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Title: Reducing Oral Fluoroquinolone Prescribing in the Ambulatory Setting: Impact on the NM BCBSIL HMO Population

Submitting Author: Mark Greg, PharmD

Original Research Complete 1

Title: Reducing Hydrocodone/Acetaminophen Prescribing in the Ambulatory Setting: Impact on the NM BCBSIL HMO Population

Submitting Author: Mark Greg, PharmD

Abstract:

Purpose: Historically, hydrocodone/acetaminophen has been the second most frequently prescribed medication in the NM Blue Cross Blue Shield Illinois HMO member population. Unnecessary exposure to this medication may result in patient harms including side effects, potential addiction, and death. The goals of the project included educating providers on the potential risks of prescribing opioids, increase prescribing of non-opioids as first-line options, and to share techniques how to effectively communicate use of non-opioid analgesic alternatives to patients.

Methods: This project used DMAIC methodology – Define, Measure, Analyze, Improve, Control. A multimodal approach was used to educate providers on pain management techniques including avoiding hydrocodone/acetaminophen use, if possible. This included creating and providing physician access to the NM produced “Avoiding Unnecessary Opioid Prescribing” video featuring a Northwestern Medicine physician subject matter expert. Quarterly BCBSIL prescription claims data for HMOI, Blue Advantage (BA) and Blue Precision (BP) plans were reviewed and tracked over time.

Results: For the BCBSIL HMOI, BA, and BP population, we observed a decrease in hydrocodone/acetaminophen prescribing from 2.57% (Q2 2015) to 1.70% (Q2 2019) of total prescription claims – a 33.5% (0.87 percentage point) decrease. This corresponded to a decrease from the #2 most frequently prescribed medication in Q1 2016 to #5 in Q2 2019. For the BCBSIL HMOI and BA population ($\approx 11,500$ lives), we observed a decrease in hydrocodone/ acetaminophen prescribing from 2.11% (Q1 2017) to 1.72% (Q2 2019) of total prescription claims – an 18.5% (0.39 percentage point) decrease in claims volume. This corresponded to a decrease from the #3 most frequently prescribed medication in Q1 2017 to #7 in Q2 2019. We also observed an increase in the volume of quarterly gabapentin prescription claims – a non-opioid analgesic alternative from 0.68% (Q1 2017) to 1.01% (Q2 2019) – 48.5% (0.33 percentage point) increase. No change was observed in the volume of other nonopiod alternatives including duloxetine, pregabalin, tramadol, and venlafaxine. For the BCBSIL Blue Precision population ($\approx 11,500$ lives), we observed a decrease in hydrocodone/ acetaminophen prescribing from 2.09% (Q1 2017) to 1.69% (Q2 2019) of total prescription claims – an 19% (0.40 percentage point) decrease in claims volume. This corresponded to a decrease from the #4 most frequently prescribed medication in Q1 2017 to #5 in Q2 2019. We also observed an increase in the volume of quarterly gabapentin prescription claims – a non-opioid analgesic alternative from 0.84% (Q1 2017) to 1.21% (Q2 2019) – a 44.5% (0.37 percentage point) increase. No change was observed in the volume of other nonopiod alternatives including duloxetine, pregabalin, tramadol, and venlafaxine.

Conclusions: The program was effective as measured by decreases observed in the prescribing of hydrocodone/ acetaminophen in the BCBSIL HMO, BA, and BP population. An increase in the use of gabapentin was observed. No changes were observed in the volume of other nonopiod alternatives including duloxetine, pregabalin, tramadol, and venlafaxine. We are confident a similar decrease in ambulatory hydrocodone/acetaminophen prescription claims for all payor plans the NM health system would be observed if data were available.

Organization: Northwestern Medicine Physician Network (NMPN) ACO

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Original Research Complete 2

Title: Reducing Oral Fluoroquinolone Prescribing in the Ambulatory Setting: Impact on the NM BCBSIL HMO Population

Submitting Author: Mark Greg, PharmD

Abstract:

Purpose: Fluoroquinolone antibiotics have been widely prescribed for 30+ years. A growing body of evidence demonstrates taking even one dose of these antibiotics may result in permanent disabling side effects. Our work focused on educating providers to prescribe non-quinolone antibiotics, where possible.

Methods: Methods This project used DMAIC methodology – Define, Measure, Analyze, Improve, Control. A multimodal approach was used to communicate the potential risks of prescribing fluoroquinolone antibiotics to prescribers. Quarterly BCBSIL prescription claims data for HMOI, Blue Advantage (BA) and Blue Precision (BP) plans were reviewed and tracked over time.

Results: Total fluoroquinolone claims as a percentage of total prescription claims decreased from 0.78% (Q1'16) to 0.33% (Q2'19) – a 57.5% (0.45 percentage point) decrease. We also observed a decrease in azithromycin prescribing over time from 1.44% (Q1'17) to 1.11% (Q2'19) – a 22.8% (0.33 percentage point) reduction.

Azithromycin is another widely prescribed antibiotic where emerging resistance is a concern.

Conclusion: The program was effective in reducing fluoroquinolone prescribing in the BCBSIL HMO, BA, and BP population. We are confident a similar decrease in overall ambulatory fluoroquinolone prescription claims for the NM health system would be observed if data were available.

Organization: Northwestern Medicine Physician Network (NMPN) ACO

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