

**PRESCRIBING PATTERNS OF SELECTIVE AND NON-  
SELECTIVE ANTI-INFLAMMATORY DRUGS IN THE  
TREATMENT OF RHEUMATOID ARTHRITIS**

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**A research report submitted to the Faculty of Health Sciences, University of  
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## **DECLARATION**

I, Menicksha Beeka, declare that this research report is my own work. It is being submitted for the degree of Master of Science in Medicine in Pharmacotherapy in the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination at this or any other University.

.....

..... day of October 2007

## **DEDICATION**

To my family for their encouragement and my friend Dhivendran for his support throughout the research as a whole.

## ABSTRACT

All members registered on the managed care database for the chronic condition Rheumatoid Arthritis (RA), for the period 01 January 2003 to 30 June 2003, were evaluated to determine the prescribing pattern of the cyclo-oxygenase (COX) II inhibitors and non-selective non-steroidal anti-inflammatory (NSAIDs). A total of 2818 members were registered on the managed care database of the chronic condition RA and 1372 members were identified as using COX II inhibitors and 827 members were using non-steroidal anti-inflammatory (NSAIDs). The prescribing frequency determined for the COX II inhibitors were 48.60% and 29.35% for the NSAIDs. The members identified as either using a COX II inhibitor or a NSAIDs were divided into two groups. The prescribing patterns of each group such as age, gender, co-morbid conditions, concomitant medication use and frequency were analysed and compared to the national institute of clinical excellence (NICE) and the South African Rheumatism and Arthritis Association (SARAA) guidelines for the appropriate prescribing of the COX II inhibitors. Celecoxib was the most frequently prescribed COX II inhibitor accounting for 46% of all the COX II inhibitors identified and diclofenac was the most frequently prescribed NSAID accounting for 34% of all the NSAIDs prescriptions. COX II inhibitors were prescribed more frequently to females with a mean age of 55 years than males. A similar prescribing trend was found with the NSAIDs. The COX II inhibitors were frequently prescribed to patients over the age of 56 with co morbid gastro-oesophageal disease and concomitant warfarin and steroid use. The prescribing patterns found in the managed care environment were similar to those recommended by the NICE and SARAA guidelines. The managed care data showed that the COX II inhibitors, which are supposed to have less gastric adverse side effects, were frequently used in combination with gastro-protective agents (GPA's).

This study indicates that even though COX II inhibitors were prescribed more frequently than NSAIDs in the managed care environment the recommended clinical guidelines and protocols employed by the managed care environment were adhered to. However, there

is a need to closely monitor patients on concomitant GPA's treatment and COX II inhibitors.

This study helped to evaluate the current prescribing patterns of COX II inhibitors in the managed health care environment. This study confirmed that guidelines and protocols were adhered to. These are excellent tools to be used in the managed health care environment to ensure effective and appropriate prescribing.

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| <b>TABLE OF CONTENTS</b>                                                                 | <b>PAGE</b> |
|------------------------------------------------------------------------------------------|-------------|
| DECLARATION                                                                              | ii          |
| DEDICATION                                                                               | iii         |
| ABSTRACT                                                                                 | iv          |
| ACKNOWLEDGEMENTS                                                                         | vi          |
| TABLE OF CONTENTS                                                                        | vii         |
| LIST OF TABLES                                                                           | ix          |
| LIST OF FIGURES                                                                          | x           |
| LIST OF ABBREVIATIONS                                                                    | xi          |
| <br>                                                                                     |             |
| <b>1. INTRODUCTION</b>                                                                   | <b>1</b>    |
| <br>                                                                                     |             |
| <b>2. MATERIALS AND METHODS</b>                                                          | <b>12</b>   |
| 2.1 Study objectives                                                                     | 12          |
| 2.2 Hypothesis                                                                           | 12          |
| 2.3 Methodology                                                                          | 12          |
| <br>                                                                                     |             |
| <b>3. RESULTS</b>                                                                        | <b>15</b>   |
| 3.1 Total number of the COX II inhibitors and the NSAIDS<br>prescribed                   | 15          |
| 3.2 The COX II inhibitors and NSAIDS drug classes                                        | 16          |
| 3.3 The demographics of the patients identified as using COX II<br>inhibitors and NSAIDS | 19          |
| 3.4 Co-morbid medical conditions                                                         | 21          |
| 3.5 Current medication use that may increase the risk of GI side<br>effects              | 24          |
| 3.6 Current use of gastro-protective agents                                              | 25          |

|             |                                                                                                                                        |           |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------|-----------|
| <b>4</b>    | <b>DISCUSSION</b>                                                                                                                      | <b>28</b> |
| 4.1         | Total number of the COX II inhibitors and the NSAIDS prescribed                                                                        | 28        |
| 4.2         | The COX II inhibitors and NSAIDS drug classes                                                                                          | 28        |
| 4.3         | The demographics of the patients identified as using COX II inhibitors and NSAIDS                                                      | 30        |
| 4.4         | Co-morbid medical conditions, and the use of gastro-protective agents, identified                                                      | 31        |
| 4.4.1       | Co-morbid medical conditions                                                                                                           | 31        |
| 4.4.2       | Clinically significant GI events and medication use that may increase the risk of GI side effects particularly warfarin and prednisone | 32        |
| 4.4.3       | Current use of gastro-protective agents                                                                                                | 33        |
| <b>5.</b>   | <b>LIMITATIONS, RECOMMENDATIONS AND CONCLUSION</b>                                                                                     | <b>35</b> |
| 5.1         | Limitations                                                                                                                            | 35        |
| 5.2         | Recommendations                                                                                                                        | 36        |
| 5.3         | Conclusion                                                                                                                             | 37        |
|             | <b>REFERENCES</b>                                                                                                                      | <b>38</b> |
|             | <b>APPENDICES</b>                                                                                                                      |           |
| APPENDIX A: | Post-Graduate Committee Research Protocol approval                                                                                     | 44        |
| APPENDIX B: | Committee for Research on Human Subjects approval                                                                                      | 45        |
| APPENDIX C: | Discovery Health authorisation confirmation                                                                                            | 46        |
| APPENDIX D: | List of co-morbid conditions found for RA patients                                                                                     | 47        |

| <b>LIST OF TABLES</b>                                   | <b>PAGE</b> |
|---------------------------------------------------------|-------------|
| <b>Table</b>                                            |             |
| 3.1 Total number of NSAIDs and COX II prescribed for RA | 15          |
| 3.2 COX II inhibitors drug class                        | 17          |
| 3.3 NSAIDs drug class                                   | 18          |

| <b>LIST OF FIGURES</b>                                                                          | <b>PAGE</b> |
|-------------------------------------------------------------------------------------------------|-------------|
| <b>Figure</b>                                                                                   |             |
| 1.1 Council of Medical Schemes algorithm for RA                                                 | 9           |
| 3.1 Percentage of the total number of NSAIDs and COX II inhibitors prescribed for RA            | 16          |
| 3.2 Percentage of the COX II inhibitors prescribed                                              | 17          |
| 3.3 Percentage of the NSAIDs prescribed                                                         | 18          |
| 3.4 Gender classifications of members receiving COX II inhibitors                               | 19          |
| 3.5 Gender classification of members receiving NSAIDs                                           | 20          |
| 3.6 Age distribution of members prescribed with COX II inhibitors                               | 20          |
| 3.7 Age distribution of members prescribed with NSAIDs                                          | 20          |
| 3.8 Mean ages and gender classification of each member using either COX II inhibitors or NSAIDs | 21          |
| 3.9 Co-morbid conditions identified for the COX II users                                        | 22          |
| 3.10 Co-morbid conditions identified for the NSAID users                                        | 22          |
| 3.11 Comparison of the co-morbid conditions                                                     | 23          |
| 3.12 Age distribution of patients presenting with the co-morbid condition GORD                  | 24          |
| 3.13 COX II inhibitor prescribed for patients on concomitant warfarin or steroid therapy        | 25          |
| 3.14 Gastro-protective agents identified                                                        | 26          |
| 3.15 Distribution of gastro-protective agents between the COX II group and the NSAID group      | 26          |

## LIST OF ABBREVIATIONS

|         |                                                                        |
|---------|------------------------------------------------------------------------|
| CABG    | Coronary Artery Bypass Surgery                                         |
| CDL     | Chronic Disease List                                                   |
| CLASS   | Celecoxib Long-Term Arthritis Safety Study                             |
| CMS     | Council for Medical Schemes                                            |
| COX 11  | Cyclo-oxygenase inhibitors                                             |
| CSI     | Cox-2 Specific Inhibitor                                               |
| CSM     | Committee on the Safety of Medicines                                   |
| CV      | Cardiovascular                                                         |
| DMARDs  | Disease Modifying Agents                                               |
| DSP     | Designated Service Provider                                            |
| EMA     | European Agency for the Evaluation of Medical Products                 |
| FDA     | Food and Drug Administration                                           |
| GI      | Gastrointestinal                                                       |
| GORD    | Gastro-oesophageal reflux disease                                      |
| GPA's   | Gastro-intestinal agents                                               |
| ICD-10  | International classification of Disease, Tenth Edition                 |
| MCC     | Medicine Control Council                                               |
| MELISSA | Meloxicam Large-Scale International Study Safety Assessment            |
| NICE    | National Institute of Clinical Excellence                              |
| NSAIDs  | Non-steroidal anti-inflammatory drugs                                  |
| OA      | Osteoarthritis                                                         |
| OTC     | Over-the-Counter                                                       |
| PMB     | Prescribed Minimum Benefit                                             |
| RA      | Rheumatoid Arthritis                                                   |
| RF      | Rheumatoid Factor                                                      |
| SARAA   | South African Rheumatism and Arthritis Association                     |
| SELECT  | Safety and Efficacy Large-Scale evaluation of COX inhibiting therapies |
| UK      | United Kingdom                                                         |
| US      | United States                                                          |
| VIGOR   | Vioxx Gastrointestinal Outcomes Research                               |
| WHO     | World Health Organisation                                              |