Working Papers Project on the Public and Biological Security Harvard School of Public Health

2.

THE IMPACT OF ANTHRAX INCIDENTS IN THREE METROPOLITAN AREAS

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Survey Shows Anthrax Incidents Have Impact on People's Worries and Behaviors in Three Cities Where Bioterrorism Reported

Washington, DC and Trenton/Princeton-area residents especially affected

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BOSTON, MA – The latest study by the Harvard School of Public Health and the Robert Wood Johnson Foundation polling attitudes toward bioterrorism finds that the lives of a large share of people have been affected directly or indirectly in three metropolitan areas where cases of anthrax have occurred. About one in five residents of the Washington, DC (21%) and Trenton/Princeton, NJ (19%) areas report that they, a friend, or a family member has been exposed to or tested for anthrax, or had their workplace closed because of anthrax or suspected anthrax. Nine percent in the Boca Raton, FL, area have been affected, compared with 4% of adults nationwide. (Figure 1)

Among the "affected" group in the Washington metropolitan area, 43% are very or somewhat worried that they could contract anthrax from opening their mail at work or at home (compared with 30% of those not affected and 24% of all adults nationally). Almost half (47%) of the "affected" are currently taking precautions opening their mail, including washing their hands after opening mail, wearing gloves, or completely avoiding opening their mail (compared with 34% of those not affected and 32% of all adults nationally). (Figure 2).

One-fourth (26%) of the "affected" DC-area residents think they or an immediate family member is likely to contract anthrax during the next 12 months (compared with 15% of those not affected and 9% of all adults nationally). Twelve percent of the "affected" say that they or someone in their household has gotten a prescription for or purchased antibiotics because of reports of bioterrorism (compared with 3% of those not affected and 4% of all adults nationally).

"Most Americans remain relatively untouched by the anthrax incidents that have occurred," says Robert J. Blendon, professor of Health Policy and Political Analysis at the Harvard School of Public Health. "But people who have experienced these incidents either directly or indirectly through friends or family members have been left worried about the future."

Half (51%) of the "affected" group in Trenton/Princeton are worried that they could contract anthrax from opening their mail (compared with 37% of those not affected). More than half (58%) of "affected" Trenton/Princeton-area residents are currently taking precautions opening their mail. A similar proportion (54%) of the unaffected group are taking such precautions, probably because so many Trenton/Princeton-area residents have had their mail delivery interrupted due to fears of anthrax contamination. Fifty-eight percent of Trenton/Princeton-area residents report interruptions of mail delivery for some

period of time, compared 19% in the Washington area, 11% in the Boca Raton, and 5% of adults nationwide.

One-third (35%) of the "affected" Trenton/Princeton area residents think they or an immediate family member is likely to contract anthrax during the next 12 months (compared with 18% of those not affected). Ten percent of the "affected" say that they or someone in their household has gotten a prescription for or purchased antibiotics because of reports of bioterrorism (compared with 2% of those not affected).

Circumstances in the Washington area, including both the September 11 attack on the Pentagon and the recent anthrax incidents, seem to have made those affected by the latter more wary of other possible attacks. More than one-third (36%) of "affected" Washington-area residents think they or an immediate family member is likely to get injured by some other type of terrorist act besides anthrax or smallpox during the next 12 months (compared with 20% of those not affected and 18% of adults nationally).

"Affected" people in the Washington and Trenton/Princeton areas are no more likely than other residents of those areas to say that they or someone in their household has taken such precautions against bioterrorism as avoiding public events or maintaining emergency supplies of food, water, or clothing.

The "affected" group in the Boca Raton-area sample was too small for analysis. Nationally, the vast majority of Americans continue to believe that they or members of their immediate families are unlikely to contract anthrax or smallpox during the next 12 months. More Americans think they or a family member is likely to get injured by some other terrorist act (18%) than by either anthrax (9%) or smallpox (8%).

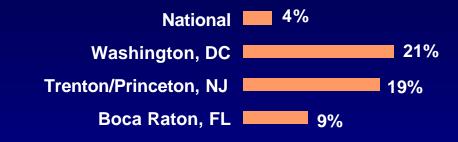
During the past month, there has been no change in the precautions Americans are taking in response to the bioterrorist threat. (The survey was taken after the incident of anthrax in Connecticut). (Figure 3)

Residents of New York City, the other major area where cases of anthrax have been reported, were not interviewed because the events of September 11 make it difficult to isolate the effects of anthrax incidents.

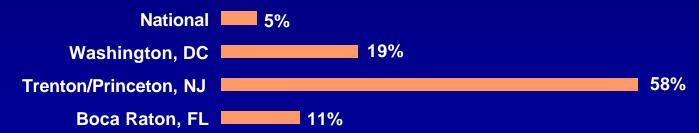
Impact of Anthrax, Nationally and in Three Metropolitan Areas

Affected

You, a friend or a family member exposed to or tested for anthrax, or had workplace closed because of anthrax or suspected anthrax



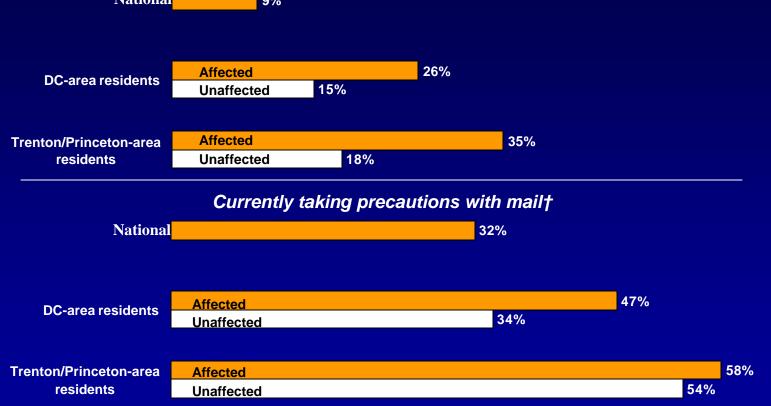
Mail Delivery Interrupted



Source: Harvard School of Public Health/Robert Wood Johnson Foundation Survey Project on Americans' Response to Biological Terrorism. November 29 - December 3, 2001.







^{*}Affected = You, a friend or a family member exposed to or tested for anthrax, or had workplace closed because of anthrax or suspected anthrax. †Wearing gloves, completely avoiding opening mail or washing hands after opening mail.

Source: Harvard School of Public Health/Robert Wood Johnson Foundation Survey Project on Americans' Response to Biological Terrorism, November 29 - December 3, 2001.

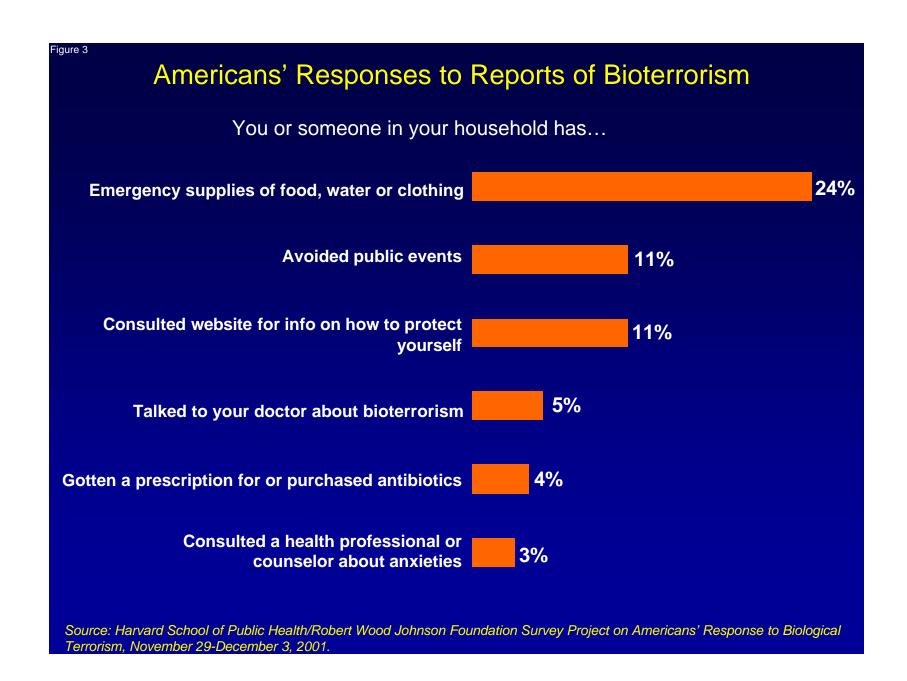
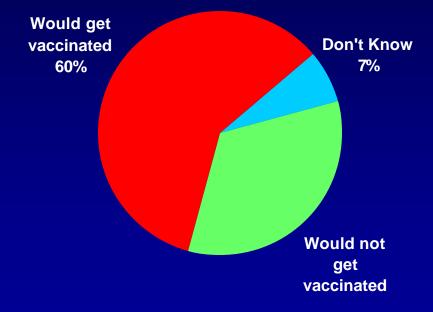


Figure 1a

Americans who would get Smallpox Vaccination as a Precaution Against Terrorist Attack

(Vaccine may produce serious side effects in a small number of cases)



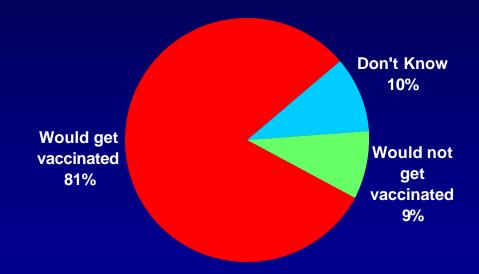
If vaccine made available

Source: Harvard School of Public Health/Robert Wood Johnson Foundation Survey Project on Americans' Response to Biological Terrorism, May 2002

Figure 1b

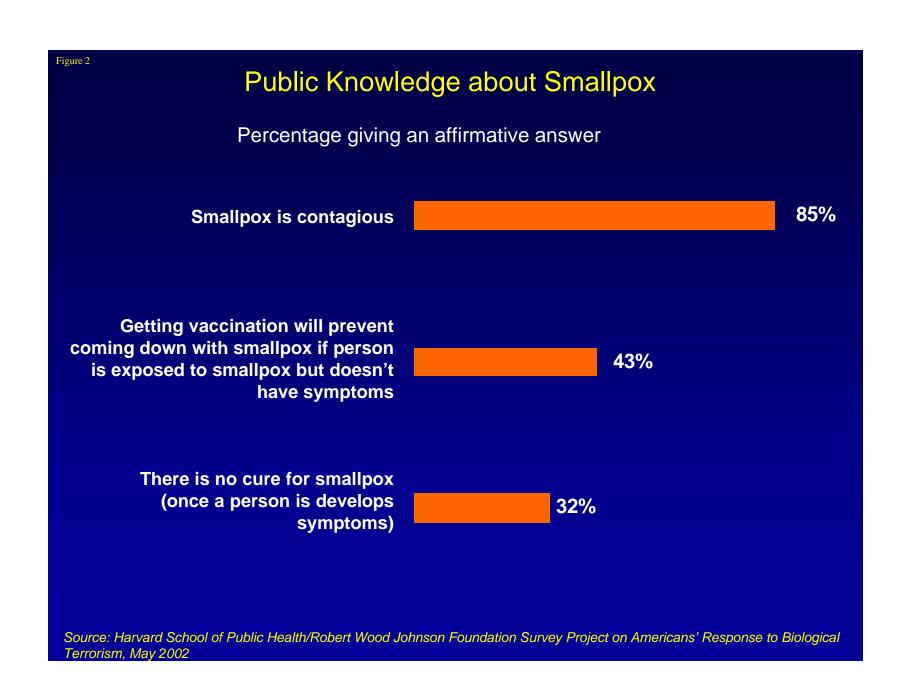
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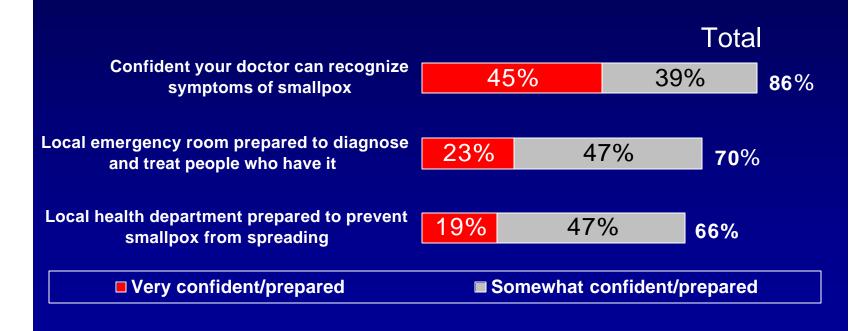


If cases of smallpox reported in community

Source: Harvard School of Public Health/Robert Wood Johnson Foundation Survey Project on Americans' Response to Biological Terrorism, May 2002



Public Confidence in the Health System in the Event of Smallpox Attack



Source: Harvard School of Public Health/Robert Wood Johnson Foundation Survey Project on Americans' Response to Biological Terrorism, May 2002

HARVARD SCHOOL OF PUBLIC HEALTH/ ROBERT WOOD JOHNSON FOUNDATION SURVEY PROJECT ON AMERICANS' RESPONSE TO BIOLOGICAL TERRORISM

Study 2: National and Three Metropolitan Areas Affected by Anthrax

November 29 – December 3, 2001

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INTERNATIONAL COMMUNICATIONS RESEARCH

HARVARD SCHOOL OF PUBLIC HEALTH/ ROBERT WOOD JOHNSON FOUNDATION SURVEY PROJECT ON AMERICANS' RESPONSE TO BIOLOGICAL TERRORISM Survey 2 – National and Three Localities Topline Results

This study consists of four surveys of adults 18 years of age and older, one nationwide, the other three in metropolitan areas affected by anthrax. The "National" results come from a survey among a nationally representative sample of 1,009 adults. The metropolitan areas follow U.S. Census definitions. The "Trenton" results come from a survey of 509 adults in Trenton metropolitan area, defined as Mercer County, NJ. The "Boca Raton" results come from a survey of 504 adults in the West Palm Beach/Boca Raton metropolitan area, defined as Palm Beach County, FL. The "Washington" results come from a survey of 516 adults in the Washington, DC, metropolitan area, which includes DC and several counties. All interviews were conducted November 29-December 3, 2001. Field work by ICR/International Communications Research of Media, PA. The margin of error for the "National" study was +/-3.74. The margin of error for the "Trenton" study was +/-5.17. The margin of error for the "Boca Raton" study was +/-5.28. The margin of error the the "DC" study was +/-5.03.

1. I'm going to read you a list of things and ask you how likely it is that each of them will happen to you or someone in your immediate family during the next 12 months. First, (INSERT FIRST ITEM)? Do you think that is very likely to happen to you or someone in your immediate family, somewhat likely, not very likely, or not at all likely? How about (INSERT NEXT ITEM)?

a. Getting the flu

		LIKELY			NOT LIKELY			
	Net	Very	Somewhat	Net	Not very	Not at all	Know	
12/3/01 National	69	28	41	30	17	13	1	
12/3/01 Trenton	68	26	41	32	18	13	1	
12/3/01 Boca Raton	63	28	35	35	24	12	2	
12/3/01 Washington	66	24	42	33	22	11	1	
10/28/01*	73	32	41	25	18	8	1	

^{*}Trend HSPH/RWJF National Survey 1

b. Contracting anthrax

		LIKELY			NOT LIKELY			
	Net	Very	Somewhat	Net	Not very	Not at all	Know	
12/3/01 National	9	3	6	88	34	54	3	
12/3/01 Trenton	21	3	17	77	37	40	2	
12/3/01 Boca Raton	14	4	10	84	36	48	3	
12/3/01 Washington	17	5	13	79	37	43	3	
10/28/01*	14	4	10	82	43	39	4	

^{*}Trend HSPH/RWJF National Survey 1

c. Contracting smallpox

		LIKELY			NOT LIKELY			
	Net	Very	Somewhat	Net	Not very	Not at all	Know	
12/3/01 National	8	2	6	89	27	62	2	
12/3/01 Trenton	13	2	11	85	36	48	2	
12/3/01 Boca Raton	12	3	9	84	32	52	4	
12/3/01 DC	8	2	6	90	36	54	2	
10/28/01*	9	3	6	88	38	50	3	

^{*}Trend HSPH/RWJF National Survey 1

d. Getting injured by some other terrorist act

		LIKELY			NOT LIKELY			
	Net	Very	Somewhat	Net	Not very	Not at all	Know	
12/3/01 National	18	5	13	78	36	42	4	
12/3/01 Trenton	24	5	19	74	38	36	2	
12/3/01 Boca Raton	20	5	16	76	44	33	4	
12/3/01 DC	24	6	18	75	43	32	1	

2. As a result of recent incidents of anthrax in the mail, how worried are you that you could contract anthrax from opening your mail (INSERT ITEM)? Are you very worried, somewhat worried, not too worried, or not worried at all?

a. at home

	Worried				Don't		
	Net	Very	Somewhat	Net	Not to	Not at all	Know
12/3/01 National	21	5	17	78	30	49	*
12/3/01 Trenton, NJ	35	12	23	65	29	36	*
12/3/01 Boca Raton, FL	23	5	17	77	33	44	1
12/3/01 Washington, DC	25	6	20	75	33	42	-

b. at work

	WORRIED			NC	T WORRIE	D	Don't work/don't	Don't
						receive mail at work	know	
	NET	Very	Somewhat	NET	Not too	Not at all		
12/3/01 National	15	5	10	69	21	48	16	1
12/3/01 Trenton	23	8	15	61	21	40	16	-
12/3/01 Boca Raton	14	4	10	61	20	41	25	=
12/3/01 DC	23	5	19	64	22	42	13	-

Anthrax Worry Home or Work

	Yes	No
12/3/01 National	24	76
12/3/01 Trenton	39	61
12/3/01 Boca Raton	26	74
12/3/01 DC	33	67

3. Has your mail delivery been stopped for any period of time because of fears about possible anthrax contamination?

	Yes	No	Don't know
12/3/01 National	5	95	1
12/3/01 Trenton	58	39	3
12/3/01 Boca Raton	11	88	1
12/3/01 DC	19	78	3

4. As a result of recent incidents of anthrax in the mail, have you completely avoided opening your mail, or have you continued to open your mail?

	Completely avoided opening the mail	Continued to open the mail	Never opened the mail anyway	Don't know
12/3/01 National	2	98	-	*
12/3/01 Trenton	6	94	*	-
12/3/01 Boca Raton	2	95	1	1
12/3/01 DC	1	99	*	*

(Asked of respondents who continue to open mail/don't know/refused)

5. Do you CURRENTLY take the following precautions when opening the mail, or not? Do you wash your hands after opening the mail? 5aa. (IF NO) Have you EVER washed your hands after opening the mail as a result of the recent incidents of anthrax in the mail?

4/5a/5aa. Combo Table

			Conti				
	Completely		V	Vash hands af	fter openi	ing the mail	
	avoided					Never washed	
	opening the					hands after	Never opened
	mail	NET	NET	Currently	Ever	opening the mail	mail anyway
12/3/01 National	2	98	36	30	6	63	-
12/3/01 Trenton	6	94	57	48	9	37	-
12/3/01 Boca Raton	2	96	40	34	6	57	-
12/3/01 DC	1	99	45	35	10	54	-

(Asked of respondents who continue to open mail/don't know/refused)

5b. Do you CURRENTLY take the following precautions when opening the mail, or not? Do you wear gloves when opening the mail? 5ab. (IF NO) Have you EVER worn gloves when opening the mail as a result of the recent incidents of anthrax in the mail?

4/5b/5ab. Combo Table

			(mail/dk/ref			
	Completely			Wear gloves w	vhen ope	ning the mail	
	avoided					Never wore	
	opening the					gloves when	Never opened
	mail	NET	NET	Currently	Ever	opening mail	mail anyway
12/3/01 National	2	98	6	5	1	92	-
12/3/01 Trenton	6	94	15	9	6	79	*
12/3/01 Boca Raton	2	96	5	3	2	91	1
12/3/01 DC	1	99	10	7	4	89	*

Mail Precaution, Ever Table

	Yes	No
12/3/01 National	38	62
12/3/01 Trenton	63	37
12/3/01 Boca Raton	43	57
12/3/01 DC	46	54

Mail Precaution, Current Table

	Yes	No
12/3/01 National	32	68
12/3/01 Trenton	54	46
12/3/01 Boca Raton	37	63
12/3/01 DC	37	63

- 6. In response to reports of bio-terrorism, have you or has someone in your household done any of the following things? Have you (INSERT ITEM)?
- a. Consulted a website for information about how to protect yourself

	Yes	No	Don't know
12/3/01 National	11	89	*
12/3/01 Trenton	17	83	-
12/3/01 Boca Raton	11	88	*
12/3/01 DC	16	84	-
10/28/01*	12	88	1

^{*}Trend HSPH/RWJF National Survey 1

b. Maintained emergency supplies of food, water, or clothing

	Yes	No	Don't know
12/3/01 National	24	76	*
12/3/01 Trenton	26	74	*
12/3/01 Boca Raton	23	77	-
12/3/01 DC	26	74	-
10/28/01*	25	75	*

^{*}Trend HSPH/RWJF National Survey 1

c. Avoided public events

	Yes	No	Don't know
12/3/01 National	11	89	*
12/3/01 Trenton	11	89	-
12/3/01 Boca Raton	12	87	*
12/3/01 DC	12	88	1
10/28/01*	12	87	*

^{*}Trend HSPH/RWJF National Survey 1

d. Talked with your doctor about health issues related to bioterrorism

	Yes	No	Don't know
12/3/01 National	5	95	-
12/3/01 Trenton	8	92	-
12/3/01 Boca Raton	5	95	-
12/3/01 DC	7	93	*
10/28/01*	6	94	-

^{*}Trend HSPH/RWJF National Survey 1

e. Consulted a health professional or counselor about your fears or anxieties related to bio-terrorism

	Yes	No	Don't know
12/3/01 National	3	97	*
12/3/01 Trenton	4	96	-
12/3/01 Boca Raton	3	97	-
12/3/01 DC	3	97	*

f. Gotten a prescription for or purchased antibiotics

	Yes	No	Don't know
12/3/01 National	4	96	-
12/3/01 Trenton	3	97	-
12/3/01 Boca Raton	6	94	-
12/3/01 DC	5	95	*
10/28/01*	5	95	-

^{*}Trend HSPH/RWJF National Survey 1

(Asked of respondents who have gotten a prescription for or purchased antibiotics in

response to reports of bio-terrorism; National = 40; Trenton = 19; Boca Raton = 29;

DC = 25)

7. Are you currently taking these antibiotics as a precaution against anthrax?

	Yes	No	Don't know
12/3/01 National	7	93	-
12/3/01 Trenton	17	83	-
12/3/01 Boca Raton	4	96	-
12/3/01 DC	8	92	-
10/28/01*	21	79	-

^{*}Trend HSPH/RWJF National Survey 1

6f/7. Combo Table

	Gotten a pr	escription for/ purcl	nased antibiotics	Have not gotten
		Currently taking Not currently		
		them as a	taking them as a	for/ purchased
	NET	precaution	precaution	antibiotics
12/3/01 National	4	*	4	96
12/3/01 Trenton	3	1	3	97
12/3/01 Boca Raton	6	*	6	94
12/3/01 DC	5	*	4	95
10/28/01*	5	1	4	95

^{*}Trend HSPH/RWJF National Survey 1

8. If you were to contract each of the following and received immediate medical care, how likely do you think it is that you would survive? First (INSERT ITEM)? Do you think it's very likely, somewhat likely, not very likely, or not at all likely that you would survive? How about (INSERT NEXT ITEM)? (IF NECESSARY: Would it be very likely, somewhat likely, not very likely, or not at all likely that you would survive?

a. The flu

	LIKELY			NOT LIKELY			Don't
	Net	Very	Somewhat	Net	Not very	Not at all	Know
12/3/01 National	96	90	6	3	2	1	1
12/3/01 Trenton	95	86	10	4	2	2	*
12/3/01 Boca Raton	94	83	11	4	3	1	1
12/3/01 DC	97	89	8	2	1	1	1

b. Smallpox

		LIKELY			NOT LIKELY		
	Net	Very	Somewhat	Net	Not very	Not at all	Know
12/3/01 National	70	44	26	19	11	9	11
12/3/01 Trenton	69	37	32	22	13	9	9
12/3/01 Boca Raton	63	39	24	26	16	10	11
12/3/01 DC	73	44	29	20	12	8	7

c. The inhaled form of anthrax

		LIKELY			NOT LIKELY		
	Net	Very	Somewhat	Net	Not very	Not at all	Know
12/3/01 National	57	25	32	35	19	15	8
12/3/01 Trenton	62	27	35	32	20	13	6
12/3/01 Boca Raton	62	34	29	29	20	9	9
12/3/01 DC	68	32	36	27	15	12	5

d. The skin form of anthrax

	LIKELY			NOT LIKELY			Don't
	Net	Very	Somewhat	Net	Not very	Not at all	Know
12/3/01 National	81	55	26	12	7	5	7
12/3/01 Trenton	89	68	21	7	4	3	4
12/3/01 Boca Raton	83	61	22	9	6	4	8
12/3/01 DC	88	66	22	8	3	5	4

9. How confident are you that your doctor can recognize the symptoms of anthrax? Are you (READ LIST)?

		CONFIDENT			NOT CONFIDENT		
	Net	Very	Somewhat	Net	Not very	Not at all	Know
12/3/01 National	78	38	40	18	12	6	4
12/3/01 Trenton	82	40	42	16	12	4	2
12/3/01 Boca Raton	73	38	36	19	12	7	7
12/3/01 DC	82	40	42	14	10	4	4

- 10. How much confidence do you have in the Centers for Disease Control or CDC to (INSERT FIRST ITEM)? A great deal, quite a lot, some, or not very much? How about (INSERT NEXT ITEM)? How much confidence do you have in the CDC to (INSERT NEXT ITEM)?
- a. provide the correct information about how to protect you and your family from anthrax

	A gr	A great deal/Quite a lot			Some/Not very much		
	Net	A great deal	Quite a lot	Net	Some	Not very much	Don't Know
12/3/01 National	60	35	25	38	25	13	2
12/3/01 Trenton	62	30	32	37	25	11	1
12/3/01 Boca Raton	58	26	32	39	29	10	4
12/3/01 DC	61	30	30	38	31	8	1

b. assess correctly the danger to workers in a building where anthrax is found

	A g	A great deal/Quite a lot		Some/Not very much			
	Net	A great deal	Quite a lot	Net	Some	Not very much	Don't Know
12/3/01 National	57	30	27	41	26	15	2
12/3/01 Trenton	52	22	30	46	30	17	1
12/3/01 Boca Raton	48	23	25	46	35	12	6
12/3/01 DC	59	26	32	40	29	11	1

11. As you may know, a vaccine for smallpox exists but it may produce negative side effects. If such a vaccine were made available to you, would you take the vaccine as a precaution against a terrorist attack using smallpox, or wouldn't you take such a vaccine?

	Would take vaccine	Would not take vaccine	Don't know
12/3/01 National	51	39	10
12/3/01 Trenton	58	35	8
12/3/01 Boca Raton	51	41	8
12/3/01 DC	55	36	10

12. Have you gotten a flu shot during the **PAST** two months?

	Yes	No	Don't know
12/3/01 National	26	74	*
12/3/01 Trenton	29	71	-
12/3/01 Boca Raton	26	73	1
12/3/01 DC	27	73	*

(Asked of respondents who have not gotten a flu shot in the past 2 months; National =

738; Trenton = 345; Boca Raton = 374; DC = 370)

13. Do you intend to get a flu shot during the **NEXT** two months?

	Yes	No	Don't know
12/3/01 National	26	71	2
12/3/01 Trenton	27	72	1
12/3/01 Boca Raton	23	75	2
12/3/01 DC	37	62	2

12/13.Combo Table

		Have gotten/int	Have not gotten/don't	
	NET	NET Gotten Not gotten, but intend		intend to get a flu shot
12/3/01 National	46	26	19	54
12/3/01 Trenton	48	29	19	52
12/3/01 Boca Raton	43	26	17	57
12/3/01 DC	54	27	27	46

14. Do you or does anyone in your household work for (INSERT ITEM)?

a. The U.S. Postal Service

	Yes	No	Don't know
12/3/01 National	3	97	-
12/3/01 Trenton	2	98	-
12/3/01 Boca Raton	2	98	
12/3/01 DC	5	95	-
10/28/01*	3	97	-

^{*}Trend HSPH/RWJF National Survey 1

b. The federal government

	Yes	No	Don't know
12/3/01 National	7	93	*
12/3/01 Trenton	4	96	*
12/3/01 Boca Raton	4	96	*
12/3/01 DC	28	72	-
10/28/01*	8	92	-

^{*}Trend HSPH/RWJF National Survey 1

Federal Government/Postal HH Table

	Yes	No
12/3/01 National	9	91
12/3/01 Trenton	5	95
12/3/01 Boca Raton	5	95
12/3/01 DC	29	71

15. During the past three months, have you, a friend, or a family member (INSERT ITEM)?

a. Been exposed to anthrax

	Yes	No	Don't know
12/3/01 National	*	99	1
12/3/01 Trenton	6	91	2
12/3/01 Boca Raton	3	97	1
12/3/01 DC	5	93	2

b. Been tested for anthrax

	Yes	No	Don't know
12/3/01 National	1	99	*
12/3/01 Trenton	9	91	*
12/3/01 Boca Raton	4	95	1
12/3/01 DC	12	87	1

c. Had your workplace closed because of anthrax or suspected anthrax

	Yes	No	Don't know
12/3/01 National	4	96	*
12/3/01 Trenton	12	88	*
12/3/01 Boca Raton	5	94	*
12/3/01 DC	14	85	1

Affected People (Yes to any Q15a-c)

	Yes	No
12/3/01 National	4	96
12/3/01 Trenton	19	81
12/3/01 Boca Raton	9	91
12/3/01 DC	21	79

16. Do you regularly go online to access the Internet or World Wide Web, or not?

	Yes	No	Don't know
12/3/01 National	50	50	*
12/3/01 Trenton	59	41	-
12/3/01 Boca Raton	48	52	1
12/3/01 DC	64	36	*

16a. Does anyone else in your household regularly go online to access the Internet or World Wide Web, or not?

	Yes	No	No one else in household	Don't know
12/3/01 National	52	46	1	1
12/3/01 Trenton	56	41	2	*
12/3/01 Boca Raton	50	48	2	1
12/3/01 DC	58	39	4	*

HH Internet Use Table

	Yes	No
12/3/01 National	64	36
12/3/01 Trenton	69	31
12/3/01 Boca Raton	62	38
12/3/01 DC	72	28