



PAIN INSIGHTS INC
PROVIDING RESEARCH SOLUTIONS ACROSS THE PAIN SPECTRUM

***Hydrocodone:
Rescheduled, Repositioned, & Reinvented***
The Impact of Rescheduling, Zohydro™ ER, and Abuse-deterrent Formulations

***Table of Contents, Report Flow, and Respondent Characteristics
October, 2014***

***Conducted by
Pain Insights, Inc.***

4 Edison Place
Fairfield, NJ 07004



Report Outline

- ▶ **Introduction/Objectives (4-5)**
- ▶ **Historical Background on Hydrocodone Rescheduling (6-9)**
- ▶ **Methodology (10-11)**
- ▶ **Practice Characteristics (12)**
- ▶ **Executive Summary (13-39)**
- ▶ **Conclusions (40-52)**
- ▶ **Detailed Findings (53-154)**
 - **Current Prescribing Environment (54-65)**
 - **Reaction to a Product Description of Xartemis™ XR (66-71)**
 - **Reaction to a Product Description of Zohydro™ ER (72-85)**
 - **Reaction to the Potential Rescheduling of Hydrocodone Combinations (86-137)**
 - Overall Impressions of Rescheduling (87-99)
 - Comparison of Alternative Analgesics vs. Hydrocodone Combinations (100-104)
 - Impact of Rescheduling Hydrocodone Combinations on Prescribing of Analgesics for Acute Pain (105-114)
 - Impact of Rescheduling Hydrocodone Combinations on Prescribing of Analgesics for Chronic Pain (115-125)
 - Attitudinal Assessments of the Consequences of Rescheduling Hydrocodone Combinations/Potential Practice Implications (126-133)
 - Reaction to Key Initiatives to Reduce Opioid Abuse and Overdoses (134-137)



Report Outline

- ▶ **Next 100 Moderate-to-Severe Patients with Acute Pain Treated with Opioids - After Rescheduling (138)**
- ▶ **Reaction to a Product Description of an Abuse-deterrent, Extended-release Hydrocodone [Product A] (139-145)**
- ▶ **Treatment of Chronic Pain with Opioids after Rescheduling and the Introduction of Product A - Next 100 Moderate-to-Severe Patients with Chronic Pain Treated with Opioids (146-147)**
- ▶ **Reaction to a Product Description of Evzio™ (148-154)**
- ▶ **Addendum (155-165)**
 - Survey Outline/Question Flow
 - Practice/Patient Impact of Rescheduling Hydrocodone Combinations
 - Attitudinal Assessments Regarding Potential Benefits and Concerns Associated with the Rescheduling Decision
 - Excerpts from Position Statements of Leading Medical/Pain Associations
 - About Pain Insights, Inc.

This study was conducted for potential clients of Pain Insights, Inc. and is intended for the sole use of said clients; any reproduction, in any manner, by organizations who are not clients of Pain Insights, Inc., without the express written consent of Pain Insights, Inc. is prohibited. The observations and conclusions developed in this report are the result of Pain Insights' analysis of survey responses and information that is generally available to the public. References to specific products or companies are derived from survey responses or publically available information. Product descriptions researched in this study were developed by Pain Insights, Inc. without direct input from companies who have ownership of the researched products. All statements are believed to depict the true intent of the sources used in this report and Pain Insights, Inc. has employed honest and unbiased thinking to best represent the data. Pain Insights, Inc. does not assume any liability for the accuracy or completeness of the information contained in this publication and does not accept or assume any liability for any consequences of actions taken as a result of the information contained in this publication.



Introduction

- ▶ The moderate-to-severe pain market is in the midst of a transformation due to the rescheduling judgment affecting hydrocodone combination products (HCPs), along with the introduction of several new immediate-release and extended-release opioid products
 - On August 22, 2014 the FDA published notice of its decision to reschedule hydrocodone combination products from Schedule III to Schedule II, effective 45 days from the announcement
- ▶ In anticipation of the rescheduling decision, this study was fielded by Pain Insights, Inc. in July 2014 among 236 healthcare practitioners prescribing hydrocodone combinations
 - Respondents were informed of the possibility of rescheduling and provided feedback regarding their reaction to this decision and future prescribing intent for HCPs under a CII status
- ▶ The primary focus of the study was to characterize the dynamics involved in the prescribing of opioids for moderate-to-severe pain, with a focus on HCPs, the most frequently prescribed opioid in the United States with over 129 million prescriptions for hydrocodone combination products dispensed in 2013 (IMSHealth™)
 - Practitioners shared the extent of the impact on their prescribing of HCPs, identified alternative products they would use, including anticipated shares, and provided attitudinal assessments regarding potential benefits and concerns associated with the rescheduling decision



Introduction

- ▶ Additional avenues of investigation included the assessment of new products impacting the moderate-to-severe pain landscape, especially important with the rescheduling decision for HCPs:
 - Reactions to recent new product introductions, including Xartemis™ XR and Zohydro™ ER, were obtained
 - Xartemis XR is the only oxycodone/acetaminophen combination product incorporating both immediate- and extended-release properties; Xartemis XR is marketed by Mallinckrodt and was introduced March, 2014
 - Zohydro ER is the first extended-release hydrocodone product; Zohydro ER is marketed by Zogenix and was introduced March, 2014
 - In addition, reaction to the concept of an extended-release hydrocodone with abuse-deterrent properties was reviewed; several companies, including Zogenix, Purdue Pharma, and Teva are developing extended-release hydrocodone products employing abuse-deterrent technologies
 - Availability of these agents is anticipated to begin within the next 12 months

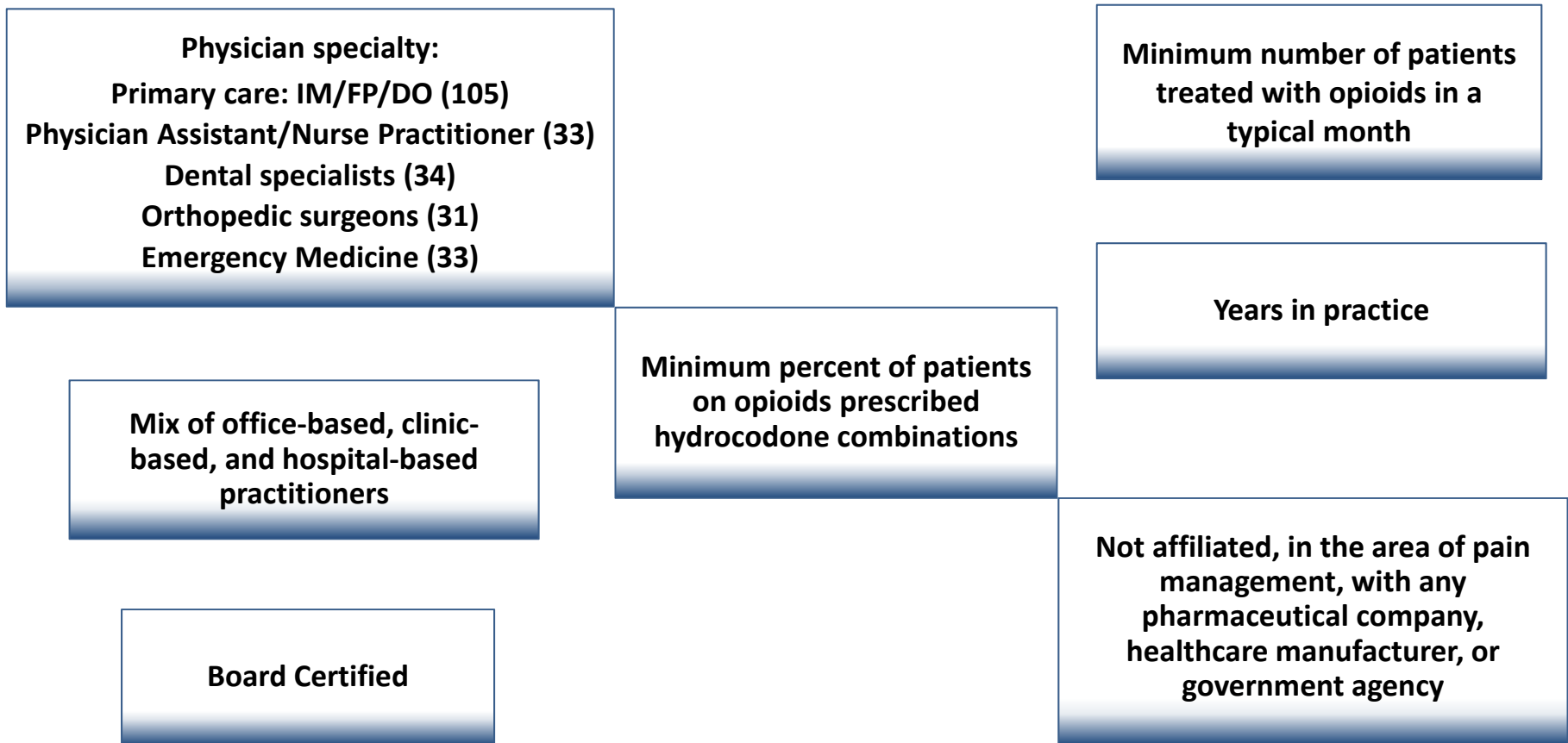
▶ ***The principals at Pain Insights, Inc. have been studying the prescribing patterns of hydrocodone combinations for approximately 25 years and have constructed this important multi-client study in a manner consistent with customized market research***



Methodology

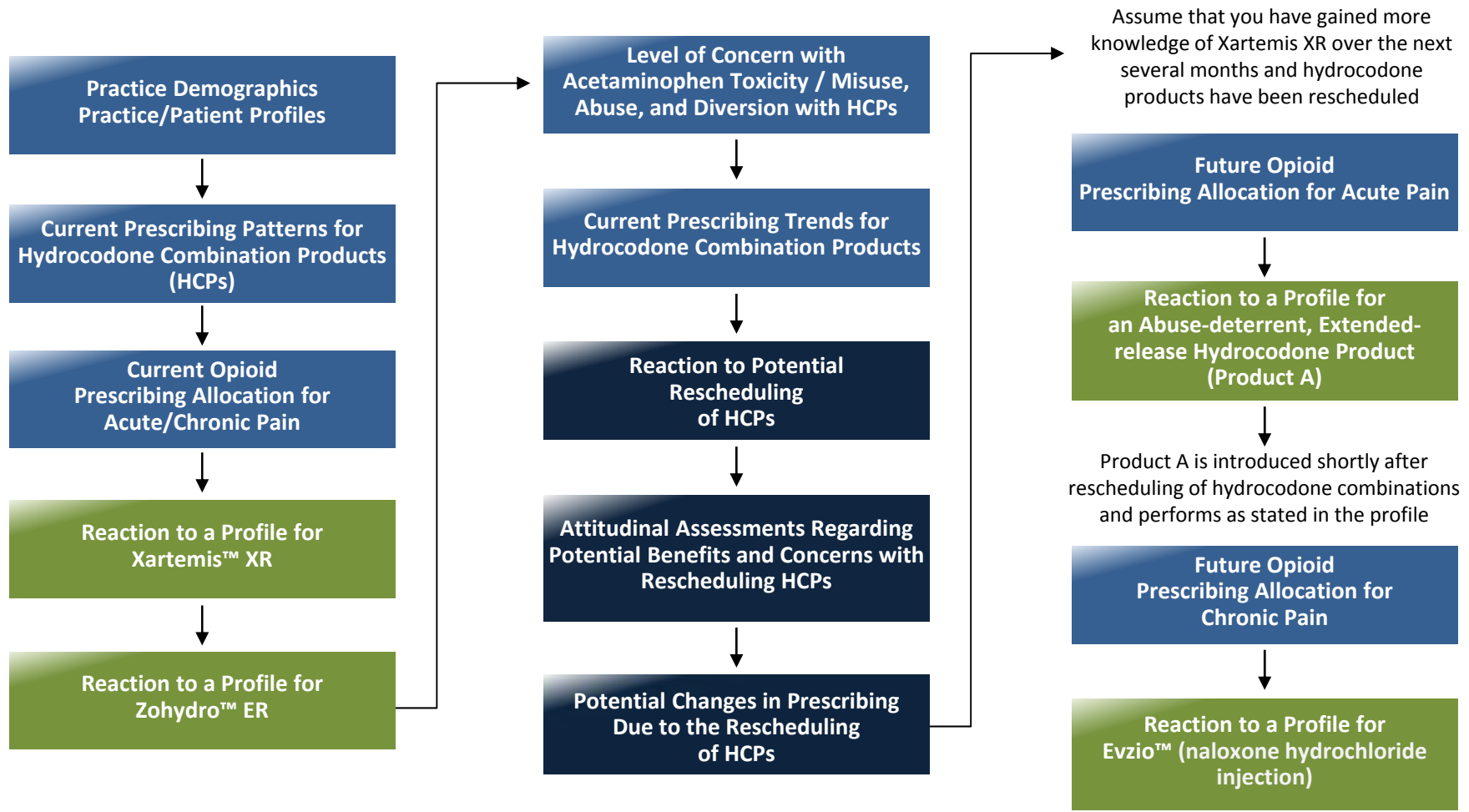
- ▶ An internet-based survey (average length: 30 minutes) was completed in August 2014 among 236 practitioners to obtain their perspectives on issues affecting the hydrocodone market

Key Screening Criteria:





Survey Flow





Practice Characteristics

Participant Practice Characteristics	
Years in practice:	16.5 (Physicians/Surgeons/ Dental specialists) 14.8 (PAs/NPs)
Primary practice location:	Office based: 62% Clinic: 16% Hospital: 22%
Number of patients treated with opioids in a typical month:	97
Percent of patients treated with opioids receiving hydrocodone/combinations:	64%
Percent of patients taking opioids with acute and chronic pain: <ul style="list-style-type: none"> • Acute pain * • Intermittent chronic • Chronic pain 	50% 23% 27%
* Influenced by dental specialists (69%), emergency medicine physicians (68%), and orthopedic surgeons (67%)	
Percent of patients taking opioids with mild, moderate, or severe pain: <ul style="list-style-type: none"> • Mild • Moderate • Severe 	14% 42% 44%
Percent of patients taking opioid analgesics that are new vs. those receiving continued therapy: <ul style="list-style-type: none"> • New * • Continued therapy 	43% 57%
* Influenced by emergency medicine physicians (75%) , dental specialists (71%), and orthopedic surgeons (53%)	



About Pain Insights, Inc.

- ▶ Pain Insights, Inc. is a full service marketing research and strategic planning firm established in 2001. We are the only firm to provide qualitative and quantitative market research, forecasting support, and strategic/marketing consultation exclusively in the area of pain management.
- ▶ We have conducted hundreds of studies focused on pain for clients ranging from large pharma to developmental companies to private investment firms. Studies have included market landscapes, opportunity assessments, new product evaluations, positioning development, promotion/educational program testing, and patient research, among others.
- ▶ The principals each have more than 25 years of experience in the pain management area.
- ▶ A differentiating feature of Pain Insights is that the principals are intricately involved in all phases of every project, from initial study design, through information collection, data analysis and authoring of all reports, with actionable recommendations.
- ▶ This level of total involvement is enhanced by the breadth of experience and pain market acumen that we bring and apply to each and every study assigned to us.

Mailing Address:

- ▶ Pain Insights, Inc.
4 Edison Place
Fairfield, NJ 07004

Principals:

- ▶ William Kolek
President
- ▶ Robert Catuosco
Vice President

Email:

- ▶ William Kolek: wk@paininsights.com
- ▶ Robert Catuosco: rc@paininsights.com

Phone: (973) 808-1147

Cell: (908) 672-6631

Fax: (973) 575-9175