FDA DOCUMENTATION FOR THE GENERIC CLEARANCE OF REQUEST FOR DATA TO SUPPORT SOCIAL AND BEHAVIORAL RESEARCH (0910-0847)

TITLE OF INFORMATION COLLECTION: Accuracy of Opioid Product Ascertainment (Inflexxion Task Order #5, Aim 2)

DESCRIPTION OF THIS SPECIFIC COLLECTION

1. Statement of Need:

Data on the use and misuse of prescription opioids are frequently collected via self-report (Substance Abuse and Mental Health Services Administration, 2019). However, a variety of respondent characteristics and situational factors can affect the validity of self-reported use of prescription opioids (Del Boca and Noll, 2000; Smith, Rosenblum, Parrino, Fong, and Salvatore, 2010). Additionally, data on the use of opioid products have often been grouped under the broader category of opioids or at the level of active pharmaceutical ingredient (e.g., hydrocodone), rather than grouped product-specifically (e.g., Vicodin). Having accurate product-specific information about opioid use would be helpful for determining whether pharmaceutical interventions, such as abuse-deterrent formulations of prescription opioids or other intervention efforts, are effective in reducing the rates of abuse of specific products.

A small study by Smith and colleagues (2010) provided some evidence, supporting the use of photographs as a valid strategy for identifying opioid products and reporting use. However, more research is needed to determine the accuracy of self-report in opioid product ascertainment; the role of product brand names, active pharmaceutical ingredients, slang terms, and photos in identifying products; and the overarching strategies used to identify products.

The purpose of this study is to assess the accuracy of opioid product ascertainment, among patients undergoing treatment for substance abuse. Thus, this study will use a within-subjects experimental design to examine whether the accuracy of patient identification of opioid products varies, depending on the information provided about the product (e.g., product name, only, versus product name and active ingredient versus photo, only). Additionally, we will investigate individual patient characteristics that affect the accuracy of opioid product ascertainment. Finally, we will examine decision-making and strategies used to identify opioid products via brief cognitive interviews with patients.

Specifically, the primary objectives of this study are to:

- Assess the accuracy of opioid product ascertainment among patients in treatment programs for substance abuse.
- Determine the influence of photographs on the accuracy of opioid product ascertainment.

- Evaluate the impact of nonspecific product endorsements (e.g., by active pharmaceutical ingredient) and potential analytic approaches to account for nonspecific data.

- Identify factors that affect the accuracy of opioid product ascertainment and strategies employed in the identification of opioid products.

2. Intended Use of Information:

These data will be used to inform methods employed in real-world data collection systems, regarding prescription drug abuse, misuse, and diversions. Specifically, the data will inform methods employed in the Addiction Severity Index-Multimedia Version (ASI-MV), which is used to study individuals evaluated for substance abuse and treatment planning.

3. Description of Respondents:

Respondents will be recruited from substance abuse treatment centers to participate voluntarily in this study. Their treatment will not be dependent upon their participation, and participation will not impact their treatment. Respondents must:

a. Be 18 years of age or older.

b. Be able to read English.

c. Report past 30-day abuse of at least one prescription opioid intended for the treatment of pain (e.g., any prescription opioid which contains hydrocodone, hydromorphone, oxycodone, oxymorphone, morphine, or tapentadol).

d. Not be experiencing cognitive or physical symptoms, due to drug use (e.g., currently high) or the stage of treatment (e.g., withdrawal), that may affect their ability to understand study procedures, provide informed consent, and complete a 45-minute questionnaire.

e. Have no prior experience working in a medical or health-related field.

4. Date(s) to Be Conducted:

As soon as OMB PRA approval is obtained. The anticipated launch will be upon approval.

5. How the Information Is Being Collected:

a. Respondents will participate via a secure video conference portal. Trained study personnel will explain the study and gather informed consent.

b. Following informed consent, respondents will independently complete the study exercises, via an online portal. These exercises are intended to evaluate the respondents' ability to accurately identify different prescription opioid products, using brand names, active ingredients, photographs, and slang terms. Other demographic and respondent characteristic information will be collected as well to further evaluate potential differences between respondents, which impact accuracy scores.

c. After completion of the independent online exercises, study staff will conduct a qualitative interview, via video conference, to further explore the decision-making process and how respondents identify prescription opioid products.

6. Confidentiality of Respondents:

Human subject protection of confidentiality is important and will be maintained through several careful measures. Respondents will be encouraged to participate in a private location. The study visit will be conducted, using a secure videoconference portal and secure private physical location of the study staff, when performing the interviews. Documentation of study recruitment and scheduling will be stored separate from the data collected, during the study. The study dataset will not contain any identifiable information.

7. Amount and Justification for Any Proposed Incentive:

Respondents will receive a $25 visa gift card for their participation in the study. Participation time is expected to be 60 minutes. This amount of compensation is appropriate for the effort required to complete the study.

8. Questions of a Sensitive Nature:

Respondents will be asked questions about their history of substance use, which may be viewed as sensitive in nature.

9. Description of Statistical Methods:

a. As a first step, we will produce descriptive statistics for continuous variables (i.e., means, standard deviations, medians, quartiles, and frequencies) and categorical variables (i.e., frequencies and percentages). For composite measures, we will assess internal consistency, among the items for each measure, using Cronbach's alpha as our metric. For scales that fail to meet our threshold of 0.75, we will examine whether dropping items will improve reliability or use a single-item measure.

b. We will conduct a content analysis of responses to the open-ended questions to classify responses as either correctly or incorrectly identifying the product shown in each free-recall exercise. We will develop a codebook that captures whether the answers provided constitute correct ascertainment for each product and the degree to which answers are correct. For example, we will capture whether

participants correctly identified the brand name (if applicable), the active ingredient, the time release formulation, and the street or slang name.

c. To understand the effect of stimuli and exercises on product ascertainment, repeated measures will be conducted on each participant. Whenever within-subject factors are used in an experiment, the statistical methods need to adjust for data-correlated errors that are likely to arise, due to multiple measurements made on the same subject. Hierarchal models or mixed models will be used to analyze and account for variability among participants and within participants from measure to measure.

d. Since our primary outcome measure is dichotomous, we will conduct a multilevel mixed-effects logistic regression. In this model, correct ascertainment is the outcome and is measured at level 1 (i.e., the ascertainment exercise level). The main predictors of interest also occur at Level 1 and relate to the type of measure (free-recall, product list, product list with active ingredient option, active ingredient list, or photograph). See protocol for detailed methods and algorithms.

   Assuming repeated measures over 96 participants, with each participant answering questions for 8 product names, and 5 types of ascertainment measures per participant and product name in a multilevel design with crossed random effects (i.e., participants and drug products are nested in 4 blocks with 24 participants and 8 products, per block), the study will have 80% power at $\alpha = 0.05$ to detect medium-small main effects by type of ascertainment measure ($d = 0.41$). The design has considerable flexibility if we need to revise assumptions to include fewer participants. For example, with only 48 participants and all other assumptions held constant, the study would still be sensitive to detect conventionally medium-sized effects ($d = 0.47$).

e. We will use a thematic and iterative approach for analyzing the interview data gathered from all participants who complete the interview. These will be the same participants as those included in the main analyses, described above. This qualitative method involves identifying, analyzing, and reporting patterns or "themes," within data, that are specific to decision-making and identification of prescription opioid products.

BURDEN HOUR COMPUTATION: (*Number of responses (X) estimated response or participation time in minutes (/60) = annual burden hours):*

Type/Category of Respondent	No. of Respondents	Participation Time (minutes)	Burden (hours)
Online exercise completion	96	45 minutes	72 hours
Qualitative interview	96	15 minutes	24 hours
Total	**96**	**60 minutes**	**96 hours**

REQUESTED APPROVAL DATE: May, 2021.

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