

Flu Shots are a Hard Sell: Evaluation of a Diabetes Media Campaign

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Acknowledgement



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BACKGROUND

History of Media Campaign

- Partnership between QIO & DPCP Program
- WVMI began a long-term broadcast campaign to promote diabetes tests, exams and preventive services in 1998
- Focused on four of the CDC national objectives:
 - A1c
 - Foot Exams
 - Eye Exams
 - Immunizations



QIO Program

- Quality Improvement Organizations
- Non-profit private entities; one per state
- Contracted by Centers for Medicare & Medicaid Services (CMS)
- Improve care for Medicare beneficiaries
- Focus on prevention & control:
 - Diabetes
 - Mammography
 - Immunizations



Distribution

- Partnership with West Virginia Broadcasters Association (WVBA)
- Public Education Partnership (PEP) Program
- Provides low-cost airplay to non-profit and government agencies
- \$6,000 per month guarantees \$32,000 per month in airplay on WVBA member stations



Results from 2006

- Six months of nine month campaign (June 1, 2006 – December 31, 2006)
- 13,377 TV & Radio airings
- \$658,762.12 Value
- \$36,000 Investment
- 16:1 Return on Investment (ROI)



Previous Announcements

- A1c: “Two Letters, One Number”
- Eye exams: “Windows to the Soul”
- Foot exams: “Feet for Life”
- Immunization: “What the Doctor Tells Me”
- Eye exams: “The Eyes Have It”
- A1c: “Training Camp”
- Eye/foot exams: “Training Camp”
- Immunization: “Training Camp”
- All: “Listen Up”
- All: “Memories”



Rotation

- Nine month span of announcements
- Rotated A1c, foot exam and eye exam announcements for six months
- Exclusively aired immunization announcements three months
 - Challenges during shortage years
 - Station backlash
- Survey results from 2006 **not** a vaccine delay or shortage season

2006 Messages

- Theme: “Good Advice”
- Members of local diabetes support group
- Mixed age, race and gender
- Extensive interviews condensed into three 30-second announcements
 - Control: A1c, Foot & Eye Exams
 - Eyes: Eye Exams
 - Flu/Pneumonia Shots
- Radio and television versions
- Statewide distribution
- High & low concentration areas (station participation, border media markets, etc.)



Three “Good Advice” PSAs

- Play from DVD

Medicare Beneficiary Survey 2002

- Measured diabetes knowledge and recall of media program information
- Measured self-reported behavior in response to media
- Medicare beneficiaries with diabetes
- Groups of counties chosen for high and low exposure to media campaign

Key Results-2002 Survey

- 92% in both groups said they had seen or heard the diabetes ads with no significant difference between the groups
- High exposure group 1.2 times more likely to recall hearing messages on HbA1c, foot examinations, and influenza immunizations than low exposure beneficiaries ($p < 0.05$)
- High exposure group members also more likely to take appropriate action in response



Objectives of this Evaluation (2006)

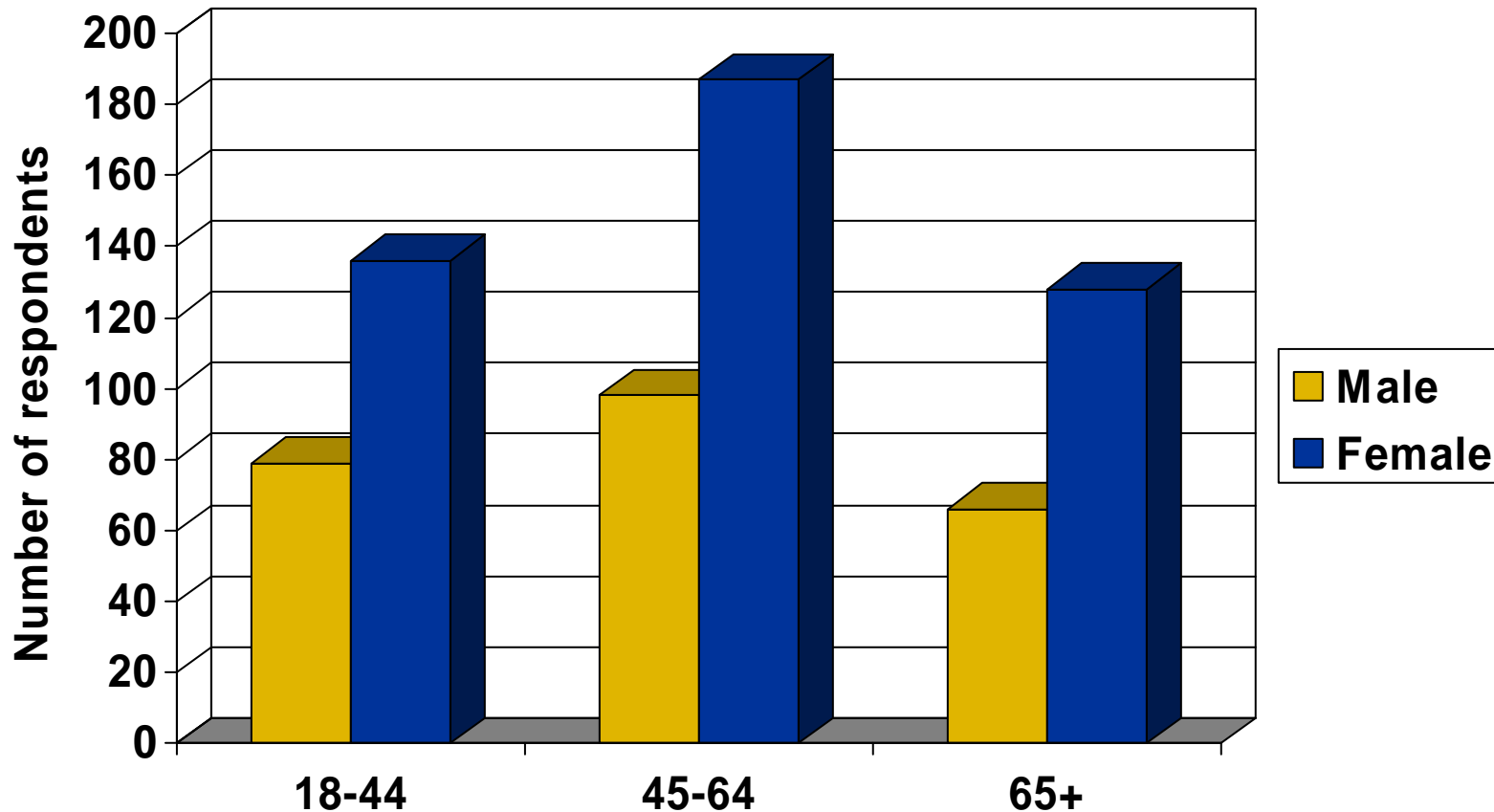
- Assess impact of a mass media diabetes campaign focused on the importance of A1C tests, foot and eye exams, and immunizations
- Measure general adult population knowledge of the disease and its prevention in a single state

The 2006 Survey

- Random dial telephone survey-not just people with diabetes
- One respondent <18 per household, 4:1 male preference
- 10 High and 10 low exposure counties
- Survey instrument similar to 2002 *except*:
 - Demographic questions built into survey
 - Dropped “source of diabetes information” questions

RESULTS

Survey Demographics: Age/Sex



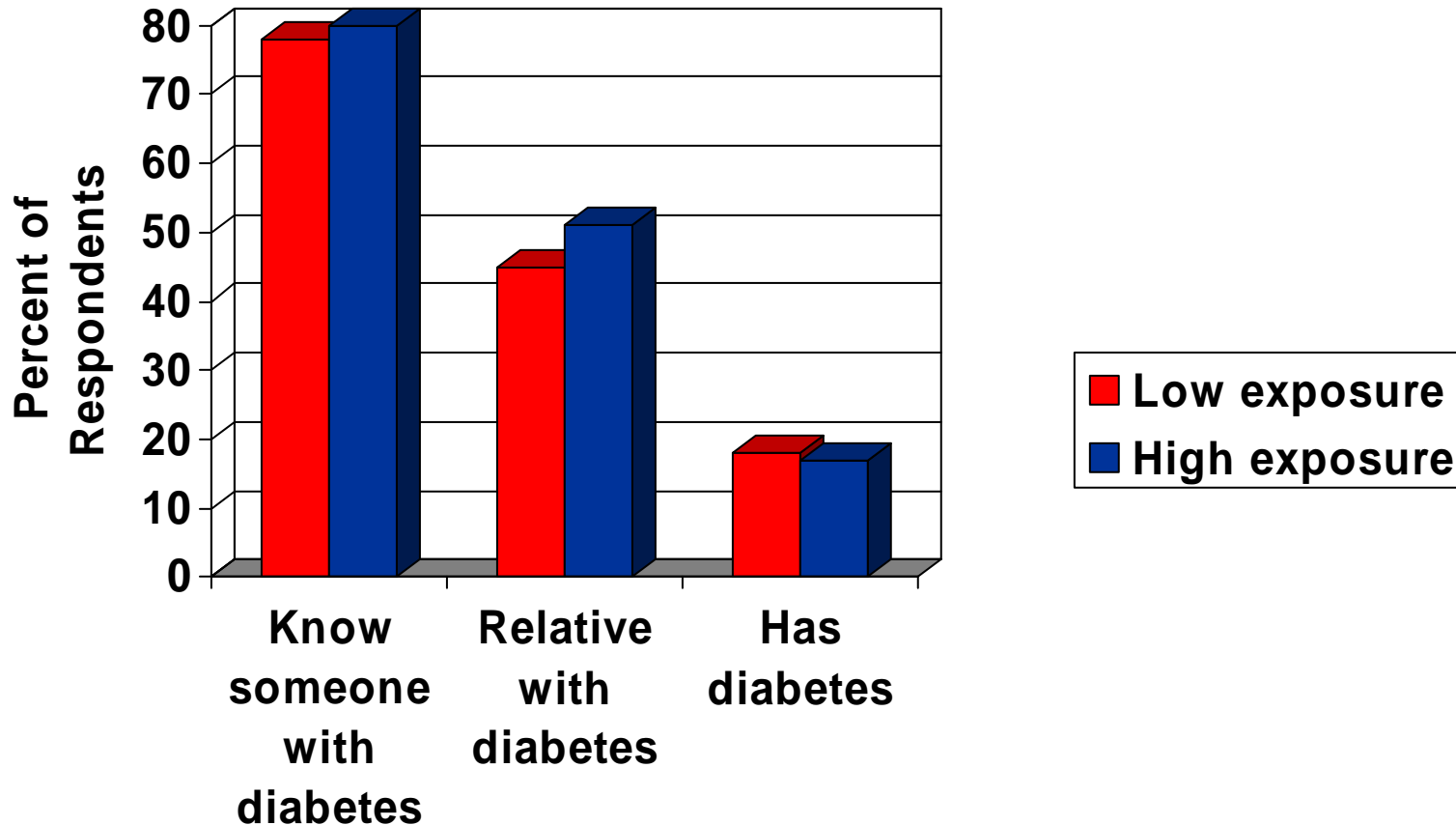
N=738
(44 missing age data)



Demographics, continued

- Survey population was older than counties' population and had greater proportion of females (in spite of male preference)
 - 20% of households had no male residents
- 97% White
- 84% high school education or greater
- Median time of residence in WV: 47 years

Diabetes History Questions by County Group



N=692

Differences not significant



Derived Measures

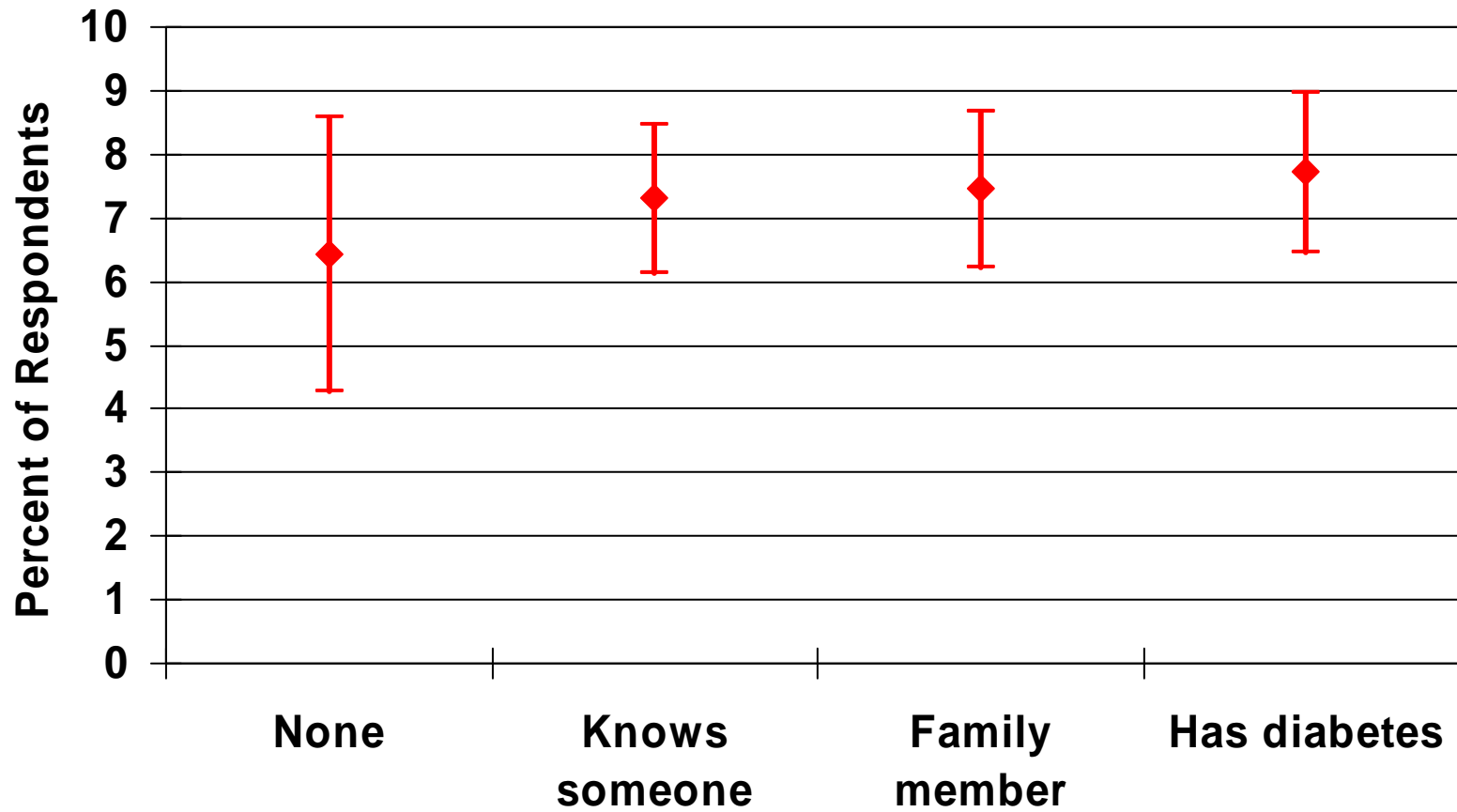
- Diabetes exposure – hierarchical combination of three questions
 - Do you know anyone with diabetes?
 - Does anyone in your family have diabetes?
 - Do you have diabetes?
- Knowledge of diabetes – sum of correct responses
- Heard messages correctly – sum of correct responses

Diabetes Knowledge by County Group

Question	High Exposure		County Group Low Exposure		Overall	
	N	Percent	N	Percent	N	Percent
People with diabetes have too much sugar in their blood	181/340	53.2	184/354	52	365/694	52.6
Diabetes can cause problems with your feet	315/340	92.6	321/354	90.7	636/694	91.6
If you have diabetes, you should have your eyes checked every year or two	305/340	89.7	326/354	92.1	631/694	90.9
Diabetes causes osteoporosis	73/340	21.5	81/354	22.9	154/694	22.2
A flu shot can save a diabetic's life	164/340	48.2	134/354	37.9	298/694	42.9



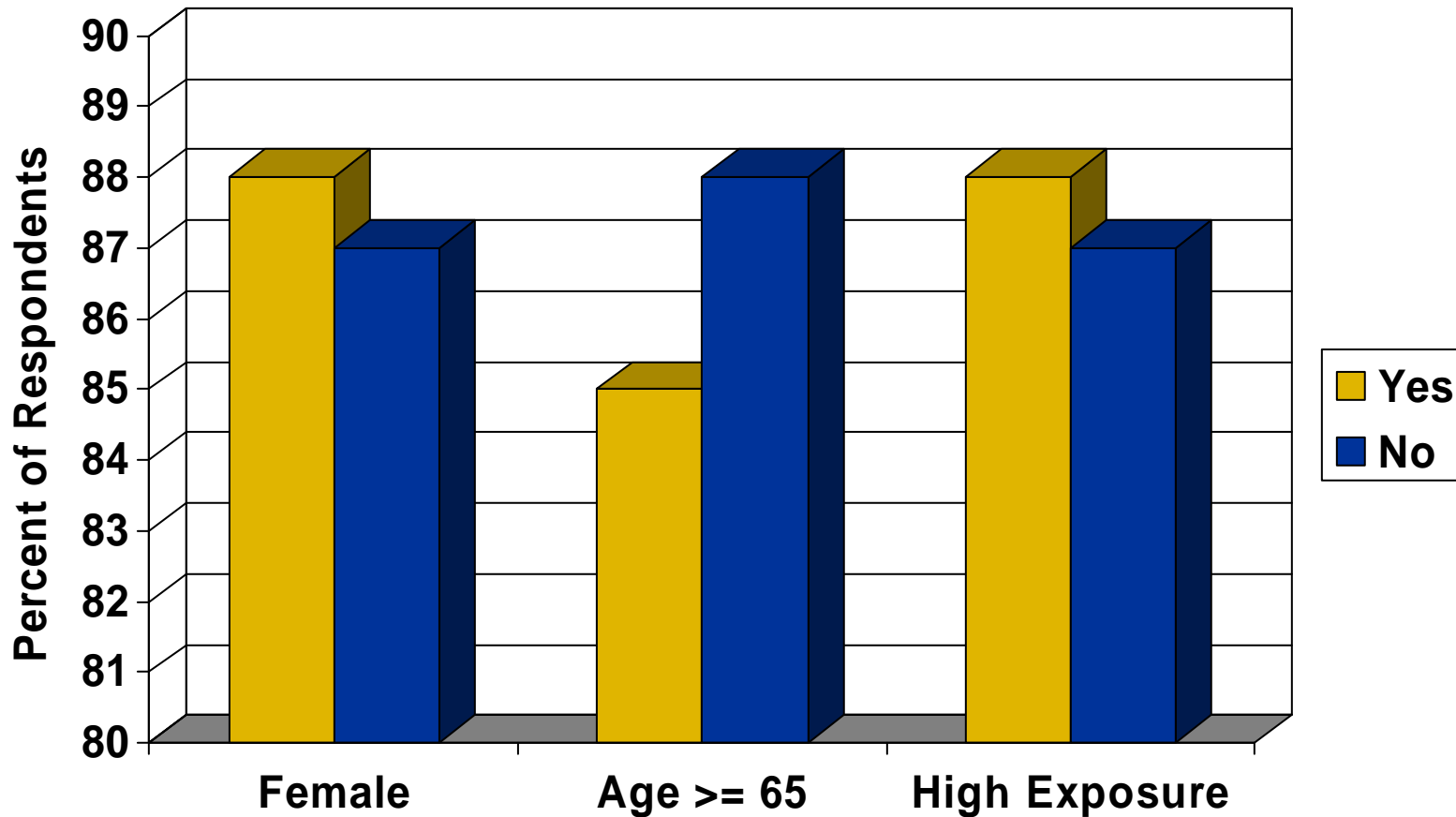
Diabetes Knowledge Score by Diabetes Exposure



Generalized linear model controlling for county
N=737, $t=7.48$, $p < 0.0001$



Who Heard the Messages: Demographic Group

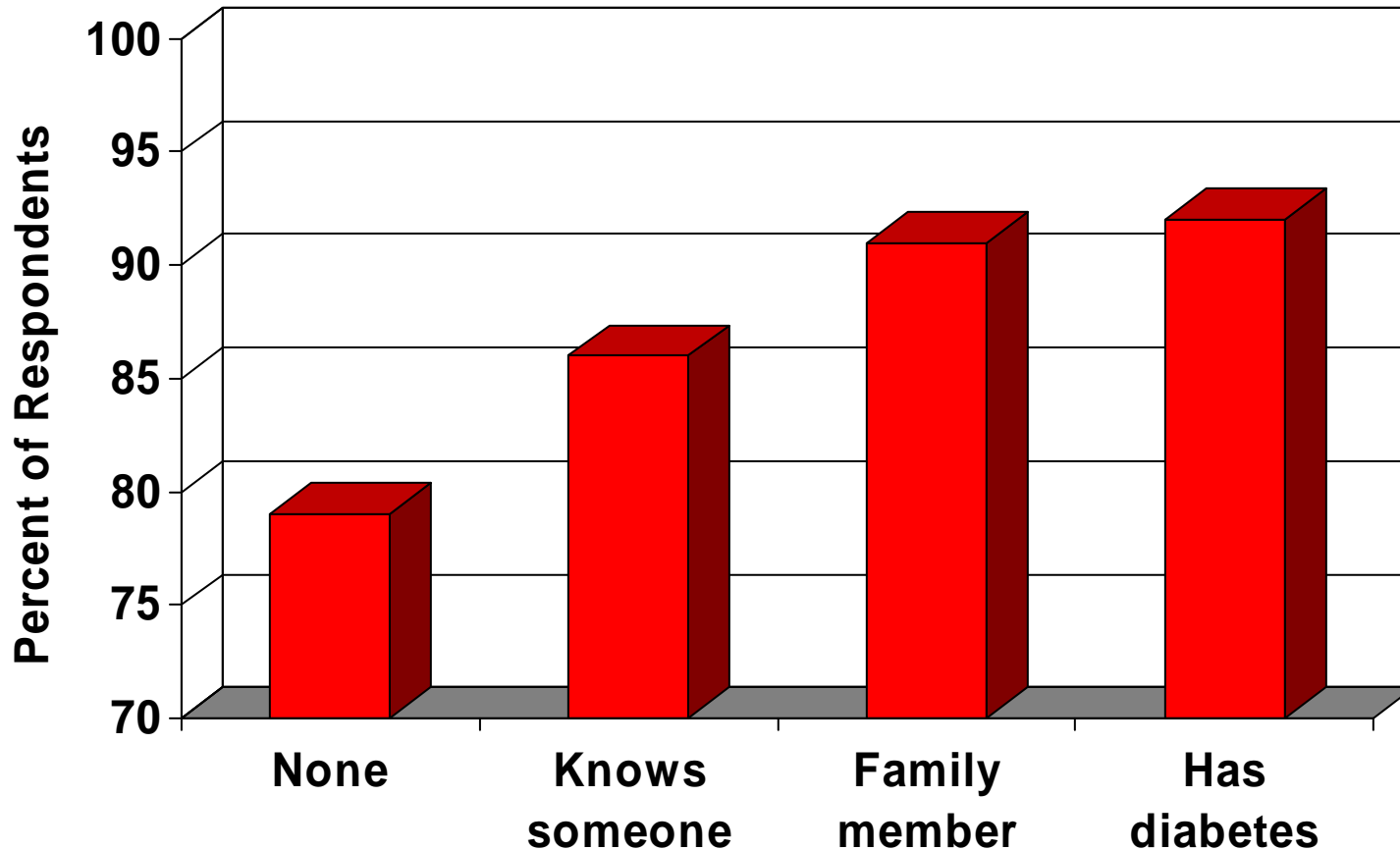


N=688

None statistically significant



Who Heard the Messages: Exposure to Diabetes



N=696

$\chi^2=14.78$, $df=3$, $p=0.002$



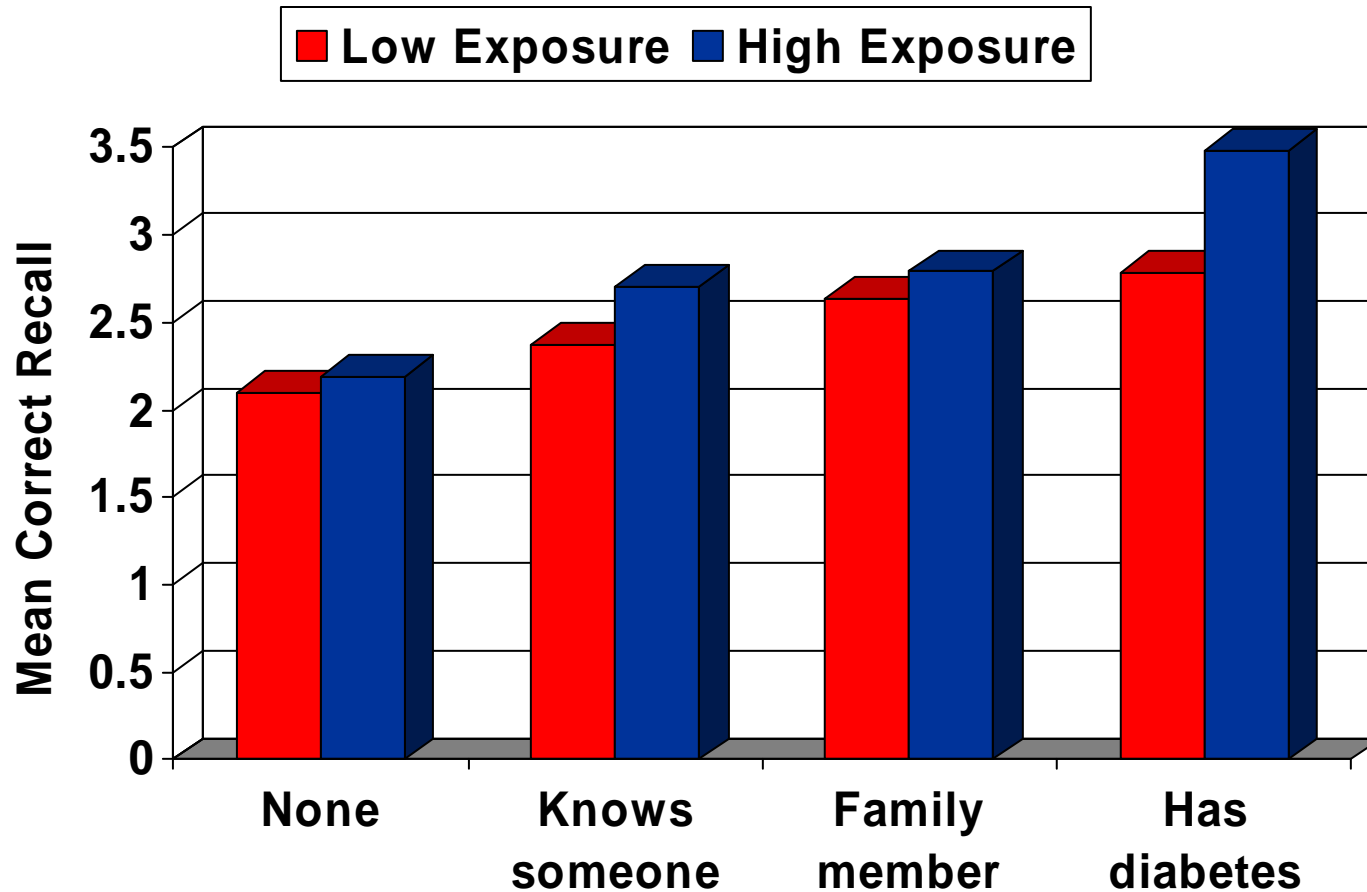
Specific Messages Recalled by County Group

Did you see or hear an advertisement about:	High Exposure		County Group Low Exposure		Overall	
	N	Percent	N	Percent	N	Percent
Having a blood test for diabetes or 'A1c' test	150/298	50.3	147/302	48.7	297/600	49.5
Having a flu shot if you are a diabetic	106/298	35.6	72/302	23.8	178/600	29.7
Eating a high fiber diet for diabetes	96/298	32.2	87/302	28.8	183/600	30.5
Having your feet checked if you have diabetes	177/298	59.4	148/302	49	325/600	54.2
Getting your eyes checked if you have diabetes	205/297	69	173/302	57.3	378/599	63.1

Differences between county groups in individual responses were not significant



Mean Correct Recall of Messages by Diabetes Contact and Exposure



Both statistically significant
in GLM model



Model of Influence of Diabetes Contact and County Group

Generalized linear model predicting number of correct messages recalled:

Parameter	Estimate	Standard		
		Error	t Value	Pr > t
Intercept	4.134	0.765	5.40	<.0001
Group	-1.315	0.429	-3.06	0.0023
Interviewer	-0.994	0.430	-2.31	0.0210
diabexp	0.291	0.054	5.43	<.0001
Group*Interviewer	0.726	0.272	2.67	0.0078



The Problem with Flu Shots

- Flu shot is the lowest of the true knowledge items (42.9% agreed)
- Recall of flu shot message lowest of all four actual messages (29.7% heard it—about the same number who “heard” the high fiber diet message)
- Although there was interviewer confounding, flu was least-reported action

Message Recall and Diabetes Knowledge, Diabetes Patients

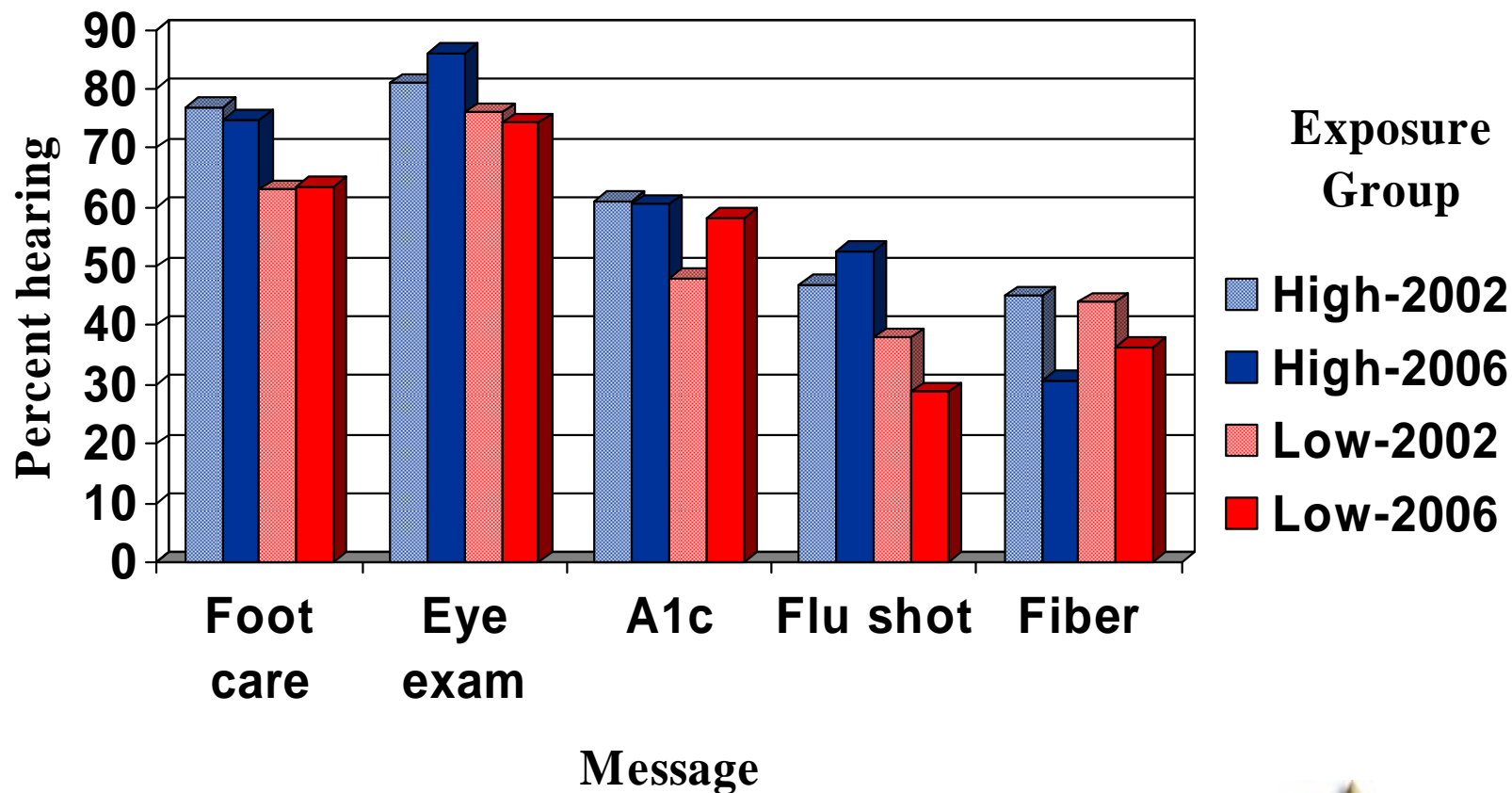
	2002	2006
Diabetes knowledge	7.8 (1.2)	7.7 (1.2)
Correct recall	2.7 (1.4)	3.1 (1.3)
N	405	122

Mean (standard deviation)

Message recall is on a 0-5 scale and
diabetes knowledge is on a 0-10 scale
based on correct responses to 5 items



Weighted Percent of Diabetic Respondents Hearing Messages



CONCLUSIONS

- Diabetes knowledge is high, especially among respondents with diabetes
- Message recall is higher in high exposure counties and among those with greater contact with diabetes
- We need greater emphasis on flu messages
- Some messages, e.g. eyes and feet, may have “maxed out”

Moving Forward

- Nine month span of announcements will begin in June 2007
- Flu information has been integrated into all messages to remind people with diabetes throughout campaign
- Continued support through additional QIO-sponsored promotional venues:
 - Provider & Beneficiary Newsletters
 - Statewide Television Program
 - Grassroots promotion



Sample 2007 Diabetes PSA

■ Play from DVD



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Questions?

