be easily replicated by

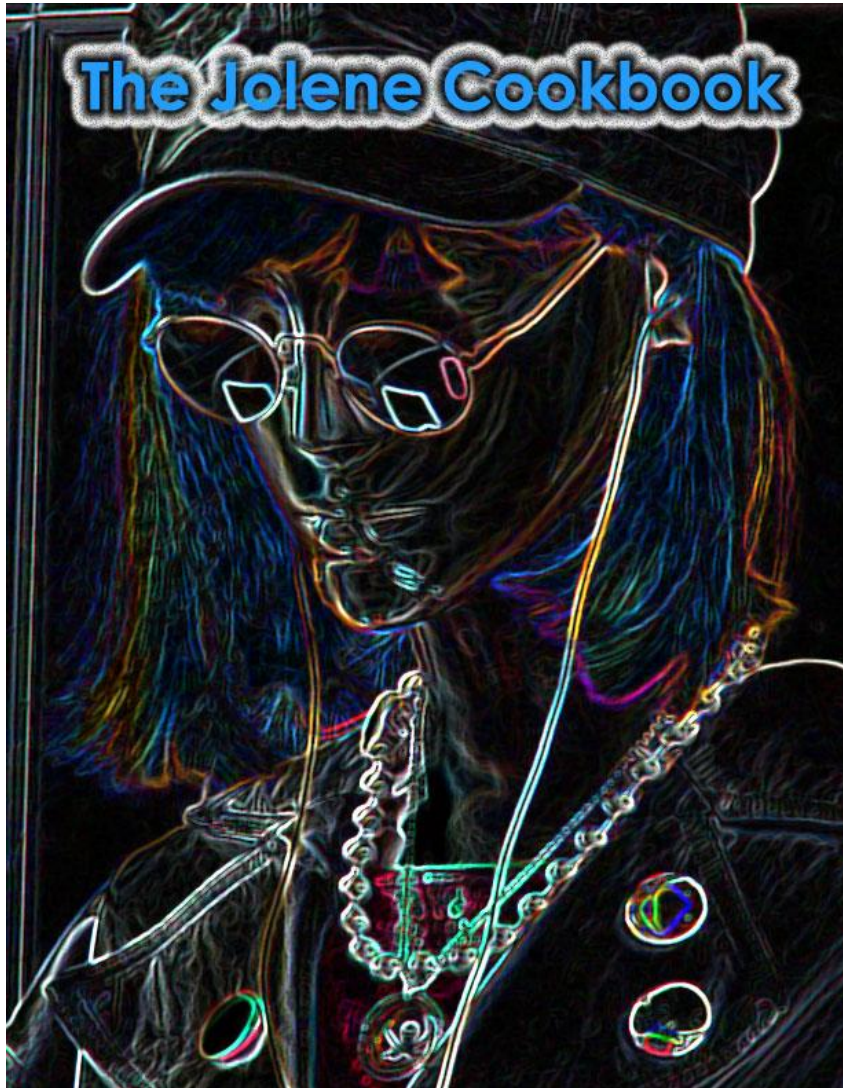


Meet "Jolene"



“The Jolene Cookbook”

Download FREE at <http://www.dangerousdecibels.org/jolene.cfm>



Protect your ears!



The Center for
Healthy
Communities,
a CDC-funded
Prevention
Research
Center

www.dangerousdecibels.org

www.oregonprc.org

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Northwest
Portland
Area Indian
Health
Board

**NIDCD - The
National Institute
of Deafness and
Communication
Disorders**