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Hunter Responses to Digital Media Messages about Chronic Wasting Disease

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EXECUTIVE SUMMARY

Chronic wasting disease (CWD) is a prion disease that infects white-tailed deer and other cervids. CWD is always fatal and spreads easily. Infected animals and their carcasses shed prions, and these prions can be transmitted directly or indirectly to other cervids. Agencies are concerned about disease transmission risks from infected material. To reduce the risk of the introduction and spread of CWD in New York State, the state prohibited the importation of whole cervid carcasses or intact heads, and the New York State Department of Environmental Conservation (DEC) is encouraging hunters to dispose of cervid carcasses and carcass parts in landfills and to avoid using deer urine-based scent lures.

In 2020, DEC was awarded funding from USDA APHIS (Project 14812) to develop a research-based digital media campaign to encourage hunters to abide by these regulations and recommendations. This report describes the testing of messages to be used in this campaign. We developed sets of messages that we expected to be effective based on the results of our past work and tested them through an experimental email survey and a subsequent set of pilot tests in selected New York State communities.

In the fall of 2021, we tested the effects of draft digital media interventions through a randomized experimental email survey of 4,433 New York State hunters who had participated in a previous baseline survey and agreed to be contacted again. Participants were divided into multiple randomized experimental (2,956 individuals) and control (1,477 individuals) groups. Individuals in each group were sent different versions of mock Facebook posts communicating information about CWD to test whether the materials influenced risk perceptions and whether the version of the materials (the source and the degree of certainty in the language used) mattered.

Pre-tests measures of hunter risk perceptions and other characteristics were available from two sources: the original baseline survey and questions on the current experimental survey that were answered before individuals were presented with one of the Facebook posts. Post-test measures of hunter risk perceptions were collected through questions on the experimental survey after individuals were presented with one of the Facebook posts.

The results of the experimental email survey analysis were used to guide the development of a complete set of materials for the digital media campaign. These materials included Facebook posts, YouTube videos, and Google CPC (cost-per-click) ads. Two elements of the Facebook posts and YouTube videos were varied: the source of the materials and whether or not the YouTube videos and Facebook posts included supporting factual information to help justify the messages. These materials were pilot-tested in a limited digital media campaign targeting 4 New York State communities.

Taken together, the results of the experimental survey and community pilot tests indicate that the digital media materials developed by DEC in collaboration with the CCSS have the intended impacts. The survey showed that hunters expressed higher risk perceptions about CWD after viewing any version of a Facebook post encouraging them not to import whole deer carcasses than they did before viewing it. The survey also showed that hunters who viewed any version of the post expressed higher CWD risk perceptions than hunters who did not. In the community pilot tests, the viewing and sharing rates showed that people engaged with the digital media materials related to CWD, particularly those with information about how hunters could reduce the risks of CWD entering New York.

These results are consistent with past research on New York State hunters. This work showed that most hunters were aware of and concerned about CWD, but many were unaware of regulations and recommendations designed to reduce the risk of hunters bringing CWD into New York. This research showed that clear, unambiguous messages with an underpinning of factual support were preferred by hunters. In our current study, hunters engaged with and responded to such messages.

The experimental variations of the materials and messages, however, did not have a consistent influence on how hunters responded. Based on our research, we cannot conclude that message source, the degree of certainty in language, or justification make a difference in how hunters respond. The lack of any clear findings in this regard may be because source, certainty, and justification are not important in this context. The degree to which certainty and justification, in particular, can be varied in brief digital media materials (such as Facebook posts and 30-second YouTube videos) is relatively small. Despite the lack of clear results, however, we can still conclude that New York hunters expressed a preference for justification for recommendations in earlier phases of this work (reported elsewhere).

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Our survey protocol was reviewed and approved by the Cornell University Office of Research Integrity and Assurance (Institutional Review Board for Human Participants Protocol ID# 1004001374).

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INTRODUCTION

Chronic wasting disease (CWD) is a prion disease that infects white-tailed deer and other members of the cervid family (e.g., mule deer, elk, moose). CWD is always fatal and spreads easily. Infected animals and their carcasses shed prions, and these prions can be transmitted directly or indirectly to other cervids (Saunders et al. 2012). Because prions are hard to inactivate and may persist in the environment for a long time, agencies are concerned about disease transmission risks from infected material (Gillin and Mawdsley 2018).

The New York State Interagency CWD Risk Minimization Plan (DEC 2018) is New York State's effort to respond to CWD risks. The overarching goal of the plan is to prevent new introductions of CWD to the state, which could harm both wild and captive cervid populations and associated recreational activities and businesses. As part of the plan, New York State prohibited importation of whole cervid carcasses or intact heads. The New York State Department of Environmental Conservation (DEC) is also encouraging hunters to dispose of cervid carcasses and carcass parts in landfills and to avoid using deer urine-based scent lures (DEC 2019).

In 2020, DEC was awarded funding from USDA APHIS (Project 14812) to develop a research-based digital media campaign to encourage hunters to abide by these regulations and recommendations. This work is taking place in several stages.

In early 2021, DEC and CCSS staff collaborated to complete a web-based survey with a random sample of 25,000 NYS hunters to assess the level of adoption of CWD risk minimization actions and perceptions about CWD as a threat to hunters and hunting (Siemer et al. 2021). We received 6,013 completed questionnaires (26% response rate after adjusting the sample size to reflect deliverable emails). The survey found that most hunters believed that CWD would threaten hunting if it arrived in New York, but many did not consider it likely to enter New York. Sizable percentages were not aware of and/or abiding by DEC's regulations and recommendations related to CWD. While hunters tended to trust DEC to manage CWD, they were not convinced of the efficacy of recommended actions for stopping the spread of CWD.

Based on these results, we developed a series of draft messages to encourage hunters to adopt CWD risk-minimization behaviors. We tested these messages in focus groups in the summer of 2021 (Siemer et al. 2022). We found that hunters in the focus groups preferred that statements and recommendations be stated in clear, objective, unambiguous terms. The accuracy of some of the draft messages, however, was questioned by some participants, and they indicated the need to see empirical evidence to support certain claims. Hunters in the focus groups also considered themselves more knowledgeable about CWD than rank and file hunters and highlighted the need to increase awareness of CWD across the hunter population.

Based on these results, we developed the next generation of messages to be tested for the CWD digital media campaign. The testing of those messages is described in this report. We developed sets of messages that we expected to be effective based on the results of our past work. In particular, we sought to develop messages about both the threat that CWD poses to New York and the actions that hunters are encouraged to take to keep it out of New York; frame these messages in clear, unambiguous terms; and provide selected factual information that would support the messages.

We tested different versions of these messages to determine whether some were more effective than others. In particular, we explored the influence of the following variables:

- Source of information. Past work has shown that most hunters trust DEC in relation to CWD management. We assessed whether messages had different impacts if they came from DEC vs. other sources.
- Certainty. Focus group results pointed to the importance of clear, unambiguous messages. We tested whether language that conveyed more or less certainty influenced how hunters responded to messages.
- Justification. Focus group results also indicated that hunters needed to be convinced of the importance of some recommended actions and wanted factual information to back them up. We assessed whether brief, factual statements that could be included in digital media messages made a difference in hunters' perceptions of the risks of certain behaviors.

In this report, we describe the development and refinement of digital media messages to encourage hunters to adopt CWD risk-minimizing behaviors. We report on how these messages were tested through an experimental email survey and a subsequent set of pilot tests in selected New York State communities.

METHODS

Experimental Email Survey

We tested the effects of draft digital media interventions through a randomized experimental email survey of 4,433 New York State hunters who had participated in a previous baseline survey (Siemer et al. 2021) and agreed to be contacted again. Participants were divided into multiple randomized experimental (2,956 individuals) and control (1,477 individuals) groups. Individuals in each group were sent different versions of digital media materials communicating information about CWD to test whether the materials influenced risk perceptions and whether the version of the materials mattered.

The survey was not a suitable format for testing the complete set of materials for the digital media campaign. Instead, we tested mock Facebook posts designed for use in the digital media campaign but containing just a subset of the messages that would be included in the full campaign. Other vehicles for communicating information to hunters (Google CPC [cost-per-click] ads and YouTube videos) were not tested in this survey. The differences in the Facebook posts (described below) were designed to provide information about whether some types of content and language had more of an effect than others.

Pre-tests measures of hunter risk perceptions and other characteristics were available from two sources: the original baseline survey (Siemer et al. 2021) and questions on the current experimental survey that were answered before individuals were presented with one of the Facebook posts. Post-test measures of hunter risk perceptions were collected through questions on the experimental survey after individuals were presented with one of the Facebook posts.

Survey Instrument

The survey instrument (Appendix A) included the following items:

- Behavior. Whether respondents had hunted cervids outside of New York State in the past 5 years.
- Social norms. Whether respondents knew hunters who had hunted cervids outside of New York State or brought back certain cervid parts in the past 5 years.
- Knowledge. Self-assessed knowledge of CWD.
- Concern. Level of concern about CWD.
- Risk perceptions. Perceptions of the risk of introducing CWD to New York through behaviors, the risk CWD would pose to deer hunting in New York, and the priority that DEC should place on keeping CWD out of New York.
- Biospheric concern. A set of items to assess level of concern about the biosphere.
- Intervention. Individuals in the experimental groups were presented with one of 6 versions of a Facebook post described below. These posts were designed to persuade hunters not to bring whole carcasses or intact deer heads back to New York from other states. The posts differed in the source to which the information was attributed and whether the language conveyed high or low certainty.
- Manipulation check. For the experimental groups, two questions assessed whether individuals noticed the source of the information and the level of certainty conveyed by the post.
- Risk perceptions. The four risk perception questions from the first part of the instrument were repeated for individuals in the experimental groups (but not the control group). These questions served as post-test measures.

- Perceived efficacy and feasibility. Three items assessed the efficacy and feasibility of DEC's regulation prohibiting bringing back whole carcasses or deer heads from outside New York.
- Source credibility. Individuals in the experimental groups were asked about the credibility of the source to which the Facebook post they saw was attributed.
- Emotions. Five items assessed respondents' emotions related to CWD.

Experimental Design

We randomly assigned hunters to one of seven groups. Members of the 6 experimental groups were sent a questionnaire including different mock Facebook posts using a 2 (certain or uncertain language) by 3 (post attributed to the NYS Department of Environmental Conservation, the Cornell University Wildlife Health Lab, or the National Deer Association). Members of the control group did not receive any mock Facebook posts with their questionnaire.

The Facebook post text suggesting greater certainty was:

All hunters need to play a role in protecting New York State from CWD by not bringing whole carcasses or intact deer heads into New York from other states. In some parts of the U.S., up to 50% of adult bucks have been found to be infected with CWD. CWD could be in any deer you kill outside New York, and you can't tell just by looking at it. New York State prohibits bringing back whole carcasses. By bringing back only deboned meat, antlers, and cleaned skulls, you can help to reduce the risk of bringing back any parts containing CWD.

The text of the post suggesting greater uncertainty was:

All hunters should play a role in protecting New York State from CWD by not bringing whole carcasses or intact deer heads into New York from other states. In some parts of the U.S., up to 50% of adult bucks could be infected with CWD. CWD might be in any deer you kill outside New York, and you may not be able to tell just by looking at it. New York State prohibits bringing back whole carcasses. By bringing back only deboned meat, antlers, and cleaned skulls, you may help to reduce the risk of bringing back any parts that could contain CWD.

Implementation

We implemented the survey in September and October, 2021. On September 30, 2021 we distributed an initial email invitation to participate in the survey. Along with a message encouraging recipients to participate in the survey, each individual in the sample received a

unique link to the website where they could complete their questionnaire. Nonrespondents received up to 3 reminder emails at multi-day intervals (distributed on October 7, 15, and 21).

Analyses

All analyses were conducted using IBM SPSS Statistics Version 27. We conducted two broad sets of analyses:

- We conducted a “within-survey experiment” entirely with data from the experimental email survey. In this set of analyses, we compared post-test CWD risk perceptions with pre-test risk perceptions for members of the experimental groups to determine how these perceptions changed after seeing the Facebook posts and whether the source of the posts or the level of certainty conveyed by the post influenced risk perceptions. In these analyses, we could not compare members of the experimental group with members of the control group, however, because members of the control group did not have both pre- and post-test measures of risk perceptions within that survey.
- We conducted a “between-survey experiment” utilizing data from both the experimental email survey and the original baseline survey of the same individuals (Siemer et al. 2021). In these analyses, we compared post-test risk perceptions between the experimental groups and with the risk perceptions of the control groups to determine whether the Facebook posts influenced risk perceptions in the experimental vs. the control group and whether the experimental variations in the post mattered. In these analyses, we did not have a pre- test measure of risk perceptions from the baseline survey that was identical to the post-test measure—a measure that was specific to the risks of particular behaviors contributing to the spread of CWD. However, we used a conceptually-related measure (see below) from the baseline survey as an independent variable; this variable assessed the perceived effectiveness of adopting risk-minimization behaviors.

Within-survey Experiment In the within-survey experiment, we explored factors influencing four post-test items assessing CWD risk perceptions:

- Bringing back whole carcasses to NYS could contribute to the spread of CWD in NYS.
- Bringing back deer heads to NYS could contribute to the spread of CWD in NYS.
- If CWD enters NYS the quality of deer hunting in New York will decline.
- Keeping CWD outside New York State should be a high priority for DEC.

We compared frequencies and means of responses to these items pre- and post-test for members of experimental groups (without considering which version of the post was received). We conducted a series of OLS regressions predicting post-test risk perceptions based on pre-test risk perceptions, the experimental variations of the Facebook posts, self-assessed knowledge about CWD, concern about CWD, and the interactions between these terms.

Between-survey Experiment In the between-survey experiment, we conducted an OLS regression for post-test CWD risk perceptions related to bringing back whole carcasses to NY based on whether or not respondents saw a Facebook post, the experimental variations of the Facebook posts, the perceived effectiveness of hunters not importing carcasses, self-assessed knowledge about CWD, concern about CWD, and the interactions between these terms. The item used to assess perceived effectiveness of not importing carcasses was:

- If NO deer hunters imported whole deer carcasses from outside New York State, how effective do you believe that would be as a means to keep CWD outside of New York State?

While this item was not identical to the post-test CWD risk perception measure, it was conceptually similar. Since no similar baseline measure was available for CWD risk perception measures related to bringing back intact deer heads, we did not conduct a regression for that measure.

Community Pilot Tests

The results of the analyses described above were used to guide the development of a complete set of materials for the digital media campaign. These materials included Facebook posts, YouTube videos, and Google CPC ads (Appendix B). Five Facebook posts were developed focusing on the topics of what CWD is, how CWD would affect hunting, how hunters could introduce CWD, hunters should not bring whole carcasses or intact deer heads into New York, and hunters should not use deer urine-based scent lures. Six YouTube videos were developed. Five of them were approximately 30-second videos on the same topics (and with similar scripts) to the Facebook posts. The sixth video was approximately two minutes in length and included most of the material from the shorter videos. Six Google CPC ads were developed conveying similar information to the Facebook posts and videos, but in a much briefer format.

Two elements of the Facebook posts and YouTube videos were varied: the source of the materials was identified as either the NYS Department of Environmental Conservation or the Cornell University Wildlife Health Lab; and the YouTube videos and Facebook posts did or did not include supporting factual information to help justify the messages.

These materials were pilot-tested using a 2x2 design in a limited digital media campaign targeting 4 New York State communities. These tests took place over 10 days with six YouTube videos, the Google CPC ads, and one of the boosted Facebook posts released on the first day and the remaining 4 boosted Facebook posts released one at a time starting two days later and continuing every two days after that. The treatments for each of the communities were as follows:

- Jamestown. YouTube videos and boosted Facebook posts attributed to DEC and including justification.
- Corning. YouTube videos and boosted Facebook posts attributed to DEC and without justification.
- Binghamton. YouTube videos including justification and Google CPC ads.
- Middletown. YouTube videos without justification and Google CPC ads.

Data collected to assess impact included the following:

- YouTube videos: impressions, number of clicks, click-through rate (CTR), % video views to 75%, and % through plays.
- Boosted Facebook posts: impressions, clicks, shares, likes, comments
- Google CPC ads: impressions, number of clicks, and click through rate (CTR).

The data for each community were compiled and compared. Because the unit of analysis was the community and there was only one community for each set of conditions, statistical analysis was not warranted.

RESULTS AND DISCUSSION

Experimental Email Survey

We compared the frequencies of the different responses to the CWD risk perception statements in members of the experimental groups pre- and post-test (Table 1). More agreed with these statements after seeing one of the Facebook posts, and fewer respondents answered “I don’t know” when asked whether they agreed with the statements. The shifts in responses were more marked for the two statements about how hunter behaviors could contribute to the spread of CWD than they were for the statements about the risk CWD poses for New York and whether CWD should be a management priority. The vast majority of hunters agreed with the latter two statements even before seeing the Facebook posts, and so there was less room for change.

Table 1. Pre-test and post-test responses to CWD risk perception statements by members of the experimental groups in the experimental email survey.

Statement	Pre-Test %						Post-test %					
	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree	I don't know	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree	I don't know
Bringing back whole carcasses to NYS could contribute to the spread of CWD in NYS.	5.0	9.7	12.6	27.9	32.5	12.4	3.3	6.4	8.3	25.8	51.9	4.3
Bringing back deer heads to NYS could contribute to the spread of CWD in NYS.	7.8	14.6	16.7	23.6	20.8	16.6	4.8	10.1	11.5	29.0	38.6	6.1
If CWD enters NYS the quality of deer hunting in New York will decline.	3.1	3.7	6.4	27.7	55.8	3.3	2.3	3.9	5.6	27.7	58.5	1.9
Keeping CWD outside New York State should be a high priority for DEC.	5.0	1.9	4.4	17.1	69.9	1.8	3.1	1.8	3.8	18.5	71.9	0.9

When we compared the means for these statements pre- and post-test (excluding individuals who responded “I don’t know” in the pre-test), we found similar patterns (Table 2). Post-test means were significantly higher than pre-test means for all statements, although the shift in means was small for the statements that were not about specific behaviors because agreement with these statements was already very high.

Table 2. Comparison of pre-test and post-test means for members of the experimental groups for CWD risk perception statements using a paired t-test.

Statement	Pre-test		Post-test		t	df	Sig. (2-tailed)
	mean	SEM	mean	SEM			
Bringing back whole carcasses to NYS could contribute to the spread of CWD in NYS.	3.84	0.029	4.20	0.026	-15.497	1745	<0.001
Bringing back deer heads to NYS could contribute to the spread of CWD in NYS.	3.42	0.032	3.86	0.030	-17.328	1651	<0.001
If CWD enters NYS the quality of deer hunting in New York will decline.	4.34	0.022	4.39	0.021	-2.437	1935	0.015
Keeping CWD outside New York State should be a high priority for DEC.	4.47	0.023	4.56	0.020	-4.100	1974	<0.001

We calculated the post-test frequency of responses to the CWD risk perception statements for those hunters who did not respond to the pre-test statements or answered “I don’t know” (Table 3). More than 40% agreed with each of these statements post-test and more than 50% agreed with the two statements about how hunter behaviors could contribute to the spread of CWD. No more than 6% disagreed with these statements post-test.

Table 3. Post-test frequencies (%) for CWD risk perception statements for those who answered "I don't know" or did not answer pre-test items.

Statement	N	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree	Missing or “I don’t know”
Bringing back whole carcasses to NYS could contribute to the spread of CWD in NYS.	311	1.3	1.0	5.1	19.0	34.7	38.9
Bringing back deer heads to NYS could contribute to the spread of CWD in NYS.	416	1.7	1.7	4.8	17.3	34.4	40.1
If CWD enters NYS the quality of deer hunting in New York will decline.	86	1.2	0.0	9.3	20.9	25.6	43.0
Keeping CWD outside New York State should be a high priority for DEC.	50	4.0	2.0	12.0	8.0	34.0	40.0

Taken together these analyses provide strong evidence that the Facebook posts influence responses to CWD risk perception statements. This influence was most marked for those statements about how hunter behaviors could contribute to the spread of CWD. Since agreement with the other risk perception statements was already high to begin with, little

opportunity for change existed. Consequently, the remaining analyses focus on the statements about hunter behaviors.

We used OLS regression models to test whether the source to which Facebook posts were attributed influenced post-test risk perceptions about hunter behaviors contributing to the spread of CWD. We did not test the influence of certain/uncertain language on risk perceptions because the question we used as manipulation check showed that respondents did not notice the level of certainty reflected by the language used in the posts. Among respondents who received Facebook posts with uncertain language, 76.3% thought the author of the post was somewhat or very certain about CWD and 7.2% thought they were somewhat or very uncertain. Among those who received posts with certain language, 76.7% thought the author was somewhat or very certain and 7.6% thought they were somewhat or very uncertain.

We first ran regressions for the risk perception statement: “Bringing back whole carcasses to NYS could contribute to the spread of CWD in NYS.” The source of the Facebook posts was not significant in this regression. Pre-test risk perceptions, knowledge about CWD, and concern about CWD were all significant, however (adjusted $r^2=0.421$, $p<0.000$, Table 4).

Table 4. OLS regression model predicting post-test beliefs about risks associated with bringing back whole carcasses to New York State for all respondents in experimental groups.

Parameter	B	Std. Error	t	p
Intercept	1.797	0.327	5.497	0.000
Pre-test risk perception	0.622	0.084	7.437	0.000
Knowledge	-0.236	0.084	-2.817	0.005
Concern	0.376	0.073	5.159	0.000
Pre-test risk perception/Knowledge interaction	0.046	0.021	2.183	0.029
Pre-test risk perception/Concern interaction	-0.077	0.019	-4.132	0.000

As expected, pre-test risk perceptions were positively associated with post-test risk perceptions. The influence of self-assessed knowledge and concern about CWD on post-test risk perceptions depends on both the main terms and the interactions. Because all of the respondents in this regression had received the intervention (in some form), the concern and

knowledge variables help us to understand how the intervention affects people differently depending on their level of concern and knowledge.

- Those respondents who say they know a lot about CWD are less likely to agree that bringing back whole carcasses could contribute to the spread of CWD. Since the main term and the interaction term have opposite signs, however, this finding is primarily true for those who did not initially believe that bringing back whole carcasses posed a risk. In other words, the intervention had less of an effect on those who did not originally consider the behavior risky and who considered themselves knowledgeable.
- Those respondents who are concerned about CWD are more likely to say bringing back whole carcasses could contribute to the spread of CWD. Because the main term and the interaction term have opposite signs, this finding is less true for those who already thought the behavior posed a risk; these individuals had less of an opportunity to change their perceptions. In other words, the intervention had more of an effect on hunters who were concerned about CWD, but did not originally think bringing back whole carcasses posed a risk.

We reran the regression for just those respondents who could correctly identify the source of the Facebook posts after viewing them. We reconsidered source as a variable in this regression. Pre-test risk perceptions, source, knowledge about CWD, and concern about CWD were all significant terms (adjusted $r^2=0.426$, $p<0.000$, Table 5).

In this regression, the relationships of pre-test risk perceptions, knowledge, and concern with post-test risk perceptions are similar in nature to those in the previous regressions. The source of the posts and interactions of the source with concern about CWD are significant in this regression. Considering both the main terms for source of information and the interaction terms involving source, the regression shows that receiving a post from Cornell had a greater effect on post-test beliefs for hunters who were moderately or very concerned about CWD and a lesser effect for hunters who were not concerned about CWD. Since 67.1% of hunters are moderately or very concerned about CWD, this finding indicates that the information from Cornell had more of an effect on most hunters than information from other sources.

Next, we ran regressions for the second risk perception statement: “Bringing back deer heads to NYS could contribute to the spread of CWD in NYS.” As with the regression for the statement about bringing back whole carcasses, the source of the Facebook posts was not significant in this regression. Pre-test risk perceptions and concern about CWD were both significant (adjusted $r^2=0.450$, $p<0.000$, Table 6), but knowledge was not significant in this regression.

Table 5. OLS regression model predicting post-test beliefs about risks associated with bringing back whole carcasses to New York State for respondents in experimental groups who were aware of the source of the posts.

Parameter	B	Std. Error	t	p
Intercept	2.012	0.473	4.252	0.000
<u>Source</u> : NYSDEC	0.690	0.218	3.172	0.002
<u>Source</u> : Natl Deer Assoc. (NDA)	0.773	0.287	2.691	0.007
<u>Source</u> : Cornell	0.000	-	-	-
Pre-test risk perception	0.469	0.118	3.992	0.000
Knowledge	-0.310	0.121	-2.560	0.011
Concern	0.456	0.113	4.025	0.000
NYSDEC/Concern interaction	-0.216	0.073	-2.974	0.003
NDA/Concern interaction	-0.281	0.096	-2.938	0.003
Cornell/Concern interaction	0.000	-	-	-
Pre-test risk perception/Knowledge interaction	0.067	0.031	.201	0.028
Pre-test risk perception/Concern interaction	-0.061	0.027	-2.235	0.026

Table 6. OLS regression model predicting post-test beliefs about risks associated with bringing back deer heads to New York State for all respondents in experimental groups.

Parameter	B	Std. Error	t	p
Intercept	1.091	0.199	5.495	0.000
Pre-test risk perception	0.735	0.059	12.475	0.000
Concern	0.249	0.071	3.505	0.000
Pre-test risk perception/Concern interaction	-0.046	0.020	-2.298	0.022

The relationships of pre-test risk perceptions and concern with post-test risk perceptions were similar to those with the previous set of regressions. Respondents who are concerned are more likely to agree that bringing back deer heads could contribute to the spread of CWD. Because the main term and the interaction term have opposite signs, this finding is less true for those

who already thought the behavior posed a risk. That is, the intervention had more of an effect on hunters who were concerned about CWD, but did not originally think bringing back deer heads posed a risk.

As we did with the previous set of regressions, we reran the regression for just those respondents who could correctly identify the source of the Facebook posts after viewing them. We reconsidered source as a variable in this regression. In this set of regressions, only pre-test risk perceptions, concern about CWD, and the interactions between them were significant terms (adjusted $r^2=0.407$, $p<0.000$, Table 7). Neither information source ($p=0.081$) nor knowledge ($p=0.368$) were significant. However, in Table 7, we report parameter estimates for both significant and non-significant terms to show that they were qualitatively similar to the terms in the previous set of regressions.

Table 7. OLS regression model predicting post-test beliefs about risks associated with bringing back deer heads to New York State for respondents in experimental groups who were aware of the source of the posts.

Parameter	B	Std. Error	t	p
Intercept	1.176	0.486	2.422	0.016
<u>Source</u> : NYSDEC	0.543	0.249	2.179	0.030
<u>Source</u> : Natl Deer Assoc. (NDA)	0.461	0.337	1.367	0.172
<u>Source</u> : Cornell	0.000	-	-	-
Pre-test risk perception	0.679	0.128	5.291	0.000
Knowledge	-0.110	0.122	-0.901	0.368
Concern	0.470	0.121	3.882	0.000
NYSDEC/Concern interaction	-0.193	0.084	-2.299	0.022
NDA/Concern interaction	-0.159	0.112	-1.415	0.157
Cornell/Concern interaction	0.000	-	-	-
Pre-test risk perception/Knowledge interaction	0.012	0.034	0.361	0.718
Pre-test risk perception/Concern interaction	-0.063	0.031	-2.034	0.042

We expected that the significant terms for this set of regressions (risk perceptions associated with bringing back deer heads) would be the same as for the previous set of regressions (risk perceptions associated with bringing back whole carcasses) because the behaviors in question were similar. However, a key difference between the two behaviors is that bringing back whole

carcasses was mentioned twice in the Facebook posts; the second time it was mentioned, the post noted that this behavior was prohibited. Bringing back deer heads was mentioned only once. The lack of significance of source in the regressions for bringing back deer heads may be attributable to this lower emphasis placed on this behavior; the posts may have had less influence on post-test perceptions because the behavior was not stressed as heavily. This interpretation is reinforced by the fact that the influence of pre-test perceptions was higher for bringing back deer heads than for bringing back whole carcasses, suggesting that these pre-test perceptions were less swayed by the post. In addition, it is important to note that 60.4% of hunters agreed in the pre-test that bringing back whole carcasses posed a risk while only 44.4% agreed that bringing back deer heads posed a risk.

We also used OLS regression models to test whether the experimental group (who saw mock Facebook posts) had higher risk perceptions related to bringing back whole carcasses to New York than members of the control group. In this regression model, we utilized data from the baseline survey conducted in February 2021 (8 months prior to the experimental survey). In particular, we utilized hunters' responses to a question about the perceived effectiveness of the carcass ban (If NO deer hunters imported whole deer carcasses from outside New York State, how effective do you believe that would be as a means to keep CWD outside of New York State?). Although this question was different than the risk perception question asked in the experimental survey, it was conceptually similar. We used OLS regression models to test whether the Facebook posts and the source of those posts influenced post-test risk perceptions about hunter importation of carcasses contributing to the spread of CWD. We controlled for baseline beliefs about the effectiveness of the carcass ban, self-assessed knowledge about CWD, and concern about CWD.

The best OLS regression model included significant terms for whether respondents received a Facebook post, baseline beliefs about effectiveness of the carcass ban, knowledge, and concern, with an interaction between knowledge and baseline beliefs about carcass ban effectiveness. The source of the posts was not significant. Although the model had low predictive power (Table 8, adjusted $r^2=0.102$), it was highly significant ($p<0.000$).

Viewing the Facebook post led to higher beliefs about the risks of bringing back carcasses to New York State. Because source was non-significant, this result supports the conclusion that any version of the Facebook posts is effective at increasing beliefs about the risks of bringing back whole carcasses. Concern also led to higher post-test risk perceptions.

The influence of baseline risk perception and self-assessed knowledge on post-test risk perceptions is more complex. The negative main terms for baseline risk perception and knowledge along with the positive interaction term indicates that those who consider

themselves more knowledgeable about CWD were less likely to have high post-test risk perceptions about carcasses—but only if their baseline risk perceptions were low.

Table 8. OLS regression model predicting post-test beliefs about risks associated with bringing back carcasses to New York State for members of the experimental and control groups.

Parameter	B	Std. Error	t	p
Intercept	3.558	0.275	12.934	0.000
Viewed Facebook post	0.287	0.062	4.625	0.000
Baseline risk perception	-0.106	0.076	-1.403	0.161
Knowledge	-0.291	0.077	-3.786	0.000
Concern	0.296	0.027	10.932	0.000
Knowledge/baseline risk perception interaction	0.080	0.023	3.502	0.000

Community Pilot Tests

The most obvious pattern in the percentage of YouTube videos viewed to 75% in the community pilot tests (Table 9) was by topic. The long videos, which were approximately four times the length of the shorter videos, had lower percentages of views to 75% than any of the shorter videos. Considering just the shorter videos, the video on “what CWD is” was consistently one of the least viewed videos. The video on “how hunters could introduce CWD” was consistently among the most-viewed videos. The two videos on specific behaviors DEC discouraged tended to more frequently viewed, but the patterns were less consistent. If we consider these results to be indicative of the level of interest in the videos, our findings are consistent with our previous work, which suggests that most hunters already have basic background information about CWD, but are less well informed about the roles they could play in introducing it.

The patterns in video views for different sources and with/without justification were not consistent when comparing these results for each topic. Sometimes the videos with DEC as the source were more viewed and sometimes those with Cornell as the source were. Sometimes the videos with justification were more viewed and sometimes those without were. These results, of course, are affected not just by the differences between the videos, but the differences between the communities.

Table 9. Percentage of video views to 75% for YouTube videos used in community pilot tests.

Topic	With Justification		Without Justification	
	DEC Source (Jamestown)	Cornell Source (Binghamton)	DEC Source (Corning)	Cornell Source (Middletown)
What CWD is	15.89%	13.09%	18.54%	19.70%
How CWD would affect hunting	15.25%	18.06%	28.02%	21.57%
How hunters could introduce CWD	39.47%	32.54%	38.71%	35.26%
Don't bring back carcasses	41.57%	12.60%	21.49%	32.05%
Don't use natural scent lures	25.29%	44.12%	30.46%	17.52%
Long video—all topics	3.38%	8.91%	6.12%	4.74%

For the boosted Facebook posts, the number of shares per thousand impressions (Table 10) was lowest for the post on “what CWD is.” This pattern is consistent with the pattern we observed in the YouTube videos. The rate of sharing for the other posts did not differ in an obvious pattern. Three of the five posts had higher sharing rates when they included justification. One had a higher rate when it did not include justification. Data for the final post was missing. The source of the posts was not varied.

Table 10. Number of shares of boosted Facebook posts per thousand impressions for posts with and without justification for messages.

Topic	With Justification (Jamestown)	Without Justification (Corning)
What CWD is	1.09	0.96
How CWD would affect hunting	3.63	2.11
How hunters could introduce CWD	2.38	2.15
Don't bring back carcasses	2.07	2.44
Don't use natural scent lures	2.75	Missing data

CONCLUSIONS

Taken together, the results of the experimental survey and community pilot tests indicate that the digital media materials developed by DEC in collaboration with the CCSS have the intended impacts. The messages that form the basis of these materials were developed initially considering research on hunter perceptions and behaviors from this and previous studies. They were tested with hunters during a series of hunter focus groups and refined prior to the experimental survey. The survey showed that hunters expressed higher risk perceptions about CWD after viewing any version of a Facebook post encouraging them not to import whole deer carcasses than they did before viewing it. The survey also showed that hunters who viewed any version of the post expressed higher CWD risk perceptions than hunters who did not. In the community pilot tests, the viewing and sharing rates showed that people engaged with the digital media materials related to CWD, particularly those with information about how hunters could reduce the risks of CWD entering New York.

These results are consistent with past research on New York State hunters. This work showed that most hunters were aware of and concerned about CWD, but many were unaware of regulations and recommendations designed to reduce the risk of hunters bringing CWD into New York (Siemer et al. 2020, 2021). This research showed that clear, unambiguous messages with an underpinning of factual support were preferred by hunters. In our current study, hunters engaged with and responded to such messages.

The experimental variations of the materials and messages, however, did not have a consistent influence on how hunters responded. Based on our research, we cannot conclude that message source, the degree of certainty in language, or justification make a difference in how hunters respond. The lack of any clear findings in this regard may be because source, certainty, and justification are not important in this context. The degree to which certainty and justification, in particular, can be varied in brief digital media materials (such as Facebook posts and 30-second YouTube videos) is relatively small. Despite the lack of clear results, however, we can still conclude that New York hunters expressed a preference for justification for recommendations in earlier phases of this work.

An important question that this study cannot answer is whether the digital media campaign will influence hunter *behaviors*. Will more hunters adopt CWD risk-reducing recommendations after the digital media campaign is implemented statewide in the fall of 2022? Elevated risk perceptions may not be lasting and may not, in any event, lead to behavior change. Engagement with digital media materials is not the same as adoption of recommendations. While this study provides positive indicators of the impact of these materials, the impact on

behavior change can only be assessed through a study of hunter behaviors, which could take place in the future.

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APPENDIX A: EXPERIMENTAL EMAIL SURVEY INSTRUMENT

Hunting and Chronic Wasting Disease Survey

We'll start by asking you a few questions about your own hunting practices and hunting practices by other people you know.

Have you hunted cervids (e.g., deer, elk, moose, and caribou) outside of New York State in the past 5 years?

☐ Yes (1)

☐ No (2)

Have other hunters you know hunted cervids outside of New York State in the past 5 years?

☐ Yes (1)

☐ No (2)

IF ANSWER TO PREVIOUS QUESTION IS YES: Please check any of the following deer (or other cervid) parts that other hunters you know have brought back to New York State during the past 5 years. (Please check all that apply.)

☐

Deer (or other cervid) head (1)

☐

Deboned meat (2)

☐

Antlers (3)

☐

Cleaned skulls (4)

☐

Whole deer (or other cervid) carcasses (5)

Now we'd like to ask you a few questions about chronic wasting disease (CWD).

In general, how much do you know about CWD?

- ☐ Nothing at all (1)
- ☐ Very little (2)
- ☐ Some (3)
- ☐ A moderate amount (4)
- ☐ A lot (5)

How would you describe your level of concern about CWD?

- ☐ Not at all concerned (1)
- ☐ Slightly concerned (2)
- ☐ Moderately concerned (3)
- ☐ Very concerned (4)
- ☐ Unsure (5)

How much do you disagree or agree with the following statements?

	Strongly disagree (1)	Somewhat disagree (2)	Neither agree nor disagree (3)	Somewhat agree (4)	Strongly agree (5)	I don't know (6)
Bringing back whole carcasses to NYS could contribute to the spread of CWD in NYS.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bringing back deer heads to NYS could contribute to the spread of CWD in NYS.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If CWD enters NYS the quality of deer hunting in New York will decline.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Keeping CWD outside New York State should be a high priority for DEC.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

To what extent do you agree with the following statements?

	Strongly disagree (1)	Somewhat disagree (2)	Neither agree nor disagree (3)	Somewhat agree (4)	Strongly agree (5)
The Earth's remaining ecosystems should be conserved at all costs. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fish and wildlife are on earth primarily for people to use. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
As humans, we have a moral obligation to ensure that we do not cause the extinction of other species. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The Earth's fragile ecosystems can be disrupted by very small changes in the balance of species. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Humans should manage fish and wildlife populations so that humans benefit. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

In the following section, you will see a brief Facebook post that could be used to share information with hunters about CWD. Please read over the full post, and then we'll ask you some questions about it. (NOT INCLUDED FOR CONTROL GROUP. THE CERTAINTY OF THE

LANGUAGE IN THE POSTS AND THE SOURCE OF THE POSTS VARIED AS DESCRIBED IN THE METHODS.)



NYS Department of Environmental Conservation ✓

6 August at 23:08 · 🌐



All hunters need to play a role in protecting New York State from CWD by not bringing whole carcasses or intact deer heads into New York from other states. In some parts of the U.S., up to 50% of adult bucks have been found to be infected with CWD. CWD could be in any deer you kill outside New York, and you can't tell just by looking at it. New York State prohibits bringing back whole carcasses. By bringing back only deboned meat, antlers, and cleaned skulls, you can help to reduce the risk of bringing back any parts containing CWD.



👍 🤔 😬 49

16 comments 21 shares



Most relevant ▼



Write a comment...



Which of the following sources did the message originate from? (NOT INCLUDED FOR CONTROL GROUP.)

- ☐ NYS Department of Environmental Conservation (1)
- ☐ Cornell's Wildlife Health Lab (2)
- ☐ National Deer Association (3)
- ☐ I did not notice (4)

How certain do you think the author of the Facebook is about CWD? (NOT INCLUDED FOR CONTROL GROUP.)

- ☐ Very certain (1)
- ☐ Somewhat certain (2)
- ☐ Neither certain nor uncertain (3)
- ☐ Somewhat uncertain (4)
- ☐ Very uncertain (5)
- ☐ I did not notice (6)

Now we're going to ask you some more questions about CWD. (NOT INCLUDED FOR CONTROL GROUP.)

How much do you disagree or agree with the following statements? (NOT INCLUDED FOR CONTROL GROUP.)

	Strongly disagree (1)	Somewhat disagree (2)	Neither agree nor disagree (3)	Somewhat agree (4)	Strongly agree (5)	I don't know (6)
Bringing back whole carcasses to NYS could contribute to the spread of CWD in NYS. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bringing back deer heads to NYS could contribute to the spread of CWD in NYS. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If CWD enters NYS the quality of deer hunting in New York will decline. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Keeping CWD outside New York State should be a high priority for DEC. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

A recent DEC regulation prohibits import of whole cervid carcasses (deer, elk, moose, and caribou) from anywhere outside New York State (only clean skull cap, antlers, and deboned meat can be brought into the state).

If NO deer hunters in New York brought in whole carcasses from other states, how effective do you believe that would be in keeping CWD outside of NY State?

- ☐ Not effective at all (1)
- ☐ Slightly effective (2)
- ☐ Moderately effective (3)
- ☐ Very effective (4)
- ☐ Unsure (5)

For the hunters I know, to **avoid** bringing in whole carcasses or deer heads would be...

- ☐ Very difficult (1)
- ☐ Somewhat difficult (2)
- ☐ Neither difficult nor easy (3)
- ☐ Somewhat easy (4)
- ☐ Very easy (5)

How effective do you think DEC's regulation will be at stopping other hunters from bringing whole carcasses into New York State?

- ☐ Not effective at all (1)
- ☐ Slightly effective (2)
- ☐ Moderately effective (3)
- ☐ Very effective (4)
- ☐ Unsure (5)

Regarding the issue of CWD, I find the NYS Department of Environmental Conservation (or National Deer Association or Cornell Wildlife Lab) to be ... (NOT INCLUDED FOR CONTROL GROUP.)

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	
Inexperienced	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Experienced
Unknowledgeable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Knowledgeable
Unqualified	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Qualified
Dishonest	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Honest
Unreliable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Reliable
Untrustworthy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Trustworthy
Have different views from me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Have similar views to me
Does not share similar beliefs as me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Share similar beliefs as me
Holds different values from me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Hold similar values as me

When I think about CWD, I feel...

	None at all (1)	A little (2)	A moderate amount (3)	A lot (4)	A great deal (5)
Hopeful (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fearful (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Angry (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sad (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Disgusted (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

APPENDIX B: TEXT FOR DIGITAL MEDIA MATERIALS IN COMMUNITY PILOT TESTS

In the text below, underlined material was included in the “justification” versions, but not in the versions that had “no justification.”

YouTube Videos

The text in each video was spoken by either a staff member of DEC or the Cornell University Wildlife Health Lab. Segments of the video alternated between the individual speaking or still images.

Video 1: What is CWD?

- Chronic wasting disease, or CWD, is a disease that kills deer and moose.
- It’s contagious and has spread widely in North America over the last decade. It’s already found in states and provinces bordering New York.
- Hunters could bring it to New York if they aren’t careful.
- Because it’s almost impossible to eliminate, keeping it out of New York is the best strategy.
- NY hunters need to help to keep it out.
- Debone your harvest if you hunt outside New York. Avoid natural urine products.
- TEXT IN LINK SUPERIMPOSED ON VIDEO AT END: Find out how YOU can keep New York CWD-free.

Video 2: How would CWD affect deer hunting in New York?

- The spread of CWD into New York would threaten deer populations and change deer hunting.
- Once it arrives CWD is almost impossible to eliminate.
- To contain its spread, deer populations would be reduced by hunting and culling.
- Hunting practices would have to change, including restrictions on movement and disposal of carcasses and special rules for disease management areas.
- NY hunters need to help to keep it out.
- Debone your harvest if you hunt outside New York. Avoid natural urine products.
- TEXT IN LINK SUPERIMPOSED ON VIDEO AT END: Find out how YOU can keep New York CWD-free.

Video 3: How could hunters introduce CWD to New York?

- Hunters could bring CWD to New York without realizing it.

- They could introduce CWD if they bring home deer carcasses or parts from outside New York or use natural urine products that contain CWD prions.
- NY hunters need to help to keep it out.
- Debone your harvest if you hunt outside New York. Avoid natural urine products.
- Find out how YOU can keep New York CWD-free.
- TEXT IN LINK SUPERIMPOSED ON VIDEO AT END: Find out how YOU can keep New York CWD-free.

Video 4: Don't bring back whole carcasses.

- Hunters should avoid bringing whole carcasses or intact deer heads from other states to help protect New York from CWD.
- In some parts of the U.S., up to 50% of adult bucks have been found to be infected with CWD.
- New York State prohibits bringing back whole carcasses.
- By bringing back only deboned meat, antlers, and cleaned skulls, you can help to reduce the risk of bringing back any parts containing CWD.
- TEXT IN LINK SUPERIMPOSED ON VIDEO AT END: Find out how YOU can keep New York CWD-free.

Video 5: Don't use natural scent lures.

- Hunters shouldn't use deer urine-based lures.
- These lures are made with urine from deer in captive deer facilities. If deer in those facilities are infected with CWD, these scent lures could contain the prions that cause CWD.
- Artificial or synthetic scent lures can be used by hunters with little risk of introducing CWD.
- Find out how YOU can keep New York CWD-free.
- TEXT IN LINK SUPERIMPOSED ON VIDEO AT END: Find out how YOU can keep New York CWD-free.

Video 6: Synthesis of previous videos.

- Chronic wasting disease, or CWD, is a disease that kills deer and moose.
- It's contagious and has spread widely in North America over the last decade. It's already found in states and provinces bordering New York. Hunters could bring it to New York if they aren't careful.
- The spread of CWD into New York would threaten deer populations and change deer hunting.
- Once it arrives it is almost impossible to eliminate.
- To contain its spread, deer populations would be reduced by hunting and culling.

- Hunting practices would have to change, including restrictions on movement and disposal of carcasses and special rules for disease management areas.
- Hunters could introduce CWD to New York without realizing it.
- Hunters should avoid bringing whole carcasses or intact deer heads from other states to help protect New York from CWD.
- In some parts of the U.S., up to 50% of adult bucks have been found to be infected with CWD.
- New York State prohibits bringing back whole carcasses.
- By bringing back only deboned meat, antlers, and cleaned skulls, you can help to reduce the risk of bringing back any parts containing CWD.
- Hunters also shouldn't use deer urine-based lures.
- These lures are made with urine from deer in captive deer facilities. If deer in those facilities are infected with CWD, the scent lures could contain the prions that cause CWD. These prions can remain on the landscape for 15 years or more with the ability to infect new deer.
- Artificial or synthetic scent lures can be used by hunters with little risk of introducing CWD.
- TEXT IN LINK SUPERIMPOSED ON VIDEO AT END: Find out how YOU can keep New York CWD-free.

Google CPC Ads

CWD threatens hunting in NY | Hunters can keep NY CWD-free

- CWD kills deer and moose. Hunters could bring it to New York if they aren't careful.
- Find out how you can help to keep it out.

CWD threatens hunting in NY | Hunters can keep NY CWD-free

- CWD is almost impossible to eliminate, so keeping it out of NY is the best strategy.
- Find out how you can help to keep it out.

CWD threatens hunting in NY | Hunters can keep NY CWD-free

- The arrival of CWD in New York would threaten deer populations.
- Find out how you can help to keep it out.

CWD threatens hunting in NY | Hunters can keep NY CWD-free

- Hunters could introduce CWD to New York without realizing it.
- Find out how you can help to keep it out.

CWD threatens hunting in NY | Hunters can keep NY CWD-free

- Protect our herd. Do not import whole deer carcasses.
- Only bring back boneless venison, antlers, and cleaned skulls.

CWD threatens hunting in NY | Hunters can keep NY CWD-free

- Don't use natural deer urine-based scent lures could cause CWD.
- Use artificial or synthetic alternatives.

Facebook Boosted Posts

Post 1

Chronic wasting disease, or CWD, is a disease that kills deer and moose. It's contagious and has spread widely in North America over the last decade. It's already found in states and provinces bordering New York. Hunters could bring it to New York if they aren't careful. It's almost impossible to eliminate, so keeping it out of New York is the best strategy. NY hunters need to help to keep it out. Debone your harvest if you hunt outside New York. Avoid natural urine products.

LINK FOR MORE INFORMATION: Find out how YOU can keep New York CWD-free.

Post 2

The spread of CWD into New York would threaten deer populations and change deer hunting. Once CWD arrives it is almost impossible to eliminate. To contain its spread, deer populations would be reduced by hunting and culling. Hunting practices would have to change, including restrictions on movement and disposal of carcasses and special rules for disease management areas. NY hunters need to help to keep it out. Debone your harvest if you hunt outside New York. Avoid natural urine products.

LINK FOR MORE INFORMATION: Find out how YOU can keep New York CWD-free.

Post 3

Hunters could introduce CWD to New York without realizing it. Hunters could introduce CWD if they bring home deer carcasses or parts from outside New York or use natural urine products that contain CWD prions. NY hunters need to help to keep it out. Debone your harvest if you hunt outside New York. Avoid natural urine products.

LINK FOR MORE INFORMATION: Find out how YOU can keep New York CWD-free.

Post 4

All hunters need to play a role in protecting New York State from CWD by avoiding bringing whole carcasses or intact deer heads from back other states. In some parts of the U.S., up to 50% of adult bucks have been found to be infected with CWD. CWD could be in any deer you kill outside New York, and you can't tell just by looking at it. New York State prohibits bringing back whole carcasses. By bringing back only deboned meat, antlers, and cleaned skulls, you can help to reduce the risk of bringing back any parts containing CWD.

LINK FOR MORE INFORMATION: Find out how YOU can keep New York CWD-free.

Post 5

Hunters shouldn't use deer urine-based lures. These lures are made with urine from deer in captive deer facilities. If deer in those facilities are infected with CWD, the scent lures could contain the prions that cause CWD. Artificial or synthetic scent lures can be used by hunters with little risk of introducing CWD.

LINK FOR MORE INFORMATION: Find out how YOU can keep New York CWD-free.