

**Summer Training at
Aareen Healthcare Pvt Ltd., Ludhiana
(April 3 to June 2, 2017)**

**Study on the Prescription Habits of Orthopedic Doctors Towards Pain
Management**

**By
Varun Chhabra**

**Under the guidance of
Mr. Rahul Sharma**

**MBA Pharmaceutical Management
2016-2018**

The logo for IIHMR University, featuring a stylized 'i' in a purple square followed by the text 'IIHMR UNIVERSITY' in a serif font, with 'UNIVERSITY' in a smaller font size.
School of Pharmaceutical Management
The IIHMR University, Jaipur
2017

CERTIFICATE

This is to certify that **Mr. Varun Chhabra** has undergone summer training in **Aareen Healthcare Pvt. Ltd., Ludhiana** from 15th April to 13th June 2017.

The candidate himself completed the project assign to his during summer training. His approach to the project was sincere and proactive. This summer training is in partial fulfillment of the course requirement recommended for the award of MBA in Pharmaceutical Management.

I wish him success in all his future endeavors.



Col. (Dr.) Ashok Kaushik

Dean (Academic & Student Affair

The IIHMR University, Jaipur



Mr. Rahul Sharma

Assistant Professor

The IIHMR University

Ref. No.....

Dated.....

Date- June 19, 2017

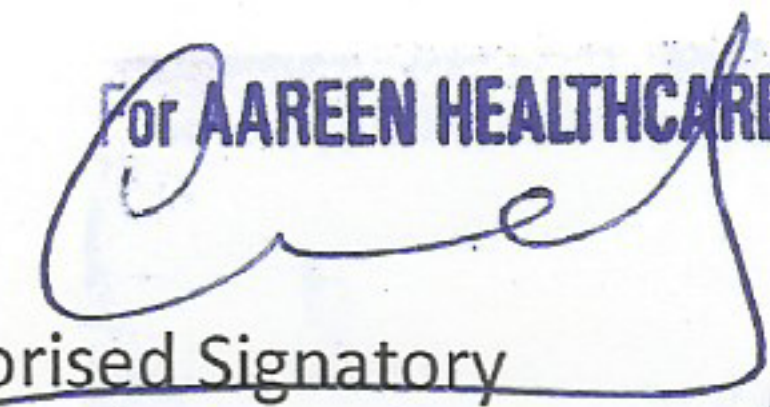
To Whom It May Concern

This is to certify that Mr. Varun Chhabra S/O Mr. Krishan Lal Chhabra student of The IIMR University, Jaipur has successfully completed his internship (from 15th April, 2017 to 13th June, 2017) at this organization which is a part of his course curriculum in MBA (Pharmaceutical management).

During the period of his internship, his association with us was found to be punctual, hardworking and inquisitive.

We wish him every success in his life and career.

For AAREEN HEALTHCARE PVT LTD.


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Authorised Signatory **Auth. Sign.**

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2 ACKNOWLEDGEMENT

I have taken efforts in this project.” However, it would not have been possible without the kind support and help of Aareen healthcare pvt ltd., Our institute, project guide and colleagues. I would like to extend our sincere thanks to all of them”.

i would also like to extend our gratitude towards my university guide Mr. rahul sharma, Asst. Professor, School of Pharmaceutical Management, The IIHMR University who helped me throughout the project.

My thanks and appreciations also go to our colleagues, and students of MBA PM 08 who have willingly supported us throughout the project.

Varun Chhabra

3 ABOUT ORGANIZATION

Aareen was started with a mission to fill the gaps in quality and innovation. Over the years with the efforts it has been trying sincerely to fill the gap with innovative & quality products. It started the journey in 2007 with 5 products and today it has become a company with 60 products diversified in various therapeutic segments.

Aareen aspires to be the Best Pharmaceuticals Company of the Nation, with an unparalleled reputation on the benchmarks of quality, consistency & novelty. It strives for customer satisfaction, quality products & best management practices. Aareen brings difference in Pharma industry by adding values innovatively. It is innovative in its formulations, packaging & designing.

3.1 VISION:

To achieve the reputation of best pharmaceutical company in India.

3.2 MISSION:

To serve consistently with best quality products & launch innovative formulations. To be recognised as a company who is “Always Ahead in Care”.

4 INTRODUCTION

Pain: An unpleasant sensation that can range from mild, localized discomfort to agony. “Pain has both physical and emotional components. The physical part of pain results from nerve stimulation. Pain may be contained to a discrete area, as in an injury, or it can be more diffuse, as in disorders like fibromyalgia. Pain is mediated by specific nerve fibers that carry the pain impulses to the brain” where their conscious appreciation may be modified by many factors.

“Pain is an unpleasant sensory and emotional experience that is associated with actual or potential tissue damage or described in such terms.”

Defining Pain

Pain is a perception that signals the individual that tissue damage has occurred or may be occurring. It is subjective and very complex. The processes in the body that are involved in the perception of pain are called "nociception." Basic and clinical research during the past 50 years has confirmed that there are many mechanisms involved in nociception.”

Classifying Pain

“Pain is either "acute" or "chronic." Acute pain stays for a short time, or is expected to be over soon. The time varies from fraction of seconds to weeks.”

“Chronic pain may be defined as pain that lasts beyond the healing of an injury, continues for a period of several months or longer, or occurs frequently for at least months.”

“To develop the best treatment strategies, health care professionals also classify pain based on its characteristics, its cause, or the mechanisms in the body or the mind that are probably involved in sustaining it. One common classification based on mechanisms distinguishes pain into categories” called "nociceptive," "neuropathic," and "psychogenic."

Types of Pain

“Nociceptive Pain: “Nociceptive pain is caused by the activation of pain receptors in either the surfaces or deep tissues of the body”. There are two types: "somatic" pain and " visceral" pain.”

"Somatic" pain “is caused by injury to skin, muscles, bone, joint, and connective tissues. Deep somatic pain is usually described as dull or aching, and localized in one area. Somatic pain from injury to the skin or the tissues just below it often is sharper and may have a burning or pricking quality.”

“Somatic pain often involves inflammation of injured tissue. Although inflammation is a normal response of the body to injury, and is essential for healing, inflammation that does not disappear with time can result in a chronically painful disease. The joint pain caused by rheumatoid arthritis may be considered an example of this type of somatic nociceptive pain.””

"Visceral" pain “refers to pain that originates from ongoing injury to the internal organs or the tissues that support them.”

Neuropathic Pain: “Neuropathic pain is believed to be caused by changes in the nervous system that sustain pain even after an injury heals. In most cases, the injury that starts the pain involves the peripheral nerves or the central nervous system itself. It can be associated with trauma or with many different types of diseases, such as diabetes.”

Psychogenic Pain: “Most patients with chronic pain have some degree of psychological disturbance. "Psychogenic" pain is a simple label for all kinds of pain that can be best explained by psychological problems.”

“This close relationship between pain and psychological distress means that all patients with chronic pain should have an assessment of these psychological factors, and psychological treatments should be considered an important aspect of pain therapy.” In many cases, “psychological problems appear to be a main cause of the pain. This does not mean that the person is not actually experiencing the pain. Rather, the patient is truly suffering but the main cause somehow relates to the emotions, or to learning, or to some other psychological process.”

“Although doctors sometimes encounter patients who pretend to be in pain (some can be called malingerers), this appears to be a rare occurrence.”

1. “There are so many different brands in market which are available and doctors are prescribing these brands every day in their prescriptions, pain killers have been regularly prescribed from many orthopedicians and physicians”
2. “Pain relievers are medicines that reduce or relieve headaches, sore muscles, arthritis, or other aches and pains. There are many different pain medicines, and each one has advantages and risks. Some types of

pain respond better to certain medicines than others. Each person may also have a slightly different response to a pain reliever.”

3.“If OTC medicines don't relieve your pain, your doctor may prescribe something stronger. Many NSAIDs are also available at higher prescription doses. The most powerful pain relievers are opioids. They are very effective, but they can sometimes have serious side effects. There is also a risk of addiction. Because of the risks, you must use them only under a doctor's supervision.” (Pain Relievers)

NSAIDs

Characterstics of NSAIDs:

- “Cause relief of pain - analgesic”
 - “Suppress the signs and symptoms of inflammation.”
 - “Exert antipyretic action.”
 - “Useful in pain related to inflammation.”
-

Classification of NSAIDs

- Salicylates:** Aspirin, Sodium salicylate
 - Propionic Acid derivatives:** Ibuprofen, ketoprofen, naproxen.
 - Aryl acetic acid derivatives:** diclofenac, ketorolac
 - Indole derivatives:** Indomethacin
 - Alkanones:** Nabumetone.
 - Oxicams:** Piroxicam, Tenoxicam
 - Anthranilic Acid derivatives:** Mefenamic acid and Flufenamic Acid.
 - Pyrazolone derivatives:** Phenylbutazone, Oxyphenbutazone.
 - Aniline derivatives:** Paracetamol²
-

5 SCOPE OF PROJECT

Pain is an unpleasant sensory and emotional experience that is associated with actual or potential tissue damage or described in such terms. "Pain can be "acute" or "chronic." "Acute pain lasts a short time, or is expected to be over soon. The time frame may be as brief as seconds or as long as weeks. Chronic pain may be defined as pain that lasts beyond the healing of an injury, continues for a period of several months or longer, or occurs frequently for at least months." The NSAIDS are most common drugs used as pain killer in clinical settings. The NSAIDS vary according to safety and efficacy profile. The most common prescribed and the drug with the highest safety and efficacy profile is Aceclofenac. The present study is designed to assess the attitude of orthopaedic doctors for choosing a particular brand and how we can correlate this assessment for new product introduction in the market.

PROBLEM STATEMENT:

Why doctors are prescribing particular brand and what are the future perspectives of the molecule?

PROBLEM JUSTIFICATION:

As the most preferred brand will be known, we can analyze different statements why this brand is preferred, after knowing its core competency we can use this data for the introduction of the new molecule in the market.

RESEARCH QUESTION?

Which is the most preferred brand in pain killer segment of the market prescribed by orthopedic Doctors?

6 RESEARCH OBJECTIVES

- To assess the attitude of Orthopedic Doctors towards different “molecules and their brands of non-steroidal anti-inflammatory drugs”.

- To explore the most common types of pain as per Orthopedic doctors.

7 RESEARCH METHODOLOGY

Study design

Descriptive study

Sampling

Quota sampling

Sample population

Orthopedic Doctors

Sample area

Ludhiana, Punjab

Sample size

100 Doctors

Data type

Primary data

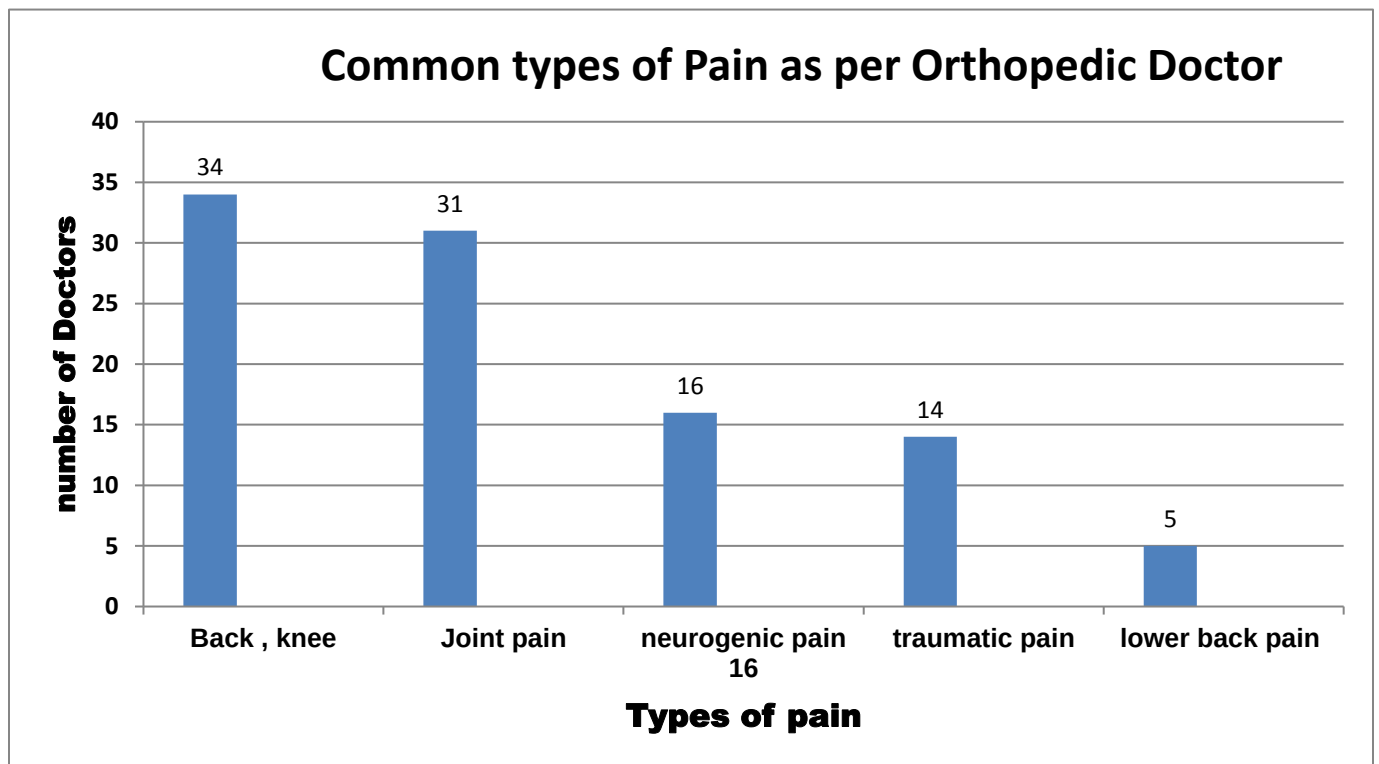
Software for Analysis

Microsoft Excel

Collection of Data – Primary Data – The primary data for this project was gathered through survey using a structured questionnaire.

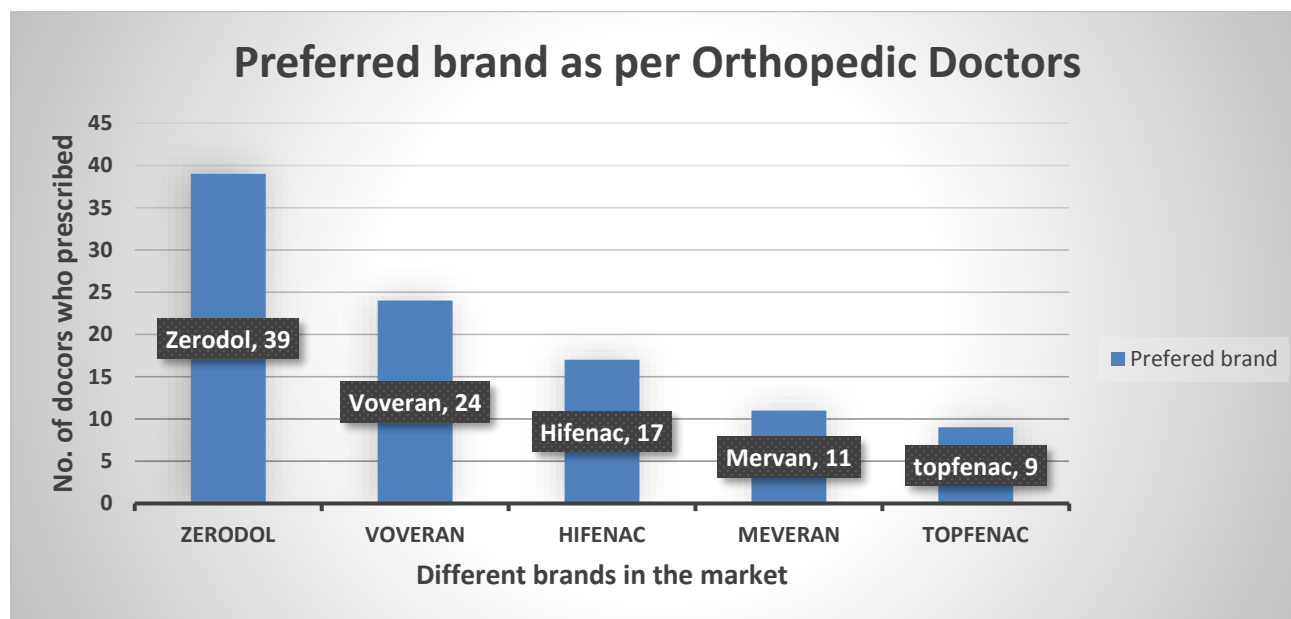
8 FINDINGS AND INTERPRETATIONS

1. What are the common types of pain you treat daily?



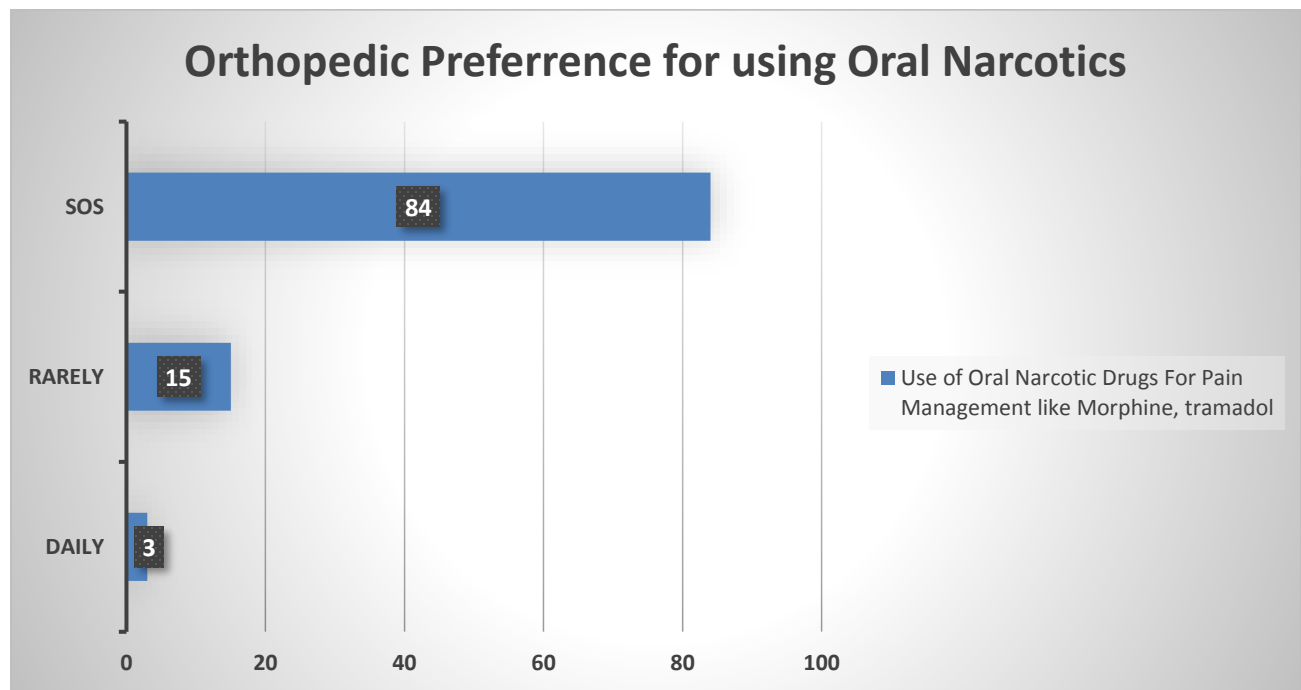
- ☐ It was found that Back & knee pain are the most commonly found pain arising amongst patients.

2. When you prescribe Aceclofenac and its combination, Which brand comes on top of your mind?



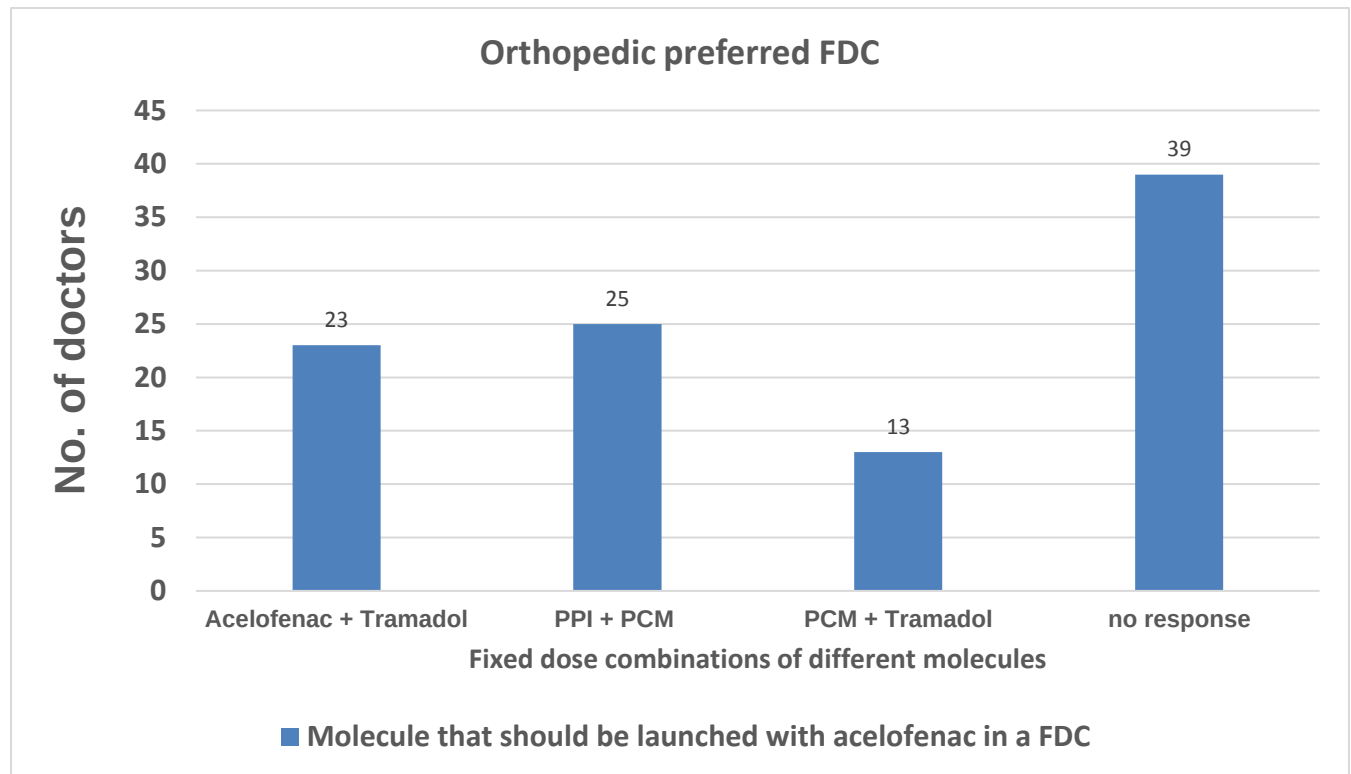
☐ It was found that Zerodol was the most preferred brand used for the treatment of pain.

3. How often do you use Oral Narcotic drugs for Pain Management like Morphine, Buprenorphine, or Tramadol etc.?



- It was found that Doctors don't prescribe Narcotics on the daily basis. It is prescribed only with the valid prescription **as and when required.**

4. Which molecule should be launched in India with Aceclofenac in a fixed dose combination?



- It was found that special emphasis should be given to the combination of Proton Pump inhibitor with paracetamol to be launched in India with Aceclofenac in a Fixed dose combination

9 AUTHOR'S SUGGESTION

- Promote the Brands in the interior where the demand is high and supply.
- Focus on the interpersonal relationship between the Top Hierarchy and the field employees.
- Cognitive approach towards the Medical Representatives.
- Regular visits at Dr. Clinic or at the Hospitals.
- Focus should also be brought on the Promotional Strategies of different Companies.
- Availability of Aareen Products in the Market.
- Continuous Medical Education (CME) Programme should be conducted for the Doctors for Marketing of the product

10 CONCLUSION

- Zerodol is the most preferred brand used for the treatment of pain.
- Special emphasis should be given to the combination of Proton Pump inhibitor with paracetamol to be launched in India with Aceclofenac in a Fixed dose combination.
- Doctors don't prescribe Narcotics on the daily basis. It is prescribed only with the valid prescription as and when required.
- The survey conducted on different types of pain showed that Back & knee pain are the most commonly found pain arising amongst patients.

11 REFERENCES:

1.<http://www.healingchronicpain.org/introduction/definitions>

2.<http://gmch.gov.in/e-study/e%20lectures/pharmacology/NON%20STEROIDAL%20.pdf>

12 ANNEXURE

Name: _____ Dr.

No. of years of practice _____

State: _____

City: _____

Q1. How many patients you see daily are suffering from any type of pain out of 10 patients?

Q2. What are the common types of pain you treat daily?

1.

2.

3.

Q3. What is your preferred brand and molecule in pain management?

Brand Name	Molecule/Combinations	Reason

Q4. How often do you use Oral Narcotic drugs for Pain Management like Morphine, Buprenorphine, or Tramadol etc. ?

- ☐ Daily
- ☐ Rarely
- ☐ SOS

Q5. According to Safety and Efficacy Profile, how will you rank these molecules?

- ☐ Aceclofenac
- ☐ Diclofenac
- ☐ Eterocoxib

- ☐ Etodolac
- ☐ Pioroxicam

Q6. In Post-Surgical Pain Management, Which is your preferred molecule and reason for that. ?

Aceclofenac + Paracetamol	Aceclofenac + Paracetamol + Serratiopeptidase

Q7. When you prescribe Aceclofenac and its combination, Which brand comes on top of your mind and why?

Q8. According to you, Which pain-killer should be launched in India which has better Safety & Efficacy profile than currently available pain-killers?

1. Osteoarthritis

2. Muscular

Pain

3. General

Pain_____

Q9. What are the prospects of these molecule/products in the near future?

☐ Oxaceprol

☐ Univestin

☐ Flaxseed Extract

☐ Any other _____

Q10. Which molecule should be launched in India with Aceclofenac in a fixed dose combination?
