

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

4.

REPORT ON 'ER' VIEWERS WHO SAW THE SMALLPOX EPISODE

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After "ER" Smallpox Episode, Fewer "ER" Viewers Report They Would Go to Emergency Room If They Had Symptoms of the Disease

Viewers More Likely to Know About the Importance of Smallpox Vaccination

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BOSTON, MA – Regular "ER" viewers who saw or knew about that television show's May 16, 2002, smallpox episode were *less* likely to say that they would go to a hospital emergency room if they had symptoms of what they thought was smallpox than were regular "ER" viewers questioned before the show.

In a survey by the Harvard School of Public Health and Robert Wood Johnson Foundation, 71% of the 261 regular "ER" viewers interviewed during the week before the episode said they would go to a hospital emergency room. A separate HSPH/RWJF survey conducted after the episode found that a significantly smaller proportion (59%) of the 146 regular "ER" viewers who had seen the episode, or had heard, read, or talked about it, would go to an emergency in this circumstance. This difference may reflect the pandemonium that broke out in the fictional emergency room when the suspected smallpox cases were first seen.

Regular "ER" viewers who saw or knew about the smallpox episode were also less likely (19% to 30%) than regular "ER" viewers interviewed before the show to believe that their local hospital emergency room was *very* prepared to diagnose and treat smallpox.

Knowledge about smallpox

The biggest difference before and after the show involved the level of knowledge about smallpox vaccination. A majority (57%) of regular "ER" viewers who saw or knew about the smallpox episode knew that if a person has been exposed to smallpox but does not have symptoms, getting a smallpox vaccination will prevent the person from coming down with the disease. Only 39% of regular "ER" viewers interviewed before the show knew this key fact.

"This change is important, because it is the central issue for public health education about smallpox," said Robert J. Blendon, professor of Health Policy and Political Analysis at the Harvard School of Public Health. "The message is that, if you have been exposed to the disease, you should get vaccinated right away. Don't wait until you get sick, because once the symptoms start, there is no treatment to stop the course of the disease."

The post-episode group was also more likely to know that a person who has contracted smallpox and has symptoms should be kept isolated from uninfected people, although the level of knowledge was high (98% and 91%, respectively) among both groups.

Talking about smallpox

The "ER" episode did not lead most regular "ER" viewers who watched or knew about the show to talk about smallpox with other people. Interviewed during the five days after the show, more than three-fourths (80%) of that group reported that they had not talked with anyone else about smallpox during the past week.

In the episode, two children whose parents worked for the foreign service came to the ER with pox-like lesions. Smallpox was suspected and tissue samples were sent to the Centers for Disease Control and Prevention. By episode's end, smallpox had not been confirmed, and bioterrorism was not considered as a likely cause. According to the Nielsen ratings, 27.5 million Americans watched the episode.

Comparisons between the pre- and post-episode groups

The analysis was confined to regular "ER" viewers in order to reduce the chance that differences between the pre- and post-episode groups might be caused by pre-existing differences between regular "ER" viewers and non-viewers. It is still possible that a greater proportion of certain types of regular "ER" viewers—for instance, those more interested in or worried about smallpox—watched this particular episode.

However, it is unlikely that differences in the make-up of the pre- and post-episode groups of "ER" viewers account for the differences in their responses. The two groups were similar demographically, with no statistically significant differences in their gender, racial, age, or educational composition. In addition, on one measure of interest—being worried about the possibility that terrorists may use smallpox in future attacks—the groups' responses did not differ significantly.

In spite of efforts to create comparable before and after groups, however, changes in attitudes and levels of knowledge cannot necessarily be attributed to watching or knowing about the show.

No significant difference on other questions

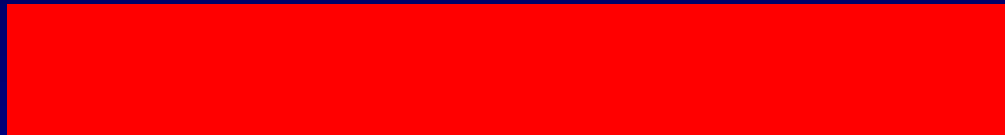
On 18 other survey questions about smallpox and related issues, no statistically significant differences were found. For instance, the two groups did not differ in their level of confidence in their own doctor to recognize smallpox symptoms or in their local health department's preparedness to prevent smallpox from spreading.

After *ER* Smallpox Episode, Fewer *ER* Viewers Report They Would Go to the ER if They Had Smallpox Symptoms

% would go to hospital ER if they had smallpox symptoms

Pre-Episode

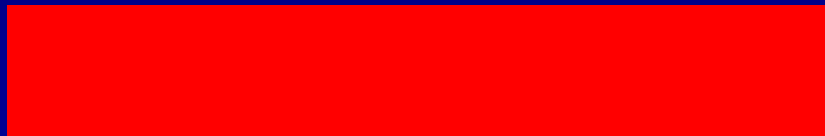
Regular *ER* viewers



71%

Post-Episode

Regular *ER* viewers who saw episode, heard, read or talked about it



59%

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

Table 1
“ER” Viewers Before and After the Smallpox Episode
 Measures where statistically significant differences occurred

	Pre-Episode	Post-episode	Difference
	Regular ER viewers (n=261)	Regular ER viewers who saw episode, heard, read or talked about it (n=146)	(Post minus pre)
Confidence in emergency rooms			
If had smallpox symptoms, would go to hospital ER	71%	59%	-12
Local ER very prepared to diagnose and treat smallpox	30%	19%	-11
Talked about smallpox			
Talked with someone about smallpox during the past week			
Yes	6%	20%	+14
No	94%	80%	
Knowledge about smallpox			
If person has been exposed to smallpox but does not have symptoms, getting vaccination will prevent coming down with smallpox	39%	57%	+18
Person who has contracted smallpox and has symptoms should be kept isolated from uninfected people	91%	98%	+7

Note: Differences between pre- and post-episode responses were statistically significant ($p < .05$) on each measure.

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

Table 2

**“ER” Viewers: Summary of Responses
Before and After the Smallpox Episode**

Only on those measures indicated by * were the responses
pre- and post-episode statistically different

	Pre-Episode Regular ER viewers (n=261)	Post-episode Regular ER viewers who saw episode, heard, read or talked about it (n=146)
Confidence in health system and trust in public officials		
Confident your doctor can recognize smallpox symptoms	86%	88%
Local ER prepared to diagnose and treat smallpox		
Very + somewhat prepared	70%	68%
Very prepared	30%*	19%
Local health department prepared to prevent smallpox from spreading		
Very + somewhat prepared	68%	68%
Very prepared	19%	18%
If you had smallpox symptoms, would go to:		
Own doctor/medical clinic	86%	80%
Hospital ER	71%*	59%
Hospital outpatient department	61%	56%
Public health department clinic	29%	27%
Talked about smallpox		
Talked with someone about smallpox during the past week		
Yes	6%	20%*
No	94%*	80%
Knowledge about smallpox		
Smallpox is contagious	87%	91%
Person who has contracted smallpox and has symptoms should be kept isolated from uninfected people	91%	98%*
If a person has been exposed to smallpox but does not have symptoms, getting vaccination will prevent coming down with smallpox	39%	57%*
There is no cure for smallpox once a person develops symptoms	29%	34%
Level of concern		
You/family member likely to contract smallpox next 12 months	7%	9%
Worried terrorists may use smallpox in future attacks	49%	44%
Smallpox vaccination		
Would get vaccinated as precaution against terrorist attack if vaccine made available (may produce serious side effects in small number of cases)	71%	65%
Would get vaccinated if cases reported in your community	87%	89%

Note: * - statistically significant difference, $p < .05$.

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**

Report on ER Viewers Who Saw Smallpox Episode

May 10 – May 21, 2002

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I N T E R N A T I O N A L C O M M U N I C A T I O N S R E S E A R C H

Harvard School Of Public Health/Robert Wood Johnson Foundation Survey Project On Americans' Response To Biological Terrorism ER Topline Report

The data for this study was completed by telephone by ICR/International Communications Research of Media, PA from May 10 - 21, 2002. This survey was conducted in two waves with a nationally-representative sample of 2,009 adults 18 years of age and older. The first wave was fielded May 10-14 and had 1000 respondents; the second wave ran from May 17-21 with a total of 1009 respondents. On May 16, NBC aired an ER episode about smallpox. The percentages provided in this topline compare pre-ER (wave 1) respondents who said they were a regular ER viewer (defined as someone who usually watches at least three out of four new episodes during the regular television season from September to May, n=261) to post-ER (wave 2) respondents who were regular ER viewers and said they saw, heard, read, or talked about the ER episode concerning smallpox (n=146). The margins of error for these two groups are +/-6.07 and +/-8.11, respectively. Differences that are statistically significant are marked with an asterisk (*).

SP-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, (ITEM)? Do you think that it 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 (ITEM)?

SP-1a: Getting the Flu	-----Likely-----			-----Not Likely-----			Don't know
	Net	Very	Somewhat	Net	Not very	Not at all	
Total: Pre	74	30	44	25	13	11	1
Total: Post	72	34	38	28	19	9	-

SP-1b: Contracting anthrax	-----Likely-----			-----Not Likely-----			Don't know
	Net	Very	Somewhat	Net	Not very	Not at all	
Total: Pre	13	4	8	84	25	58	3
Total: Post	11	5	6	87	36	51	1

SP-1c: Contracting smallpox	-----Likely-----			-----Not Likely-----			Don't know
	Net	Very	Somewhat	Net	Not very	Not at all	
Total: Pre	7	2	5	90	24	66	2
Total: Post	9	6	3	90	30	60	*

SP-1d: Getting injured by some other terrorist act	-----Likely-----			-----Not Likely-----			Don't know
	Net	Very	Somewhat	Net	Not very	Not at all	
Total: Pre	23	4	19	74	30	44*	2
Total: Post	16	5	11	79	46*	32	5

SP-2A. How worried are you about the possibility that terrorists may use smallpox in attacks in the future? Would you say you are very worried, somewhat worried, not too worried, or not worried at all?

	-----Worried-----			-----Not Worried-----			Don't know
	Net	Very	Somewhat	Net	Not too	Not at all	
Total: Pre	49	8	40	51	31	20	-
Total: Post	44	12	32	54	38	17	2

SP- 5A. To the best of your knowledge, is smallpox a disease that is contagious, meaning that it can be passed from one person to another, or is it not contagious?

	Contagious	Not contagious	Don't Know
Total: Pre	87	8	5
Total: Post	91	5	4

SP-5B. To the best of your knowledge, if a person has been exposed to smallpox but doesn't have symptoms, would getting a vaccination prevent the person from coming down with the disease, or wouldn't a vaccination prevent it?

	Vaccination prevent the disease	Vaccination wouldn't prevent the disease	Don't Know
Total: Pre	39	38*	23
Total: Post	57*	22	21

SP-5C. To the best of your knowledge, is there a cure for smallpox once a person develops symptoms, such as a high fever and rash, or isn't there a cure once the person has the symptoms?

	Is a cure	Is no cure	Don't Know
Total: Pre	46	29	24
Total: Post	39	34	28

SP-6. Suppose you were exposed to smallpox and had symptoms such as a high fever and rash. How likely do you think it is that you would survive if you got immediate medical care? Do you think it's very likely, somewhat likely, not very likely, or not at all likely that you would survive?

	-----Likely-----			-----Not Likely-----			Don't Know
	Net	Very	Somewhat	Net	Not very	Not at all	
Total: Pre	84	43	41	12	9	3	4
Total: Post	84	35	49	11	9	1	5

SP-7. As you may know, a vaccine for smallpox exists, but it may produce serious side effects in a small number of cases. If such a vaccine were made available to you, would you go get vaccinated as a precaution against a terrorist attack using smallpox, or wouldn't you get such a vaccination?

	Would get a vaccination	Would not get a vaccination	Don't Know
Total: Pre	71	25	4
Total: Post	65	32	3

(Asked of those who said "No" to SP-7)

SP-8. What if cases of smallpox were reported in your community? Would you go get a smallpox vaccination, or wouldn't you get such a vaccination?

SP-7/8 Combination Table

	Total: Pre	Total: Post
Would get vaccination	87	89
Yes if available	71	65
Yes, if smallpox in community	15	24
Not even if smallpox in community	7	8
Don't know	6	4

SP-11. If you had symptoms of what you thought might be smallpox, where would you go first for diagnosis or treatment? Would you go to (READ ITEM) or somewhere else?

(Percent who would go to...)	Total: Pre	Total: Post
Your own doctor or medical clinic	86	80
A hospital emergency room	71*	59*
A hospital outpatient department	62	56
A public health department clinic	29	27

SP-12. If you had smallpox and went to your local hospital, how likely do you think it is that they would refuse to treat you because you might infect other people at the hospital? Do you think it is very likely, somewhat likely, not very likely, or not at all likely that they would refuse to treat you?

	-----Likely-----			-----Not Likely-----			Don't know
	Net	Very	Somewhat	Net	Not very	Not at all	
Total: Pre	29	7	22	68	33	35	3
Total: Post	24	10	15	72	34	38	4

SP-13. How confident are you that your doctor can recognize the symptoms of smallpox? Are you very confident, somewhat confident, not very confident, or not at all confident?

	-----Confident-----			-----Not Confident-----			Don't know
	Net	Very	Somewhat	Net	Not very	Not at all	
Total: Pre	86	44	42	11	7	4	3
Total: Post	88	46	42	10	8	2	3

SP-14. How prepared do you think your local hospital emergency room is to diagnose and treat people who have smallpox? Very prepared, somewhat prepared, not very prepared, or not at all prepared?

	-----Prepared-----			-----Not Prepared-----			Don't know
	Net	Very	Somewhat	Net	Not very	Not at all	
Total: Pre	70	30*	40	22	16	6	8
Total: Post	69	19	49	24	17	7	8

SP-15. If there were an outbreak of smallpox, how prepared do you think your local health department would be to prevent smallpox from spreading? Very prepared, somewhat prepared, not very prepared, or not at all prepared?

	-----Prepared-----			-----Not Prepared-----			Don't know
	Net	Very	Somewhat	Net	Not very	Not at all	
Total: Pre	68	19	49	28	20	8	5
Total: Post	68	18	50	27	23	4	6

SP-16. If you were in a hospital emergency room and someone across the room had an advanced case of smallpox, how likely do you think you would be to get smallpox? Very likely, somewhat likely, not very likely, or not at all likely?

	-----Likely-----			-----Not Likely-----			Don't know
	Net	Very	Somewhat	Net	Not very	Not at all	
Total: Pre	65	24	42	28	20	8	7
Total: Post	72	22	51	22	17	5	6

SP-17. If somebody has contracted smallpox and has symptoms such as a high fever and rash, should that person be kept isolated from uninfected people, or should they be allowed to go about their normal lives?

	Kept isolated	Allowed to go about their normal lives	Don't know
Total: Pre	91	6	3
Total: Post	98*	2	1

SP-18. If there were an outbreak of smallpox, do you think health professionals would discriminate against elderly people, or would they be treated like everyone else?

	Professionals would discriminate against the elderly	Elderly would be treated like everyone else	Don't know
Total: Pre	19	77	4
Total: Post	13	78	9

SP-19. If there were an outbreak of smallpox, do you think health professionals would discriminate against blacks or African-Americans, or would they be treated like everyone else?

	Professionals would discriminate against African-Americans	African-Americans would be treated like everyone else	Don't know
Total: Pre (Waves 1 & 2)	11	87	3
Total: Post	6	93	1

SP-20. To the best of your knowledge, have you ever been vaccinated for smallpox, or not?

	Have been vaccinated	Have not been vaccinated	Don't know
Total: Pre	54	35	10
Total: Post	53	34	13

SP-21. During the past week, have you talked with anyone about smallpox?

	Have talked to someone about smallpox	Have not talked to anyone about smallpox	Don't know
Total: Pre	6	94*	-
Total: Post	20*	80	-

SP-21a. Since "Thursday" [for Friday interviewing replace with "yesterday"], did you see, hear, or read anything about smallpox in the news?

	Yes	No	Don't know
Total: Post	26	73	1