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2017 PARTNERSHIP FOR A DRUG-FREE NEW JERSEY (PDFNJ) STUDY

Project Title

Effects of an Intensive Dissemination Campaign on Community Knowledge, Attitudes, and Actions Regarding the Prevention of Opioid and Heroin Abuse.

Background and Research Objectives

Drug overdose is currently the leading cause of accidental death in New Jersey, and the rate of heroin overdose in the state is three times the national average. Many of those affected begin their journey to opiate addiction through legally prescribed pain medications and then move on to heroin when they are unable to afford or obtain these medications. National and local efforts to curb this major public health problem recognize that public education campaigns are needed to alert citizens in all walks of life to the problem and arm them with information that will allow them to recognize when they and their loved ones are at risk and how they should act. For over a decade, the PDFNJ has developed and implemented a comprehensive and carefully coordinated public awareness campaign that takes advantage of multiple media and community channels to disseminate messages that are tailored to various target audiences (parents, friends, teachers, school nurses, employers, and physicians among many others) to educate New Jerseyans about the risks of opioid addiction and what they can do, personally and collectively, to protect their families and communities from this devastating epidemic. The current iteration of this ongoing campaign, *Before They Prescribe - You Decide*, aims to educate parents about the link between opioid misuse and abuse and heroin addiction and urge them to ask physicians questions about the medical necessity, possible side-effects, and alternative treatments when their children are prescribed pain medications.

Recent findings from the PDFNJ-commissioned *2016 Parents' Attitudes & Behaviors Toward Drug and Alcohol Abuse Prevention Study* demonstrate that six in ten (61%) NJ parents said they saw or heard commercials or ads telling them about the risks of drug abuse at least once a week. Eight in ten parents (80%) said the ads encouraged them to talk to their children about using drugs or alcohol, and almost six in ten said the ads made them more aware of the risks of using drugs and alcohol. The study also found that most New Jersey parents (71%) believe there is a link between pain killers prescribed for things like sports injuries and wisdom teeth removal and the rising use of heroin in NJ, and 72% also know that heroin is now less expensive to obtain than prescription drugs. Perhaps most significant, virtually all parents surveyed (95%) report that they have spoken to their child about drugs and between 25-41% of all parents reported taking various actions to dispose of or safeguard prescription medication they have in their homes. While encouraging, the results also revealed a persistent gap in knowledge, attitudes, and actions between those residing in communities with high versus low incidence of opioid and heroin addiction. This suggests that parents and other adults who live in communities not yet devastated by this epidemic have lower motivation to pay attention to and process the messages of the statewide campaign and therefore may require additional targeting through an intensive outreach and dissemination effort.

The primary goal of this study was to assess the feasibility and potential efficacy of a media-intensive dissemination and outreach campaign targeting parents and other adults in a mid-sized NJ community (Scotch Plains in Union County) with low incidence of opioid and heroin addiction. The campaign utilized a combination of direct mailings to approximately 13,000 households, email blasts, and door-to-door canvasing to reach and engage community residents over a period of three weeks in June 2017. The specific objectives of this study were:

1. Assess township residents' degree of exposure to, engagement with, and recall of campaign-specific messages.
2. Estimate the scope of change, if any, in residents' knowledge, attitudes, and actions regarding opioid and heroin addiction pre and post the campaign as well as the extent to which these changes were associated with exposure to and engagement with campaign messages.
3. Explore demographic and other factors that can account for observed differences in campaign exposure and campaign effects among residents.
4. Assess the degree to which relative gains in township residents' knowledge, attitudes, and actions regarding opioid and heroin addiction post-campaign are comparable to those reported by residents of a high-incidence matched comparison community (Toms River Township in Ocean County).

Research Design and Methods

To assess the measurable effects, if any, of the intensive media campaign on knowledge, attitudes, and actions regarding opioid and heroin addiction within the low-incidence community (Scotch Plains), the study utilized a pre-post campaign research design with a high-incidence community (Toms River Township) serving as a comparison group. The pre-post campaign comparison within the low-incidence community was intended to generate an estimate of the effects of the campaign on the treated (i.e., Scotch Plains residents). The comparison of residents' knowledge, attitudes, and actions regarding opioid and heroin addiction between the low-incidence community (Scotch Plains) and the high-incidence community (Toms River) at baseline was intended to produce a benchmarked estimate of this effect (i.e., the extent that Scotch Plains' residents "catch up" to Toms River's residents following the campaign). To enhance the internal validity of the study (i.e., control for factors other than the campaign that can influence the outcomes of interest), a panel (or a sub-sample) of baseline survey participants from both communities where re-contacted post-campaign and their knowledge, attitudes, and behaviors was assessed.

Sample size calculations were performed using IBM SPSS SamplePower, and the size of the sample required to detect campaign effects (alpha = 0.05; power = 80; effect size = 0.5) was used to recruit a randomly selected sample of adults (N = 175) in each of the two matched communities (Scotch Plains and Toms River) to complete a baseline survey prior to the launch of the intensive media campaign (June 2017). The brief (10-12 minutes) phone interview was fielded by Rutgers University's Eagleton Center for Public Interest Polling (ECPIP). To draw a random sample of respondents in each community, ECPIP utilized a listed cell phone database that increases efficiency and incidence rate compared to standard random digit dial (RDD) cell samples, as well as maintains scientific validity and representativeness of the population under study. RDD landline phone sample only was also utilized to ensure the representativeness of the sample. The cell phone numbers selected were texted in accordance with Telephone Consumer Protection Act (TCPA) regulations, and each text message contained a link to an online version of the survey and a unique access code per respondent. Respondents were offered an incentive of a $10 gift card upon completion of the survey. A random sample of respondents were asked at the end of the survey if they would be willing to be re-contacted for a follow-up survey, yielding a panel of 50 respondents in each community who were interviewed post-campaign in addition to the fresh sample of respondents (N = 150) recruited to complete the post-campaign survey in the intervention community (Scotch Plains).

Appendix A includes a copy of the survey questionnaires. The baseline survey administered to the random sample of adult residents in Scotch Plains and Toms River in early June 2017 included the following questions:

1. Frequency of general exposure to information about the opioid and heroin problem in NJ from various sources (news media, PSAs, community channels, conversations with others).
2. Knowledge and beliefs regarding the risks posed by opioids prescription, including the link between opioids and heroin addiction.

3. Actions respondents have personally taken in the past 6 months to protect their family against opioid and heroin abuse (i.e., seek information from public health sources or health care provider, dispose of medicine at home and/or at a collection site, and talk to children about risks).
4. Demographic characteristics (age, gender, race/ethnicity, education, income, number of underage children in household, whether or not have pain medicine stored at home, whether or not personally know someone who is or has been addicted).

The post-implementation survey was conducted in late June, following two rounds of direct mailing and email blasts in Scotch Plains. A fresh sample of adults residing in this community was recruited to complete the survey (N = 150), in addition to the panel of respondents interviewed pre-campaign (N = 50) in both communities (Scotch Plains and Toms River). The post-campaign survey (see Appendix A) included questions about the following:

1. Specific exposure to, engagement with, and recall of campaign messages over the past 3 weeks.
2. Knowledge and beliefs regarding the risks posed by opioids prescription, including the link between opioids and heroin addiction (same as baseline).
3. Actions respondents have personally taken in the past three weeks to protect their family against opioid and heroin abuse (i.e., seek information from public health sources or health care provider, dispose of medicine at home and/or at a collection site, and talk to children about risks) (same as baseline).
4. Demographic characteristics (age, gender, race/ethnicity, education, income, number of underage children in household, whether or not have pain medicine stored at home, whether or not personally know someone who is or has been addicted).

Summary of Findings

Exposure to Information about the Opioid addiction problem. Consistent with the findings of other studies, including PDFNJ's most recent (2016) statewide parent survey, the findings of this study (see Table 2 in Appendix B) reveal that the overwhelming majority of residents in both communities (more than 85%) are regularly exposed to information about the Opioid addiction problem, both nationally and in NJ. On average, residents of Scotch Plains and Toms River see, read or hear information about the problem at least once or twice each week. Much of this information comes from national and local news media outlets, but also from social media and media ads. To a lesser extent residents receive information from their municipality and organizations in their community and from information posted in public places, and even less frequently from health care professionals (although this is likely a function of the frequency in which they visit a doctor's office or a pharmacy). Residents report that the topic of opioid addiction also frequently comes up in conversations they have with friends, neighbors, and co-workers. This suggests an already saturated information environment in both communities, although exposure to information was generally higher among residents of Toms River for virtually every information source (a statistically significant difference). There were no statistically significant differences in exposure to information about the opioid addiction problem among residents of Scotch Plains before and after the implementation of the intensive information campaign. This might have presented a challenge to the intervention as it is possible that the large amount of information already circulating in this community confounded the information PDFNJ disseminated. At the same time, this finding also confirms that this information environment was relatively stable during the implementation, and therefore that any effects, if any, observed regarding the outcomes of interest can be attributed to the intervention.

Exposure to and Evaluation of PDFNJ's Intensive Campaign. The follow up survey with a representative sample of residents in Scotch Plains also included questions that asked specifically about information received from PDFNJ via direct mailing, email blast, and/or in-person from PDFNJ's volunteers who performed door-to-door canvassing. The questions were designed to assess direct recall of information

received from PDFNJ in the past three weeks as well as recall of the messages included in the communication from PDFNJ. Overall, only 9% of all respondents (N = 152) could recall receiving information from PDFNJ, and those who did, almost exclusively recalled receiving it via direct mailing (a handful recalled receiving the information in-person and none recalled receiving the info via email). One-third of all respondents were not sure or could not remember receiving information from PDFNJ, suggesting the possibility that many more residents received the information but could not remember the source. Of those who recalled getting the information from PDFNJ, 33% said they learned new things about the opioid problem, 81% said they became more aware of the risks posed by prescription pain medication, 54.6% learned about immediate actions they can take to protect themselves and their family against the risk, 54.4% were encouraged to have conversations with their family about the topic, and 55% were influenced to think about community response to the problem. Overall then, residents who can recall receiving the information found it useful and action-motivating.

Change in Opioid-Related Knowledge and Cognitions. The data collected in this project allow to compare the level of knowledge and the distribution of key cognitions between the two comparison communities and in the intervention community (Scotch Plains) before and after the implementation of the intensive communication campaign. The results (see Table 3 in Appendix B for a summary) show that residents of Toms River were more concerned, and self-efficacious about the risks posed by opioid addiction than residents at Scotch Plains at baseline but equally knowledgeable. Thus, in comparison to their Scotch Plains counterparts, a significantly greater percentage of Toms River residents believe that the opioid problem in their community is serious or very serious (a 42% difference) and expressed concern about the problem (a 13% difference), and these differences were statistically significant. These differences appear to be associated with the fact that a greater percentage of Toms River residents report personally knowing someone who is addicted to opioids – whether a family member or a friend, a neighbor or an acquaintance, or a student in their local schools. At the same time, residents in both communities appear to be equally knowledgeable about the causes and treatment of opioid addiction (with most respondents correctly answering 5 of the 6 true/false knowledge questions). Toms River residents were also more likely on average than their Scotch Plains counterparts to indicate a higher level of self-efficacy (or confidence) to detect the symptoms of opioid addiction and help an addicted family member, and less likely to perceive that town officials are effectively addressing the problem in their community.

Despite these differences, the results show that residents of both communities generally believe they already possess the knowledge needed to protect themselves and their family against the risk of opioid addiction, including having conversations with children and asking questions when pain medicine is prescribed. They also do not appear to be very concerned about the stigma attached to opioid addiction and its potential to impede seeking and receiving treatment. This is certainly good news from a public health perspective. At the same time, this also potentially explains why no statically significant improvements in knowledge and cognitions were observed among Scotch Plains' residents before and after the implementation of the intensive communication campaign by PDFNJ.

Change in Opioid-Abuse Protective Behaviors. Table 4 (see Appendix B) summarizes findings regarding respondents' actions and experiences with prescribed pain medication. About an equal percentage of residents of both communities (24%) reported having pain medication stored in their home, and about 32% were prescribed pain medication in the past year. Of those who were prescribed pain medication, a slightly greater percentage of respondents from Tom River (18%) reported that prescribers of pain medication discussed with them the risk of opioid addiction, a statistically significant difference relative to respondents from Scotch Plains. In general, a greater percentage of respondents from Toms River reported taking any type of action to decrease the risk of addiction (seeking information on the Internet, taking inventory of pain medicine stored at home, locking medicine cabinet, disposing of pain medicine in household trash, at a collection site, flushing down a drain, and talking to a child about the risk of opioid abuse), but the difference from Scotch Plains' respondents was statistically significant only regarding the locking of a medicine cabinet and disposing of

expired or unwanted pain medication at a collection site, and talking to kids about risks of opioids. Toms River residents took on average 2 actions compared to 1.5 actions by residents of Scotch Plains. Importantly, following the implementation of the intensive communication campaign, respondents from Scotch Plains reported an average of 2 actions (catching up with Toms River residents at baseline), including a significant increase in the percentage of respondents who had a conversation with a child about the risks of opioids. This in turn is likely associated with the fact that post-campaign, a greater percentage of Scotch Plains' respondents (15% greater) correctly noted the link between risk of addiction and pain medication that is prescribed to treat a sports injury or a dental procedure. Combined with the fact that those respondents who recalled getting the information from PDFNJ were significantly more likely than those who said they did not to answer this question correctly, it seems reasonable to expect that the campaign's main contribution has been with regard to this particular information that was largely missing from the information provided by other sources. This conclusion is also consistent with evidence about this association based on analyzing the panel data, but the size of this sample was too small to meet statistical significance standards.

Conclusions and Recommendations

The findings of this study demonstrate that adult residents of both the intervention (Scotch Plains) and the comparison community (Toms River) are already exposed to a great deal of information about the opioid addiction epidemic that is circulated by multiple sources – national and local news media, social media, community channels, and interpersonal conversations. While there are significant differences in the intensity with which this information is circulating within each community and residents' personal familiarity with opioid addiction in their community (both are higher in Toms River), these differences do not appear to be strongly associated with opioid addition-relevant knowledge and perceptions, which are already high in both communities. Given this, it is unlikely that additional information dissemination efforts, intensive as they may be, can have a large impact on audiences' knowledge and motivation to engage in protective behaviors. Despite this, the results of this study show that the intensive communication campaign in Scotch Plains may have been associated with a greater percentage of residents recognizing the risk of addiction from having pain medication prescribed for sports injury or dental procedures and an increase in the number of residents who have had conversations with children about the risks of prescription pain medicine. A more conclusive evidence of campaign effects would be based on observing these associations in the panel data, but the sample is too small (5 of 50 respondents recalled getting information from PDFNJ) to support sound statistical analyses.

The findings from both communities suggest the existence of knowledge gap among residents regarding the actions taken by township officials to protect the community against the risk of addiction. Therefore this seems to be an area that cam benefit from further information efforts. Also, while about half of all respondents who were prescribed pain medication in the past year were informed about the risks of opioid addiction by the prescribing physician, the other half were not. Thus, in addition to continuing physician education about the importance of having these conversations with patients, there is room for increasing efforts to educate the public about how to bring this issue up with physicians and what specific questions to ask. Lastly, whereas this particular study did not assess respondents' familiarity with the available treatment options in their community, it found that a sizable number of respondents believe that they can detect symptoms of addiction and know what to do to help a person who is addicted. While the self-efficacy is there, it is not clear that residents know who they can turn to for help, and this information may be worthwhile distributing.

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Appendix A
Survey Instruments

Baseline Survey Questions

We are trying to find out what people know or may not know about opioids or prescription pain medications like OxyContin, Vicodin, and Codeine that are prescribed by a doctor to treat pain. To be clear, we are not asking about "over-the-counter" pain relievers such as aspirin, Tylenol, or Advil that can be bought in drug stores or grocery stores without a doctor's prescription.

1. How frequently do you read, hear or see information about addiction to prescription pain medications or heroin in: (not at all, once or twice a month, once or twice each week, daily or almost daily)
    a. National news stories
    b. Local news stories
    c. Social media like Facebook and Twitter
    d. Outdoor advertising like signs and billboards
    e. Information provided by your township
    f. Information provided by local organizations in your community (e.g., church)
    g. Information that is available in a physician office, a clinic, or a pharmacy
    h. Conversations you have with friends, neighbors, or co-workers

2. Where you prescribed pain medication within the last 12 months? (Yes, No)
    a. If yes, did the doctor provide you with information about the risk of addiction? (Yes, No)

3. Do you personally know a family member or close friend who has or had a problem with abuse of prescription pain medication or heroin? (Yes, No)

4. Do you know a neighbor or another acquaintance in your community who has or had a problem with abuse of prescription pain medication or heroin? (Yes, No)

5. Do you know of or heard about a student in your local school who has or had a problem with abuse of prescription pain medication or heroin? (Yes, No)

6. Please tell me whether you think each of the following statements is true or false? (True, False, Don't Know)
    a. Everyone who takes prescription pain medications will become addicted to them (F)
    b. People get addicted to prescription pain medicine because they lack the self-discipline to use it as it should be used (F)
    c. Only long-term use of prescription pain medicine can cause addiction (F)
    d. Prescription pain medicines are a synthetic version of heroin (T)
    e. Prescription pain medications given for sports injuries or wisdom teeth removal can lead to heroin addiction (T)
    f. There are effective treatments for prescription pain medicine and heroin addiction (T)

7. How much of a problem is addiction to prescription pain medications and/or heroin in your area? (not at all serious, only a little serious, moderately serious, very serious, or extremely serious)

8. In general, how concerned are you about prescription pain medicine or heroin addiction impacting members of your family? (Not at all concerned, a little concerned, moderately concerned, very concerned, or extremely concerned)

9. How frequently do you see or hear commercials or ads telling you what you can do to protect your family and community against prescription pain medicine and heroin addiction? (not at all, once or twice a month, once or twice each week, daily or almost daily)

10. Please tell me if you strongly disagree, disagree, unsure, agree, or strongly agree with each of the following statements:
    a. I know enough about the symptoms of addiction to prescription pain medicine or heroin to be able to tell if a family member or a close friend is at risk for addiction or is addicted.
    b. I know what to do if a family member or a close friend becomes addicted to prescription pain medicine or heroin.
    c. I am concerned about what people may think of me if they find out that a family member or a close friend of mine are addicted to prescription pain medicine or heroin.
    d. I am confident that local officials are doing everything they can to prevent and stop addiction to prescription pain medicine or heroin in our community.
    e. I believe that there are things I can personally do to prevent or stop the spread of addiction to prescription pain medicine or heroin in my community.
    f. I am well prepared to have conversations with children and others who may not be aware of the risk of getting addicted to prescription pain medicine that they are prescribed or use without a prescription.
    g. I am confident that I know what questions to ask a physician or a dentist who prescribe pain medication as part of my treatment or the treatment of a family member.

11. Do you currently have pain medicine stored in your home? (Yes, No, Not sure)

12. In the past six months, please tell me if you done any of the following: (yes, no)
    a. Searched for information on the Internet or your phone about how to safely use prescription pain medication
    b. Looked through your prescription medicines to figure out if some expired or no longer needed
    c. Locked your medicine cabinet
    d. Disposed of unused, unwanted, or expired medicine in your household trash
    e. Disposed of your unused, unwanted, or expired medicine at a local disposal site
    f. Flushed unused, unwanted, or expired medicine down a sink or drain
    g. Talked to a child about the dangers of using prescription medicine

Demographic information (age, gender, race/ethnicity, religiosity, education, income, number of children under 18 living in household)

Post-Campaign Survey Questions

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We are trying to find out what people know or may not know about opioids or prescription pain medications like OxyContin, Vicodin, and Codeine that are prescribed by a doctor to treat pain. To be clear, we are not asking about "over-the-counter" pain relievers such as aspirin, Tylenol, or Advil that can be bought in drug stores or grocery stores without a doctor's prescription.

1. How frequently do you read, hear or see information about addiction to prescription pain medications or heroin in: (not at all, once or twice a month, once or twice each week, daily or almost daily)
    a. National news stories
    b. Local news stories
    c. Social media like Facebook and Twitter
    d. Outdoor advertising like signs and billboards
    e. Information provided by your township
    f. Information provided by local organizations in your community (e.g., church)
    g. Information that is available in a physician office, a clinic, or a pharmacy
    h. Conversations you have with friends, neighbors, or co-workers

2. Where you prescribed pain medication within the last 12 months? (Yes, No)
    a. If yes, did the doctor provide you with information about the risk of addiction? (Yes, No)

3. Do you personally know a family member or close friend who has or had a problem with abuse of prescription pain medication or heroin? (Yes, No)

4. Do you know a neighbor or another acquaintance in your community who has or had a problem with abuse of prescription pain medication or heroin? (Yes, No)

5. Do you know of or heard about a student in your local school who has or had a problem with abuse of prescription pain medication or heroin? (Yes, No

6. Please tell me whether you think each of the following statements is true or false? (True, False, Don't Know)
    a. Everyone who takes prescription pain medications will become addicted to them (F)
    b. People get addicted to prescription pain medicine because they lack the self-discipline to use it as it should be used (F)
    c. Only long-term use of prescription pain medicine can cause addiction (F)
    d. Prescription pain medicines are a synthetic version of heroin (T)
    e. Prescription pain medications given for sports injuries or wisdom teeth removal can lead to heroin addiction (T)
    f. There are effective treatments for prescription pain medicine and heroin addiction (T)

7. How much of a problem is addiction to prescription pain medications and/or heroin in your area? (not at all serious, only a little serious, moderately serious, very serious, or extremely serious)

8. In general, how concerned are you about prescription pain medicine or heroin addiction impacting members of your family? (Not at all concerned, a little concerned, moderately concerned, very concerned, or extremely concerned)

9. Please tell me if you strongly disagree, disagree, unsure, agree, or strongly agree with each of the following statements:
    a. I know enough about the symptoms of addiction to prescription pain medicine or heroin to be able to tell if a family member or a close friend is at risk for addiction or is addicted.
    b. I know what to do if a family member or a close friend becomes addicted to prescription pain medicine or heroin.
    c. I am concerned about what people may think of me if they find out that a family member or a close friend of mine are addicted to prescription pain medicine or heroin.
    d. I am confident that local officials are doing everything they can to prevent and stop addiction to prescription pain medicine or heroin in our community.
    e. I believe that there are things I can personally do to prevent or stop the spread of addiction to prescription pain medicine or heroin in my community.
    f. I am well prepared to have conversations with children and others who may not be aware of the risk of getting addicted to prescription pain medicine that they are prescribed or use without a prescription.
    g. I am confident that I know what questions to ask a physician or a dentist who prescribe pain medication as part of my treatment or the treatment of a family member.

10. Do you currently have pain medicine stored in your home? (Yes, No, Not sure)

11. In the past six months, please tell me if you done any of the following: (yes, no)
    a. Searched for information on the Internet or your phone about how to safely use prescription pain medication
    b. Looked through your prescription medicines to figure out if some expired or no longer needed
    c. Locked your medicine cabinet
    d. Disposed of unused, unwanted, or expired medicine in your household trash
    e. Disposed of your unused, unwanted, or expired medicine at a local disposal site
    f. Flushed unused, unwanted, or expired medicine down a sink or drain
    g. Talked to a child about the dangers of using prescription medicine

12. In the past few weeks, do you recall getting or receiving information in your mail or email from the Partnership of a Drug Free New Jersey about things you can do to prevent prescription pain medicine or heroin addiction? (Yes, No, Not sure)

IF 12 = YES

13. Did you receive this information by mail, email, or both?

14. Did you have a chance to read this information? (Yes, No)

IF 14 = YES

15. We'd like to know if this information was useful to you. Can you please tell me if you strongly disagree, disagree, unsure, agree, or strongly agree with each of the following statements:

a. I learned new things I didn't know about prescription pain medicine and heroin addiction.
b. I was made more aware of the risks of prescription pain medicine and heroin addiction.
c. I learned about immediate actions I can take to safely dispose of prescription medicine that I no longer need or use.
d. I was encouraged to have conversations with my family about the risks of misusing prescription pain medicine.
e. It made me think about what we do as a community to stop prescription pain medicine and heroin addiction.

Demographic information (age, gender, race/ethnicity, religiosity, education, income, number of children under 18 living in household)

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Appendix B
Detail Tables

Table 1: Sample Characteristics

	Toms River (N = 175)	Scotch Plains (Pre) (N = 194)	Scotch Plains (Post) (N = 152)
Age [Mean (SD)]	47.3 (17.03)	46.5 (16.6)	42.6 (16.5)
Sex			
Males	48.6%	48.2%	41%
Females	51.4%	51.8%	58%
Race/Ethnicity			
White†	96%	76%	64.4%
Black†	2.1%	12.6%	12%
Asian†	1.4%	6.3%	4.5%
Hispanic	8.8%	7.4%	7.5%
Education			
Less than HS†	5.5%	1.5%	3.6%
HS graduate	33.7%	8.3%	12.2%
Vocational degree†	6.1%	2.6%	-
Some college†	22.7%	17.7%	24.4%
College graduate†	20.2%	33.2%	31.6%
Graduate degree†	11.7%	36.8%	27.8%
Income			
Less than $25,000†	11.3%	2.3%	9.4%
$25,000-$50,000	13.4%	10.9%	7.7%
$50,000-$75,000	19.0%	11.4%	12.5%
$75,000-$100,000†	24.6%	16.0%	16.8%
$100,000-$150,000	19.7%	18.3%	23.8%
$150,000 or more†	12.0%	41.1%	29.7%
Children ≤ 18 at Home			
None	61.3%	58.8%	57.3%
1-2	30%	34.6%	34.5%
> 2	8.7%	6.6%	8.3%
Religious Services Attendance			
At least once a week	12.6%	14.2%	20.4%
A few times a month	28.3%	24.2%	28.9%
Seldom	34.6%	36.3%	28.2%
Never	24.5%	25.3%	22.5%

†A statistically significant difference between the Toms River sample and the Scotch Plains (Pre) sample.

§A statistically significant difference between the Scotch Plains (Pre) sample and Scotch Plains (Post) sample.

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Table 2: Exposure to Information about Opioid Abuse

	Toms River (N = 175)	Scotch Plains (Pre) (N = 194)	Scotch Plains (Post) (N = 152)
National News Outlets†			
Daily or almost daily	51.8%	24.7%	36.4%
Once or twice a week	20.6%	33.7%	29.3%
Once or twice a month	21.8%	28.4%	28.3%
Local News Outlets†			
Daily or almost daily	48.5%	19.3%	26.5%
Once or twice a week	30.8%	31.3%	27.6%
Once or twice a month	14.8%	29.2%	29.5%
Social Media†§			
Daily or almost daily	45.7%	18.5%	29%
Once or twice a week	14%	25.4%	19%
Once or twice a month	11.6%	21.2%	25.4%
Outdoor Advertising†			
Daily or almost daily	25.1%	8.9%	10.2%
Once or twice a week	19.2%	16.3%	21.4%
Once or twice a month	22.2%	30%	24.6%
Information from Township†			
Daily or almost daily	14.9%	2.6%	4.1%
Once or twice a week	18.6%	5.3%	12.2%
Once or twice a month	23.6%	16.3%	17.3%
Community Organizations†			
Daily or almost daily	10.5%	3.7%	5.2%
Once or twice a week	13.6%	7.9%	10.3%
Once or twice a month	38.3%	23.7%	25.8%
Health Care Professionals†			
Daily or almost daily	15.5%	5.8%	6.2%
Once or twice a week	9.5%	6.9%	10.3%
Once or twice a month	35.7%	30.2%	34.1%
Interpersonal Conversations†			
Daily or almost daily	32.3%	6.3%	10.3%
Once or twice a week	22.8%	15.6%	15.5%
Once or twice a month	29.3%	43.2%	40.2%
Commercials or Ads†			
Daily or almost daily	35.3%	18%	17.1%
Once or twice a week	31.1%	31.4	33.6%
Once or twice a month	22.2%	29.4%	36.3%
Average Total Exposure†	2.44 (.68)	3.02 (.54)	3.1 (.57)

†A statistically significant difference between the Toms River sample and the Scotch Plains (Pre) sample.

§A statistically significant difference between the Scotch Plains (Pre) sample and Scotch Plains (Post) sample.

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Table 3: Opioid Abuse-Related Experience, Knowledge, and Perceptions

	Toms River (N = 175)	Scotch Plains (Pre) (N = 194)	Scotch Plains (Post) (N = 152)
Social Proximity to Addiction			
Family member or friend†	55.9%	36.9%	37%
Neighbor or acquaintance†	58.2%	41.8%	38%
Student in local school†	43.8%	22.7%	23%
Opioid Addiction Knowledge	4.54 (1.17)	4.6 (1.09)	4.6 (1.3)
Seriousness of Opioid problem†			
Very serious	79.3%	14.1%	12.4%
Somewhat serious	17.2%	39.8%	42.8%
Not very serious	3.5%	46.1%	44.8%
Concern about Opioid Problem†			
Very Concerned	33.1%	15.7%	14.4%
Somewhat concerned	25.3%	29.3%	26%
Not very concerned	41.6%	55%	59.6%
Self-Efficacy			
Tell symptoms of addiction†	1.90 (.93)	2.41 (1.2)	2.40 (1.2)
Help addicted family member†	2.02 (1.07)	2.33 (1.2)	2.55 (1.2)
Concerned about stigma	3.43 (1.55)	3.67 (1.4)	3.43 (1.35)
Ask prescriber right questions	1.66 (.99)	2.01 (1.1)	2.09 (1.2)
Response from local officials†	2.99 (1.33)	3.08 (1.16)	2.99 (1.14)
Response efficacy	2.69 (1.1)	2.82 (1.15)	2.80 (1.1)
Conversations with children	1.95 (1.02)	2.12 (1.12)	2.14 (1.14)

†A statistically significant difference between the Toms River sample and the Scotch Plains (Pre) sample.

§A statistically significant difference between the Scotch Plains (Pre) sample and Scotch Plains (Post) sample.

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Table 4: Drug-Abuse Preventive Behaviors

	Toms River (N = 175)	Scotch Plains (Pre) (N = 194)	Scotch Plains (Post) (N = 152)
Prescription medicine at home	23.8%	24.4%	24%
Drug Preventive Actions			
Seeking information	13.9%	12%	18.6%
Taking inventory	53.5%	45.8%	51.5%
Locked medicine cabinet†	22.5%	9.9%	13.4%
Dispose in trash	34.3%	34.2%	42.3%
Dispose at collection site†	29.2%	15.2%	21.6%
Flushed down a drain†	24%	10.5%	18.6%
Talked to child about risks§	35.9%	26.6%	41.2%
Number of preventive actions†§	2.05 (1.75)	1.5 (1.37)	2 (1.7)
Past Year Opioid Prescriptions			
None	72.9%	67.2%	69.2%
Once or twice	18.2%	26.2%	25.3%
More than twice	8.8%	6.7%	5.5%
Prescriber Discussed risk†	(n = 46)	(n = 63)	(n = 45)
Never	50%	68.3%	60%
Half of all times	10.9%	12.7%	19.9%
All or more than half of times	39.1%	19%	20.1%

†A statistically significant difference between the Toms River sample and the Scotch Plains (Pre) sample.

§A statistically significant difference between the Scotch Plains (Pre) sample and Scotch Plains (Post) sample.